The Gilgit Mission, 1885-86 by Col. Lockhart & Col. Woodthorpe

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THE

# GILGIT MISSION,

## 1885-86.

BY

COLONEL SIR W. S. A. LOCKHART, K.C.B., C.S.I.,
BENGAL ARMY,

AND

COLONEL R. G. WOODTHORPE, C.B.,
ROYAL ENGINEERS.

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OFFICERS OF THE MISSION.

COL. WOODTHORPE. CAPT. BARROW. COL. LOCKHART. DR. GILES.

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# NOTE.

THE first five chapters of this Report have been written by Colonel Woodthorpe, the sixth, seventh, and eighth by Surgeon Giles, and the three last by Colonel Lockhart, who has also furnished the Introduction.

Free use has been made of Captain Barrow's admirable Gazetteer of the Eastern Hindú Kush, issued last April by the Intelligence Branch, Indian Army Head Quarters.

The photographs illustrating the work were taken by Surgeon Giles.

Nº 138 499A 499B

# SKETCH MAP

*To illustrate the*

## GEOLOGY OF THE DISTRICTS

*Traversed by the*

# CHITRAL MISSION,

*By*

SURGEON GEO: M. GILES.

*Med: Officer and Naturalist.*

*Scale; 1 inch=16 Miles.*

MILES 20 15 10 5 0 20 30 40 MILES

71° 72° 73° 74° 75° 37° 36°

BADAKHSHAN — WAKHAN — PAMIR-I-KHURD — TAGDAMBASH PAMIR — KANJUT — CHITRAL — KAFIRISTAN — YASIN

Oxus R. — Wakhan R. — Panja R. — Yarkhun R. — Chitral R. — Kunar R. — Ghizar R. — Gilgit R. — Indus R.

Killa Panja — Khandut — Urgand — Ishkashim — Zebak — Koksha R. — Ishkatul 600 — Sanglich — Limestone — Gazikistan — Ali Durah — Durah Pass 14,800 — Shah Salim — Gabbar — Simmik — Parabek — Drusup — Lidik pass 14,850 — Ahmed diwana — Pshar or Shui — Ansai — Jaldik — Shawal pass 14,600 — Bamboret — Ain — Brox — Kesu — Kala Drósh — Chocolate coloured grit — Mirkandi — Shoghot — Koghazi — Baranas — Buni — Sanogar — Mastuj 7800 — Rhaman — Laspar — Shandur pass 12,100 — Brep — Tui pass 14,200 — Shah Janoli — Khopa — Walti — Nalti — Yasin — Chashi — Pingal — Dhamal — Tangrot 75° — Gakuch — Roshan — Pilchi — GILGIT 4830 — Bozai Gumbaz — Ghat — Vakhjrui pass 16,600 — Killik pass 15,600 — Bun-i-kotal — Misgah — Garcha — Khaibar — Pasu — Gilkin — Atmobad — HUNZA — Nagar — Nagar R. — Chalt — Safed Ab' — Nomal — Hini — Hunza R.

Quartzite Schists and Micaceous Schists — Gneiss Schists — Friable Gneiss — Gneiss and Schistose Slates — Band of compact Breccia — Langar — Gneiss with Schists & Slates — Granular Limestone — Quartzite — Gneiss — Schists — Slate — Mica Schists — Pale coloured Slate — Limestone — Garnetiferous Limestone — Slate and Mica Schists — Green Quartzose Gneiss — Gneiss rock predominating — Schists and Slates — Limestone — Line of strike — Direction of Dip — Routes followed — Rivers

(Y.17485.)

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# ROUGH MAP

*Shewing generally the configuration*

*of the ground in the immediate vicinity of the*

## DÚRÁH PASS.

*Scale. 6 Inches - 1 Mile.*

0 500 1000 Yards

R. G. Woodthorpe




*Height of the Lake above the Sea = 12,450 Ft.*

*" " path at the top of the zigzag = 13,400 "*

*" " Crest of the Pass ✠ = 14,800 "*

*Hastily Surveyed by Bapu Jadu, Subsurveyor.*

Y 17483.

Nancerfield Lith 22, Bedford St Covent Garden. 12/88. 17620.

# MAP

OF

# CHITRÁL, HUNZA, AND PARTS OF WAKHÁN AND KÁFIRISTÁN

SURVEYED BY

COLONEL R. G. WOODTHORPE, R.E., ASSISTED BY

SUB-SURVEYOR BÁPU JÁDU.




*Published under the direction of* Colonel H. R. Thuillier, R.E., *Surveyor General of India.*

*Photozincographed at the Trigonometrical Branch Office, Debra Dún. November 1888*

*Note.— The routes taken by the members of the Mission are colored red, thus* ——

Compiled under the direction of Colonel C. T. Haig R. E, Deputy Surveyor General, Trigonometrical Branch,
by Mr G. W. E. Atkinson
Outlined by Munshi Abdul Karim
Typing by Mr G. W. E. Atkinson
Hill Shading by Mr T. H. Rendall


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On the 18. Sep.r 1891.

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(To be retained in his own possession).

When this map is not further required it should be returned, in a sealed cover, to the Registrar, Surveyor General's Office, Calcutta.

# INTRODUCTION.

In the year 1885 His Excellency Lord Dufferin, Viceroy of India, determined that a correct knowledge should be obtained of the Hindú-Kush range, and of the population and resources of that region. To this end a party was, with the sanction of the Secretary of State, despatched from India in the month of June of that year, under command of Colonel W. S. A. Lockhart, C.B., of the Bengal Army (nominated, in the first instance, to His Excellency General Sir Donald Stewart, when Commander-in-Chief in India, by the late Sir Charles MacGregor). The other officers selected were Colonel R. G. Woodthorpe, R.E., Captain E. G. Barrow of the Quarter-Master General's Department, and Surgeon G. M. J. Giles of the Indian Medical Department. Of these Colonel Woodthorpe was to survey the country, Captain Barrow was to act as staff officer, and Surgeon Giles, as well as having medical charge of the party, was to be naturalist and photographer. The escort consisted of 17 non-commissioned officers and men of the 24th Panjáb Infantry, and, in addition, there were three non-commissioned officers of Bengal Cavalry and Infantry, and one of Panjáb Frontier Force Infantry, who were qualified surveyors. These latter were to supplement Colonel Woodthorpe's one native surveyor, and, under Captain Barrow's superintendence, to conduct route surveys on a large scale.

The general instructions given to Colonel Lockhart by the Indian Foreign Secretary were briefly as follows:—

I.—To go to Chitrál by way of Kashmír and Gilgit. On arrival, to enter into friendly relations with Mehtar Amán-ul-Mulk, and to gain full information regarding Chitrál and the other provinces subject to the Mehtar's control, in view to making the Government of India thoroughly acquainted with the material resources of the country, the number and condition of its inhabitants, the routes and passes leading through and from it, and with all other matters of interest.

II.—To endeavour to penetrate into Káfiristán from Chitrál, and to explore that almost unknown country thoroughly. To do this, however, without running any unnecessary risks, and to bear in mind that the primary object was to gain the goodwill of the inhabitants. Admission to any part of the country was not to be pressed for, should the inhabitants dislike to grant it, but full use was to be made of any opportunities gained with the consent of the people

so as to acquire a knowledge of Káfiristán and the Kāfirs, and of the passes leading from their country across the Hindú-Kush. In this last respect special caution was enjoined, and the Afghán border was, as far as practicable, not to be touched, pending further instructions.

III.—To take a sum of money and presents up to a certain value for distribution to men of influence.

IV.—To write fully and frequently to the Foreign Department, and to keep a diary.

V.—To allow no correspondence between any member of the party with either newspapers or scientific societies.

VI.—To maintain discipline in the party.

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## CHAPTER I.

### Personnel and Equipment of the Survey Party. Manner in which the Survey work was carried on.

BEFORE commencing the general geographical portion of this report, it will perhaps be as well to give the following note by Colonel Woodthorpe on the personnel and equipment of the survey party, and the manner in which the work was carried on.

The party was composed as follows:—

Colonel R. G. Woodthorpe, R.E., officiating deputy superintendent, Survey of India.

Bábú Bápú Jádú, sub-surveyor.

Muhammad Nawáz Khán, Kot Dafadár, 17th B. L. - } Sepoy surveyors.
Havildár Gopál Singh, 44th G. L. I. - - }
Lance Naik Nawáb Khán, 4th Punjab Infantry - }
Sawár Kishen Singh, 13th B. L. - - - }

The sub-surveyor Bápú Jádú is a Mahratta. He was then in the Bhopál and Málwa Topographical survey party, and volunteered for this work. The four Sepoy surveyors were chosen by Colonel Lockhart for their qualifications as certified from Rurkí. They were all fair route surveyors, but did not know very much else at first; they picked up a good deal, however, from the Bábú and myself, in the way of hill sketching. Kot Dafadár Náwáz Khán was left in Chitrál during the winter, and did not rejoin us again till June, and then only for a few days, so there were not many opportunities of making use of him. Ten *khalásis* for the carriage of instruments, &c. were attached to the party.

I knew before starting that I should, probably, from the nature of the mission, be unable to do much in the way of triangulation, and that our work would be confined principally to reconnaissance and topography based on accurate route surveys and traverses, and checked by astronomical observations. As I anticipated, our way usually lay along low valleys lying among high ranges of steep hills, the lower spurs of which effectually shut out from below all view of the lofty peaks fixed by Colonel Tanner, except in such cases as when they rose at the end of some long valley running either directly towards or away from them, as for instance, Tirich-Mír, which is thus visible W. from Mastúj at a distance of about 40 miles, and N. from Chitrál at a distance of 28 miles. This is a very fine peak, and afforded us many

valuable checks in longitude, especially at Chitrál, the position of which place we were able to obtain accurately with its assistance.

Our marches often averaged 12 miles a day, and this prevented our leaving the road to climb the hills on either side to any great height, though even when we did it was seldom that we were rewarded by any sufficiently extended view to enable us to fix ourselves from known peaks, unless, indeed, we climbed at least 7,000 feet above our route, *i.e.*, to an average height of 12,000 or 13,000 feet above the sea.

From the passes we seldom saw much, as we were generally unfortunate in the weather. All this, as I have said above, was, as I anticipated from my former experience in Afghánistán, and therefore, in applying for my equipment, I was careful to indent for a subtense instrument, and a couple of light 10-foot rods, marked off in foot spaces in black and white, as I knew it would be impossible to work a perambulator or to carry on accurate route surveys with any other system of actual measurement.

The instruments used were :—

(1.) A Troughton and Simms' 6-inch theodolite, with micrometer eyepiece and complete vertical circle; and, for general work, trigonometrical and astronomical, such as I was engaged on, there could not be a better instrument.

(2.) A subtense instrument; which consists of a small telescope mounted above a prismatic compass, the whole fitting on a light stand. The telescope is fitted with a micrometer eyepiece, by means of the wires in which, intercepting a given length of the rod, the observer is enabled to see, from a glance at the tables in his note-book, the distance of the man with the rod from the instrument, and the compass gives the direction: thus, both bearing and distance can be plotted at once.

(3.) Two hypsometers and three aneroids; the former worked well, but the aneroids were not reliable over 9,000 feet. They suffered, however, from rough usage; twice my pony fell into a river with the aneroids in the holsters, where I fondly hoped they would have been safe; and when carried on our persons they were liable to jerks from unavoidable tumbles over the steep and frequently dangerous slopes we had to traverse.

(4.) For chronometers, I had a ship's box chronometer by Dent, which was too bulky and quite useless when carried about, as its rate then varied as much as a quarter of an hour a day at times. Two chronometer watches by Brock were good, and kept fair time, but did not stand rough usage; one stopped altogether from a slight shock received as the result of my being obliged to jump a few

feet. The other stood better, but was not reliable enough for chronometric longitudes when exposed to great variations of temperature.

The subtense method proved, as it has done before, a great success. We ran altogether 750 miles of traverse with it, of which I did 550, and Bápú Jádú about 200; and although we sometimes did as much as 19 miles in the course of the day, and very often 15 or 16, when the work was plotted on the 1 inch = 1 mile scale, and reduced to that of 1 inch = 4 miles, the results were wonderfully good. Whenever we could, we took observations for latitude and azimuth, to check our traverses and the compass variation. Gilgit was our starting point, and the first great traverse was carried thence to the Dúráh Pass *viâ* Chitrál; the second carried us from Gilgit, through Hunza, over the Kilik Pass to Kala Panja, and so by Zebák again to the Dúráh, thus giving us two independent positions for that point, which disagreed only by 0·3 of a mile, which is sufficiently satisfactory, and proves the excellence of the subtense as an instrument for explorers. When together, I generally worked the subtense traverse, while the Bábú had the plane-table; and at intervals during the march I gave him the bearings and distances, which he plotted on his plane-table; and, from positions thus obtained, worked in the topography. Every night I plotted my traverse on a large scale, reduced it, and checked the Bábú's work with it, correcting his positions when necessary, which was very seldom. At certain places, where the valley was sufficiently open, or a halt permitted us to leave the camp for a little distance, I measured bases and azimuths, and determined, by triangulation, the positions of such peaks as would assist the plane-tabling. The Sepoy surveyors ran route surveys on the scale of 1 inch = 1 mile, for the Quarter-master General's Department, generally; but when opportunity offered, they were detached to explore small valleys or passes of minor importance.

As already stated, the position of Chitrál is fairly accurately fixed. I observed several times for latitude to stars N. and S. of the zenith in September and October, and also for an azimuth to Tirich-Mír, from which I obtained the longitude of Chitrál. Tirich-Mír, towering above the lower ranges shutting in the valley, nearly due north of Chitrál at a distance of 28 miles, is singularly favourable for such a determination of longitude. A few other places have also been similarly fixed, Kala Panja, for instance, where a series of very good observations for latitude gave a result coincident with Capt. Trotter's latitude, though the longitude disagrees by about seven miles. Our longitude for Kala Panja was obtained by an azimuth to Lunkho fixed peak. In all, latitude observations were made at 15 places,

of which four, viz., Mastúj, Chitrál, Kala Panja, and Yásín, are principal and important places.

Heights were taken principally with the hypsometer, intermediate places being observed with the aneroid barometer. Occasionally, vertical angles were observed to known peaks, and the results agreed fairly well with the hypsometric values. The two values for each height obtained by these two methods, sometimes differ by as much as 200 feet; but Colonel Tanner tells me that the trigonometrical values for peaks such as Tirich-Mír, which were observed from a long distance, are hardly so accurate as to be preferred to the hypsometric values as a basis for calculation of the heights of Chitrál, Mastúj, &c. The aneroid barometers were generally read twice a day on the march, giving a morning and evening reading for each camp. During our stay at Gilgit they were read four times a day, as also the thermometers, wet and dry bulb, and duly recorded with the maximum and minimum temperature for every day. Notes of the weather were also made daily throughout.

I would here make a few remarks on the work done by my assistants. Notwithstanding the, to him, entire novelty of the work and the country, Bápú Jádú did very well. He was never daunted by the difficulties of the hill-climbing, nor by the unaccustomed cold and snow, but went wherever he was ordered without hesitation, and always succeeded well with his work, which I found good whenever I had an opportunity of testing it. He has pluck and endurance, and is always anxious to acquire knowledge. He now knows the necessary observations and computations for time latitude and azimuth, all of which were quite new to him. He is also a very fair draughtsman. I consider him well deserving of promotion for all he did and suffered during this service, for which he volunteered. The three Sepoy surveyors worked well, especially Sawár Kishen Singh, whom I consider by far the most trustworthy. He was very accurate in all his route surveys, being seldom out more than 300 yards, even in a long march of 16 or 17 miles over bad ground; and he draws fairly. Lance Naik Nawáb Khán is an exceedingly neat draughtsman, but not so accurate as Kishen Singh, and I fancy somewhat inclined to trust to his imagination when alone. Havildar Gopál Singh is neither so accurate as Kishen Singh nor so neat as Nawáb Khán. Kót Dafadár Muhammad Nawáz Khán ranks, I think, with Gopál Singh, though, as I said before, I had not many opportunities of judging of his work.



THE ESCORT.

HEIGHTS above SEA-LEVEL of PLACES in the EASTERN HINDÚ-KUSH.

| Place. | Height by Hypsometer. | Height by Aneroid Barometer. | Remarks. |
|---|---|---|---|
| Gilgit | — | — | Height, 4890. Trigonometrically. |
| Sharot | — | 6,000 | |
| Singal | — | 6,080 | |
| Gákúch | 7,136 | — | |
| Roshan | 7,060 | 7,050 | |
| Jandrót or Jinjrót | 7,640 | 7,570 | |
| Ghizar | 9,835 | — | |
| Shandúr Pass | 12,250 | — | |
| Sar Láspúr | 9,819 | — | |
| Mastúj | 7,760 | — | |
| Réshún | — | 6,500 | |
| Koghazi | — | 5,450 | |
| Chitrál | 4,980 | — | |
| **KÁFIRISTÁN.** | | | |
| Zidig Pass | 14,900 | — | |
| Shúi or Pshúr | 7,830 | — | Villages in the Arnawai Valley. |
| Apsai | 7,230 | — | |
| Lút-díh or Brágmatal | 6,660 | — | |
| Shawal Pass | 14,100 | — | |
| Bumboret | 6,650 | — | Village in the Bashgal Gol. |
| **ON ROAD FROM JANDROT TO CHÍTRÁL *viâ* YASÍN AND THE DARKÓT PASS.** | | | |
| Yásín | 7,800 | — | |
| Darkót Village | 9,160 | — | |
| Darkót Pass | 15,000 | — | |
| Baróghil Camp | 11,960 | — | General level Baróghil Plain 12,000, Baróghil Pass 12,460. |
| Barnas | 6,100 | — | |
| **FROM CHITRÁL TO THE DURÁH PASS.** | | | |
| Shoghot | 6,260 | 6,200 | |
| Drúshp | — | 7,000 | |
| Parabek | — | 7,850 | |
| Snáh Salím | 10,830 | — | |
| Dúráh Pass | 14,800 | — | |
| Hauz-i-Dúráh (Lake Dufferin) | 12,450 | — | 2 miles west of the Durah Pass. |
| **BELOW CHITRÁL ON THE CHITRÁL RIVER.** | | | |
| Aiún | 4,550 | — | |
| Kala Drósh | 4,500 | — | |
| Kalkatak | — | 4,200 | |
| **NEAR MASTÚJ.** | | | |
| Kala Drásan | 6,640 | — | |
| **FROM GILGHIT TO THE WÁKHUJRÚI PASS.** | | | |
| Chalt | 6,120 | — | |
| Chaprót Fort | 7,050 | — | |
| Húnza | 8,000 | — | |
| Pású | — | 8,000 | |
| Gírcha | — | 8,750 | |
| Misgáh | 10,150 | — | |
| Kilik Pass | — | 15,600 | |
| Camp Ghal | 14,530 | — | |
| Wakhujrúi Pass | 16,150 | — | |

HEIGHTS above SEA-LEVEL of PLACES in the EASTERN HINDÚ-KUSH—*continued.*

| Place. | Height by Hypsometer. | Height by Aneroid Barometer. | Remarks. |
|---|---|---|---|
| **IN WAKHÁN AND BADAKHSHÁN.** | | | |
| 1st camp below Wákhujrúi Kotal | 14,721 | — | These three camps were on the Áb-i-Wakhán, or main source of the Panja River. |
| 2nd " " | 13,960 | — | |
| 3rd " " | 13,250 | — | |
| Langar | 12,450 | — | |
| Sarhad-i-Wakhán | 10,450 | — | |
| Baróghil Pass | 12,460 | — | |
| Kala Panja | 9,050 | — | |
| Warg | 8,650 | — | |
| Iskkasham | 8,560 | — | |
| Zébák | 8,550 | — | |
| Sanglích | — | 9,300 | |
| Gazikistán Lake | 12,150 | — | |
| 8 miles N.E. of Hauz-i-Dúráh | | — | |
| **FROM MASTÚJ TO YÁSÍN BY THE TÚI PASS.** | | | |
| Sháh Janáli | 12,700 | — | |
| Túi Pass | 14,700 | — | |
| Yásín | 7,800 | — | |
| **IN KASHMÍR TERRITORY.** | | | |
| Kamri Pass | 13,250 | — | |
| Trágbal | 11,810 | — | |
| **PASSES NORTH OF CHITKÁL.** | | | |
| Nuksán | 16,560 | — | |
| Ágram | 16,112 | — | |
| Khatinza | 17,500 | — | Deduced from Nuksán by an elevation with Aneroy level. |
| **PASSES IN MÚRIKHO AND TÚRIKHO.** | | | |
| Garti Gal | 12,820 | — | |
| Sad Ishtrágh or Khotgaz | 18,900 | — | (Deduced). |
| Baugi | 13,370 | — | (Approximate). |
| Khút | 14,200 | — | Ditto. |
| Janáli Pass | 16,700 | — | Ditto. |
| Uchil Pass | 18,400 | — | Ditto. |

## Abstract of Observations for Latitude on Road from Gilgit to Chitrál, and in Húnza and Wakhán.

| Place of Observation. | Reference Numbers. | Astronomical Date. | Observer. | Instrument Observed with. | Object Observed. | Zenith Distance Corrected for Index and Level Errors. | Instruments Used in Computation of Refraction. | | Deduced Latitude. | | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Barometer. | Thermometer. | By Star North of Zenith. | By Sun or Star South of Zenith. | Final Latitude. | |
| | | | | | | ° ′ ″ | ° | ° | ° ′ ″ | ° ′ ″ | ° ′ ″ | |
| Mastúj | — | 2nd Sep. 1885 | Col. Woodthorpe. | Theodolite | α Ursæ Minoris (Polaris) | 53 52 15 | — | — | 36 18 16 | — | — | This is the latitude of the Polo ground 1¼ miles and 40° N.E. of Fort. |
| „ | — | 7th July 1886 | „ | „ | „ „ | 54 51 4 | 22·6 | 74 | 36 17 44 | — | — | |
| „ | — | 8th „ | „ | „ | „ „ | 54 32 7 | 22·6 | 79 | 36 17 53 | — | 36 18 2 | |
| „ | — | 8th „ | „ | „ | Antares | 62 28 7 | 23·0 | 72 | 36 18 17 | — | — | |
| Sanóghar | — | 3rd Sep. 1885 | Col. Woodthorpe. | Theodolite | α Ursæ Minoris (Polaris) | 54 11 19 | — | — | 36 17 16 | — | — | This is the latitude of camp by small tank north of Polo ground Azimuth to Tirich-Mir—267° 48′ 30″. |
| „ | — | 4th „ | „ | „ | Sun | 61 5 15 | — | — | 36 17 16 | — | — | |
| „ | — | 5th July 1886 | „ | „ | α Ursæ Minoris | 54 54 30 | 22·7 | 70 | 36 17 38 | — | 36 17 32 | |
| „ | — | 4th Sep. 1885 | „ | „ | „ | 54 11 42 | — | — | 36 18 43 | — | — | |
| „ | — | „ | „ | „ | „ | 54 1 47 | — | — | 36 16 46 | — | — | |
| Chitrál | — | 12th Sep. 1885 | — | Theodolite | α Ursæ Minoris | 54 30 30 | — | — | 35 51 31 | — | — | This is the latitude of camp in an orchard near the Serai, 580 yards from the S.W. angle of the S.W. tower of the Fort. Bearing to tower 56½° by compass (variation = 4¼ °). |
| „ | — | 16th „ | — | „ | „ | 54 34 40 | — | — | 35 50 36 | — | — | |
| „ | — | 4th Oct. 1885 | Bapu Jadu | „ | „ | 54 16 25 | — | — | 35 51 27 | — | — | |
| „ | — | 5th „ | „ | „ | „ | 54 25 55 | — | — | 35 51 42 | — | — | |
| „ | — | 14th Sep. 1885 | Col. Woodthorpe. | „ | Sun | 32 31 15 | — | — | 35 51 4 | — | — | |
| „ | — | 12th „ | „ | „ | α Cephei | 26 15 30 | — | — | 35 50 20 | — | 35 51 6 | |
| „ | — | 14th Oct. 1885 | „ | „ | α Aquilæ (Altair) | 27 16 55 | — | — | — | 35 51 2 | — | |
| „ | — | „ | „ | „ | α Cephei | 26 15 20 | — | — | 35 51 30 | — | — | |
| „ | — | 13th „ | „ | „ | α Ursæ Minoris | 53 23 4 | — | — | 35 50 50 | — | — | |
| „ | — | 9th „ | „ | „ | „ | 54 7 5 | — | — | 35 51 34 | — | — | |
| „ | — | 14th „ | „ | „ | Sun | 46 11 52 | — | — | 35 50 39 | — | — | |

ABSTRACT of OBSERVATIONS for LATITUDE on ROAD from GILGIT to CHITRÁL, and in HÚNZA and WAKHÁN.

| Place of Observation. | Reference Numbers. | Astronomical Date. | Observer. | Instrument Observed with. | Object Observed. | Zenith Distance Corrected for Index and Level Errors. | Instruments Used in Computation of Refraction. | | Deduced Latitude. | | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Barometer. | Thermometer. | By Star North of Zenith. | By Sun or Star South of Zenith. | Final Latitude. | |
| | | | | | | ° ′ ″ | | | ° ′ ″ | ° ′ ″ | ° ′ ″ | |
| Aián | — | 6th Oct. 1886 | Col. Woodthorpe. | Theodolite | α Ursæ Minoris | 53 30 50 | — | — | 35 43 41 | — | — | Large village. The latitude is of the principal orchard. |
| „ | — | „ | „ | „ | α Aquilæ (Altair) | 27 9 0 | — | — | 35 43 20 | — | 35 43 31 | |
| Koghazi | — | 10th Sep. 1885 | Col. Woodthorpe. | Theodolite | Sun | 30 49 15 | — | — | 36 56 26 | — | 36 56 26 | This is the latitude of the polo ground. |
| Húnza | — | 25th Apr. 1886 | Col. Woodthorpe. | Theodolite | Sun | 23 8 38 | — | — | 36 19 54 | — | 36 19 54 | This is the latitude of the polo ground. |
| Langar | — | 13th May 1886 | Col. Woodthorpe. | Theodolite | Sun | 18 36 39 | — | — | 37 1 36 | — | — | This is the latitude of the Western end of the Dasht-i-Langar. |
| „ | — | „ | „ | „ | Polaris | 54 7 15 | — | — | 37 1 20 | — | — | |
| „ | — | „ | „ | „ | „ | 54 6 30 | — | — | 37 1 55 | — | 37 1 52 | |
| „ | — | „ | „ | „ | α Virginis (Spica) | 47 36 53 | 18·5 | 32 | — | 37 2 37 | — | |
| „ | — | „ | „ | „ | α Ursæ Majoris | 25 20 34 | 18·5 | 32 | 37 1 52 | — | — | |
| Kala Panjah | — | 25th May 1886 | Col. Woodthorpe. | Theodolite | Sun | 16 2 43 | — | — | 36 59 49 | — | — | This latitude is that of a ruined village 1,300 yards south of the principal fort. |
| „ | — | 26th „ | „ | „ | Polaris | 54 13 7 | — | — | 36 59 59 | — | — | |
| „ | — | 26th „ | „ | „ | „ | 54 13 42 | — | — | 36 59 50 | — | — | |
| „ | — | 25th „ | „ | „ | η U. Majoris | 12 55 9 | 22 | 50 | 36 59 50 | — | 36 59 49 | |
| „ | — | 25th „ | „ | „ | Arcturus | 17 14 58 | 22 | 50 | — | 36 59 48 | — | |
| „ | — | 26th „ | „ | „ | β Corvi | 59 47 23 | 22 | 58 | — | 37 0 47 | — | |
| „ | — | 26th „ | „ | „ | α Draconis | 27 66 55 | 58 | 58 | 36 58 43 | — | — | |

## Abstract of Observations for Latitude on Road from Gilgit to Chitrál, and in Húnza and Wakhán.

| Place of Observation. | Reference Numbers. | Astronomical Date. | Observer. | Instrument Observed with. | Object Observed. | Zenith Distance Corrected for Index and Level Errors. | Instruments used in Computation of Refraction. | | Deduced Latitude. | | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Barometer. | Thermometer. | By Star North of Zenith. | By Sun or Star South of Zenith. | Final Latitude. | |
| | | | | | | ° ″ ′ | ° | ° | ° ″ ′ | ° ″ ′ | ° ″ ′ | |
| Zerkhwán (Zebák) | — | 9th June 1886 | Col. Woodthorpe. | Theodolite | Polaris | 54 41 7 | 22·2 | 59 | 36 35 58 | — | — | This is the latitude of the village. |
| ,, | — | ,, | ,, | ,, | η Ursæ Majoris | 13 18 42 | 23·2 | 59 | 36 36 13 | — | 36 35 55 | |
| ,, | — | ,, | ,, | ,, | α Bootis | 16 59 35 | 22·2 | 59 | — | 36 35 34 | — | |
| Jhopu | — | 11th July 1886 | Bapu Jadu | Theodolite | Polaris | 54 15 50 | 21·85 | 77 | 36 36 18 | — | — | This is the latitude of the village. |
| ,, | — | ,, | Col. Woodthorpe. | ,, | Antares | 62 46 30 | 22 | 77 | — | 36 35 50 | 36 36 9 | |
| ,, | — | ,, | Bapu Jadu | ,, | Sun | 14 28 33 | 22 | 92 | 36 36 7 | — | — | |
| ,, | — | ,, | Col. Woodthorpe. | ,, | ζ U. Minoris | 41 32 22 | 22 | 77 | 36 36 20 | — | — | |
| Sarhad-i-Wakhán | — | 18th May 1886 | Bapu Jadu | Theodolite | Sun | 17 27 7 | — | — | 37 0 6 | — | — | This is the latitude of the fort. |
| ,, | — | 17th ,, | Col. Woodthorpe. | ,, | ,, | 17 40 21 | — | — | 37 0 4 | — | 37 0 5 | |
| Gazikistán (camp) | — | 19th June 1886 | Bapu Jadu | Theodolite | Sun | 12 45 41 | 21 | 69 | 36 11 41 | — | 36 11 41 | — |
| Camp between two lakes foot of Dúrah. | — | 20th June 1886 | Bapu Jadu | Theodolite | Sun | 12 41 55 | 20·5 | 60 | 36 8 39 | — | 36 8 39 | — |
| Yásin | — | 16th July 1886 | Col. Woodthorpe. | Theodolite | Antares | 62 32 47 | 22·3 | 60 | — | 36 21 44 | — | Polo ground ½ mile below fort. |
| ,, | — | ,, | ,, | ,, | Polaris | 54 28 17 | 22·3 | 60 | 36 21 59 | — | 36 21 52 | |
| Gendal | — | 17th July 1886 | Col. Woodthorpe. | Theodolite | Polaris | 54 32 20 | 23 | 68 | 36 19 5 | — | — | This is the latitude of a spot ½ mile below village on flat swamp and shingle close to small tomb in a garden. |
| ,, | — | ,, | ,, | ,, | Antares | 62 29 31 | 23 | 68 | — | 36 18 23 | 36 18 9 | |
| ,, | — | ,, | ,, | ,, | β Draconis | 16 6 30 | 23 | 68 | 36 18 0 | — | — | |

## CHAPTER II.

### General Geographical Descriptions. Roads. Bridges. Political Geography. Communications. Climate.

THE country passed through by the Mission lies between the 71st and 75th parallels of longitude and the 36th and 38th parallels of latitude, and the surveys made, including rough reconnaissances, cover an area of some 12,000 square miles. No claim is laid to having made any important geographical discovery, although the party had the good fortune to explore one pass, the Kilik-cum-Wakhujrúi, which had never before been visited by any scientific party, and to gain more reliable information about it, and the district of Hunza, through which this pass was reached, than had before been procurable. The party had hoped, moreover, to explore the whole, or at least the greater portion of Káfiristán, but in this they were disappointed, and grievously so; nevertheless their all too short visit to the Bashgal Gol ("Gol" = valley) took them over, for explorers, entirely new ground. Much of the rest of the country travelled through and many of the passes had already been visited and described by native explorers and travellers, but the information derived from their reports is often misleading, and a tendency to exaggerate was found in them all; for, as General Walker* has pointed out, it has seldom been found possible to employ trained native surveyors in making explorations beyond the British Frontier. The natives in the service of the Indian Survey Department could not venture into these distant regions without great risk of detection, which would probably result in their murder, or at least grievous ill-treatment. All the most successful explorers have been men most specially selected for the purpose, who resided on the frontiers, and had the right of travelling into the regions beyond, as traders, physicians, pilgrims, or religious teachers. One of the principal explorers, who preceded the Mission in these regions, known to the world as M —— S ——,† was a Pír of great sanctity, who resided in Kashmír. He had already made one visit to the regions of the Upper Oxus, and was about to make a second when he volunteered to combine a tour of pilgrimage and discipular visitation with geographical reconnaissance, and his services being accepted, he underwent a short course of training in the survey office at

* Late Surveyor-General of India.

† Muhammad Shâh.

Dehra Dun. He acquired much information, which proved useful to Colonel Woodthorpe, and was sufficiently accurate to assist that officer much in forming plans for his geographical work. Reliable topographical information is seldom if ever to be obtained from native sources; even when dealing with intelligent natives, it is always difficult to make them understand exactly what we want to know, especially concerning roads, passes, and the approaches thereto; and where the latter are tolerably easy, it is not unusual for them to be described as "a plain as flat as my open hand"; while a mile or two of roadway in the immediate vicinity of the pass, utterly impracticable for any large number of laden men or baggage animals, is entirely ignored. Travelling, as they do, in comparatively small numbers, with little or no impedimenta, they find it easy to traverse any of their mountain paths, and quite fail to realise that a projecting rock, a steep bit of the road, or a dangerous bridge, may prove formidable obstacles to even such a small and lightly equipped party as the Mission was.

The geographical results of the Mission may be thus roughly summed up. An accurate knowledge has been acquired, by personal observation, of the ground actually covered by the Mission, and an improved knowledge of the adjoining districts, while all the passes of any importance whatever, across the Hindú Kush, lying between the parallels of longitude above mentioned, and the approaches to these passes from either side, have been visited and examined by some competent member of the party, their positions accurately fixed, and their heights properly determined.

Before proceeding to treat in detail the various districts lying within the limits of the region under consideration, it will be as well to give a rough outline of the principal features and the general character of the country. A glance at the map will show that the most important range of hills is, of course, the Hindú Kush,* that formidable barrier to invasion from the north of our Indian possessions, which here runs in a slightly N.E. and S.W. direction; the principal peaks having an average height of 23,000 feet above the sea, except in the neighbourhood of the Baróghil Pass, which presents the most curious and startling feature in this part of the world; for here the mighty main range suddenly sinks down abruptly into absolute insignificance, and for a short distance low undulating hills take the place

* The term Hindú Kush is unknown in these parts, but it is a convenient geographical expression. The people of Chitrál and elsewhere call the range "The Great Mountains," or "The Snow Mountains," but they talk of a pass between Khinján and Chárikár as the Kotal-i-Hindú Kush, perhaps the Sar Alang or Paiwár. Hindú Kush means literally "the Hindú slayer," as it is considered impossible for a Hindú to attempt to cross it and live. Probably some one at Chárikár in the old war asked the name of the range, pointing towards the pass, and received a reply referring to the latter only, which he mistook to apply to the range itself.

of lofty peaks. The pass itself is a little flat grassy plain or "trough," about half a mile wide, at an elevation of 12,460 feet, only, above sea level. Seated on one of the western slopes just above this little plain, it is difficult to realise that of the two small streams which babble along on either side, separated from each other by a few yards only, one flows into the Aral Sea and the other into the Indian Ocean.

From a point a little to the west of the Kilik Pass, the Hindú Kush sends out a long lofty range to the south, known as the Shandúr range, running at first in a direction generally parallel to the Hindú Kush, from which it is separated by the upper portion of the Yárkhún Valley, it gradually diverges from it and turns southwards past Chitrál proper, where also its peaks begin to decrease from their average height of 22,000 feet to 13,000 and 14,000 feet at Dír.

The principal passes over this range are the Darkot, Tui, and Shandúr, of which the latter is by far the best. Below Mastúj, at the Shandúr Pass, this range is again connected with another lofty chain of peaks, called by Colonel Tanner the Hindú Ráj, which shuts in the districts of Mastúj, Yásín, and Gilgit, on the south. Finally, to the north of Wakhán we have the mountain ranges which form the southern rampart of the Great Pamir. All these main ridges again send out huge spurs, some of the peaks on which are but little inferior in height to those on the parent range, the whole forming such a sea of hoary giants of almost uniform height, that even from the most elevated standpoints it is impossible to separate, by the eye, the different ranges one from the other, or to determine the exact run of any particular ridge. The principal spurs are the two springing from Tirich Mír, one running northwards, forcing the Oxus to make its great bend to the North, and at the same time forming the natural Eastern boundary of Badakhshán; the other running southwards and terminating at the junction of the Mastúj and Lutkú rivers.

The spurs in their turn send out a confused mass of minor features, divided from each other by deep, narrow, and gloomy ravines. It is useless to enumerate all the lofty peaks, even in this limited area of gigantic mountains, in which there are probably more over 20,000 feet than there are mountains above 10,000 in the whole of Europe. The best-known peaks are Nanga Parbat, 26,620; Rakaposhi, 25,550; Tirich Mir, 25,426; Hunza Peak, 25,050; Haramosh, 24,270; and Sad Istrágh, 24,170.

The hydrography of this region naturally divides itself into two grand divisions—the waters draining to the Oxus and those draining to the Indus. As regards the former, we are here only concerned with the Áb-i-Panja and its tributaries, and the Vardúj with its feeders. The former is a grand river, whose volume may be compared to that of the Kábal river between



THE BAROGHIL PASS

(LOOKING NORTH).

Jalálábád and the Peshâwar Valley. Several of its reaches are navigable for many miles, but the use of boats is quite unknown. It is bridged only in one place, between Urgand and Shikarf. This bridge is only practicable for men on foot. The Vardúj is a rapid stream, quite unnavigable, and in the summer only fordable early in the day. It is bridged in numerous places.

As regards the Indus drainage system, we may conveniently divide it into three areas:—

(I.) The Kunar river, with its tributaries. This river is known in various parts of its course as the Yárkhún, the Mastúj, the Chitrál, and the Asmar. In winter it is fordable in places. In summer it is nowhere so. Above Mastúj it can only be crossed by rope, or more correctly speaking, twig bridges, of which there are several. At and below Mastúj in several places there are bridges which can be utilised for cattle and horses. It is very rapid and nowhere navigable. In summer it is for the most part a roaring turbid torrent, like the Jhelum river, between Kashmír and Kohála. Its principal tributaries are the Gazan Dara, the Sor Laspúr, the Túriko river, the Lutku, the Bashgal Gol, and the Péch river, of Káfiristán.

(2.) The Gilgit river, with its tributaries, the Hunza river, the Karumbar, the Warshikgum or Yásín river, and the Ghizar. All these rivers are rapid, roaring rivers, like the Jhelum, quite unnavigable, and only fordable in winter at certain places. They are for the most part only bridged by rope or twig bridges, and animals as a rule have to be swum across. The Yásín river, however, is provided with several plank bridges.

(3.) The Indus itself with its tributaries in Shináka and the Kohistán. This great river is here a broad and rapid flood, especially in spring and summer. It can only be crossed by boats or *masak* rafts. The force of the current renders the river unnavigable.

As regards lakes, there are the Shandúr and Pandár, which are drained by the Ghizar, Lake Dufferin on the western side of the Dúráh pass, the lake from which the Yárkhún or Chitrál river takes its rise, and the lake of the little Pamir.

When we pass from Kashmír proper, with its moist climate, to the inner districts, the Alpine character of the country changes, and the hills which rise steeply on either side of the valleys are bleak and bare in the extreme. The line of perpetual snow lies generally at from 12,000 to 13,000 feet: above this is a region of lofty forbidding peaks, of vast snow-fields and mighty glaciers, among which the principal rivers and their affluents find

their sources. Below the snow line we come upon a belt, descending sometimes to 8,000 feet, of gentler slopes, more or less covered with fine pine trees, and carpetted in summer with bright soft turf and beautiful flowers. These pleasant slopes give place abruptly to crags and pinnacles and steep faces of bare rock, on which markhor and ibex alone find sure footing. From these barren heights huge tali of shingle slope down to the valleys below, while the side streams coming from the glaciers and melting snow-fields wash down from the mountain sides vast masses of mud and débris, which, on the stream emerging from the usually narrow mouth of the ravine into the main valley, are deposited in the form of large alluvial fans* through which the stream cuts its way in a deep channel. These fans are the only cultivable parts of the country, and where they are tilled, the water necessary for cultivation, is, in this rainless region, brought down from the stream at its point of issue from the hills in numerous, well laid out, canals. Almost the only other moisture the ground receives is from the melting of the snow which falls during the winter months.

The paths, as a rule, lie low down in the valleys, near the rivers' edge, ascending and descending considerably here and there to avoid some precipice or treacherous slope; and from the low elevation of his route, it is seldom that the traveller sees the higher peaks and ranges on either side. His view is bounded by the line of bare precipices and fantastic pinnacles of the lower ranges, and as he crosses, with discomfort, the shingle slopes every ready to move down under his weight, he gazes upwards with wonder at their vast height and at the frowning rocks above. Passing onwards he has difficulty in picking his way, for signs of a pathway are almost invisible among massive boulders heaped up in confusion, from which all smaller particles of rock have long since been washed away. Now he comes to a precipice, round the face of which, at a dizzy height above the foaming torrent below, runs what, by courtesy only, can be called a road, consisting as it does of a narrow cornice, some three feet wide at the most, somewhat insecurely supported by stone walls loosely built up or by shrubs and posts fixed in cracks and fissures of the rocks, the superstructure formed of brushwood and earth. Clefts in the face of the rock often break the continuity of the paths, and are crossed by a few unfixed logs thrown across, which move and turn under the foot of the traveller; occasionally advantage is taken of these clefts to reach a higher level for the roadway, and this is done by means of rude notched

* A good description of the manner in which these fans are formed will be found in the interesting geological chapter by Dr. Giles.



BRIDGE AND PATH, CHITRÁL.

beams placed obliquely from side to side of the cleft. Of course, over such places it is impossible to take animals laden or unladen; so a higher path, sometimes ascending 1,000 feet, is zigzagged over the mountains for their benefit in summer, or a ford in winter gives them passage. Even these upper paths are only steep rocky staircases up which the poor beasts of burden struggle with much toil and frequent rests. Here and there a river has to be crossed, and this is done by means of several kinds of bridges.

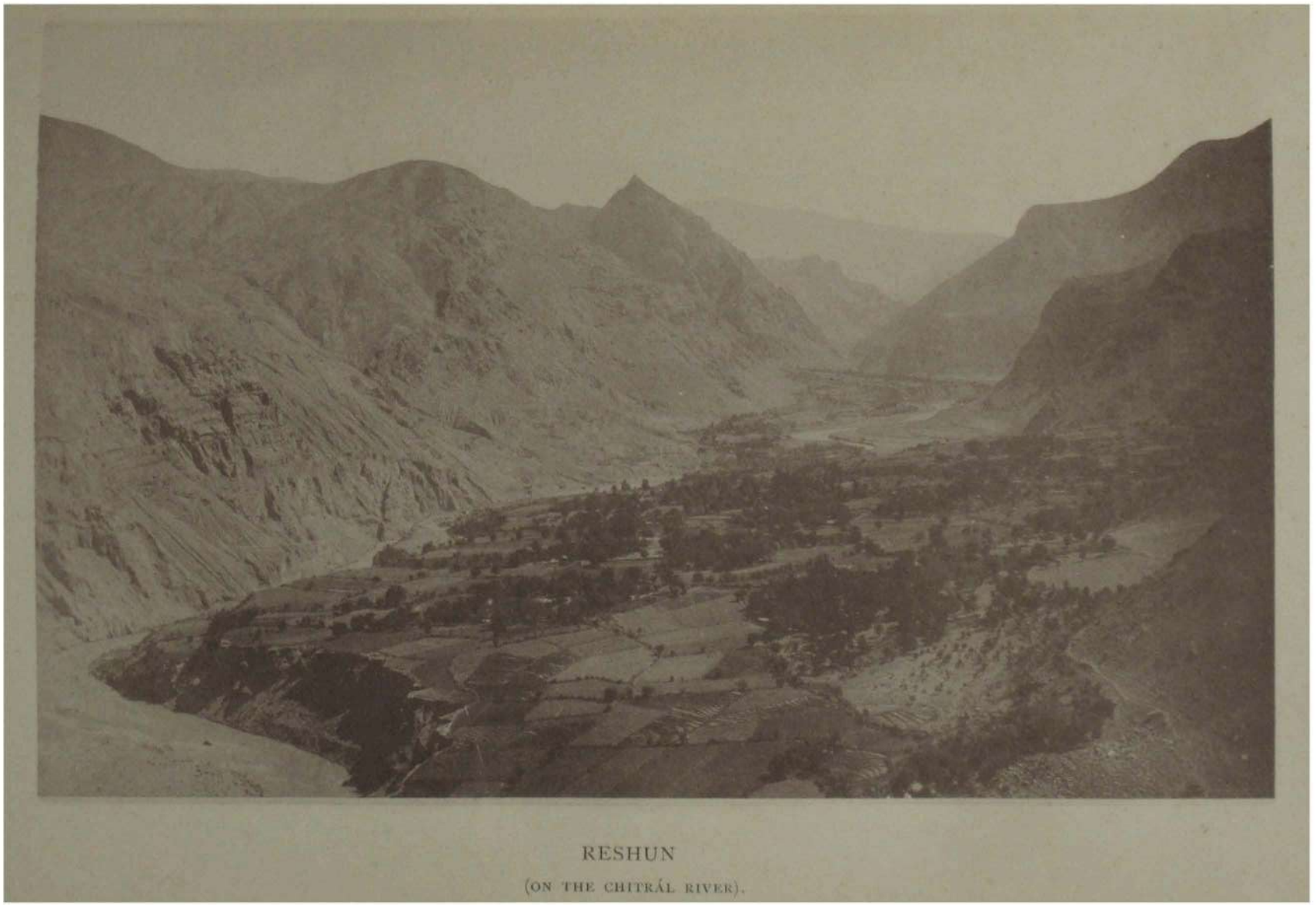
The best are rude examples of the cantilever principle. Large piers of rubble masonry are first constructed and carried to the requisite height: strong beams, slightly projecting over the water, are then embedded in these and a layer of masonry built over their butt ends; other series of beams are built into the piers in like manner, projecting further and further over the water until they approach each other sufficiently for the space between to be bridged over by a single length of beam. The superstructure is formed of rough planks. They are somewhat shaky, but in reality are stronger than they seem to be, and both men and animals soon get accustomed to them. Then there are wickerwork footbridges made of plaited osiers. They are called "Chipul;" their vibration is very great; and they must be crossed cautiously by the most experienced. Persons have to cross by them singly and horses cannot use them. Sometimes, as at Kala Drosh, the river is crossed by two long pliant beams, each a few inches wide and not lashed together anywhere, bending and rebounding separately, at each step. Lastly we have the suspension bridge, which consists of ropes formed of plaited willow or birch twigs, lightly bound together in groups of threes. One triple plait forms the footway, about six inches wide, to secure the full advantages of which width the foot must be placed across and not parallel to the ropes; the other two triple plaits form the suspension ropes and handrails at a height of from two to three feet above the footway, and are kept apart at intervals by means of forked sticks which pass under the roadway, and are strengthened at the top by cross pieces, which have to be straddled over by the passenger. The roadway is connected with the suspension ropes by further single plaits at intervals of six feet. The ends of the three triple plaits are securely anchored round logs kept firm by heavy rocks heaped on them. Where the situation admits, the bridge is suspended across a narrow gorge from the steep rocks high above the river, but where the banks are low the landing stages and suspension piers have to be built up. The dip is very considerable generally, especially when great spans are required, as the ropes do not bear much tension. They sway about very much in a high wind, and in the centre are often nervously near the tossing tumbling

torrent which goes boiling along beneath. In some cases one bank is much higher than the other, and the steep incline adds to the difficulty in crossing from the lower side. These bridges are generally renewed yearly; the materials are collected by the villagers from the hills and the ropes are plaited in four days—the bridge being put up in another two. They are capable of bearing from 12 to 20 men on them at once, though 12 is the number considered to be the limit of safety. The bridge at Cherkala has a span of 120 yards. Men carry large and cumbrous loads across these bridges. Colonel Biddulph says he has known cases of men being carried across on the backs of others: sheep and calves are also carried across on men's shoulders. Accidents by falling from them are unknown. In some suspension bridges in Kashmír the ropes are formed of hide giving a minimum of footing. One has seen a very feeble old man cross a hide bridge in safety, though he had to be lifted on to the footropes, which were at a height of about four feet from the ground. Ordinary passengers swing themselves up by a knotted hand-rope.

Our traveller having now won well past all these dangers turns a corner, and sees what at first he fears can only be a mirage, or image of the brain, from its exceeding beauty and contrast with all the frightful barrenness through which he has just passed. A veritable oasis springs up before his tired gaze. From out a dark and threatening gorge issues a clear, sparkling stream, winding its way in a deep channel, with much murmuring and many tumblings among huge boulders, through a large alluvial plateau on which stand little villages of mud and stone nestling among *chinar* trees, in the deep shade of which lie travellers in many-coloured coats taking their noon-tide rest; their horses tethered hard by drowsily munching a few stalks of Indian corn, or lazily drinking from the little channels of clear water which go babbling on through sunshine and shade to irrigate the fields beyond. The towers of a fort stand up above the trees, their mud walls glistening like stone in the brilliant sunshine. Rose bushes in full bloom, making the still air fragrant, line the way, peeping over or hiding the rough stone walls which bound the lanes on either side, while heavily laden orchard trees, mulberries, and rich trailing vines break up the green and gold of the fruitful fields; a lovely picture set in a rugged frame of bristling rocks, while here and there an envious glacier, rolling down some dark ravine, seems about to break in on all the peaceful luxuriance of the scenes below. In its stony bed in the valley at the foot of the alluvial cliffs the big river rushes along, thick, and of a pallid brownish green colour, betraying its glacial origin, and into it the village stream runs, its clear blue contrasting well with the other turbid waters; and here, if the traveller is an angler, and can spare the time this afternoon, he may well pause awhile, for at the tail of the clear water, and



TWIG BRIDGE AT CHORKALA.



RESHUN

(ON THE CHITRÁL RIVER).

just within the shadow of the muddy wavelets, he shall find many fine fish lying eager for any prey, worms, flies, grasshoppers, which may be carried down to them, and in a couple of hours he shall have made a welcome addition to the evening fare of himself and his followers.

## Political Geography.

The whole region treated in this report may, from a political and administrative point of view, be subdivided into four distinct areas:—

I. The Tájik provinces of Wakhán, Ishkasham, and Zebák, which are now all directly subject to the Amír of Afghánistán.

II. The independent states of Hunza and Nagar.

III. Chitrál, which now includes Yásín and the Karumbar and Ghizar valleys. Practically speaking, Chitrál includes everything between the Hindú-Kush and Hindú Ráj ranges, from Gákúch and Ishkúman on the east to the Dúráh and Mírkaní on the west. It also includes the narrow valley between Mírkaní and Asmár.

IV. Káfiristán, or the country inhabited by non-Mussulmán races.

As regards the first division, it should be distinctly understood that the whole is now under the direct administration of the Amír's officials. These districts are essentially Tájik states, and have always been till now more or less feudatory to the Mírs of Badakhshán and *never* to the Kháns of Bokhára. It is necessary to bear this in mind as the Russian staff map draws the Afghán frontier at the eastern boundary of Badakhshán, that is, at the water-shed of the great span from Tirich Mír, which separates the drainage of Badakhshán from the Upper Oxus drainage. This boundary gives Wakhán and Ishkasham, not to mention Shighnán and Roshán, to Bokhára; but that state has no vestige of a reasonable claim to these provinces. Historically, politically, and ethnologically, they belong to the *de facto* rulers of Badakhshán.

Another line of separation is the fact that the people are Shíahs of the Maulai sect, while those of Bokhára are amongst the most bigoted Sunis in Asia. The above brief statement of facts shows on what an unsubstantial basis the impudent rectification of boundaries foreshadowed by the staff map has been made.

In 1872–73 negotiations took place between the British and Russian Governments with reference to the delimitation of the Afghán frontier. There was a considerable divergence of views regarding Badakhshán and Wakhán, the Russian Government deeming it advantageous to the peace of Central Asia that those provinces should be independent; but ultimately, in

1873, the Russian Government recognised the claims of the Amír to Badakhshán and Wakhán, from the Victoria lake on the east to the confluence of the Kokcha and Oxus on the west, the Oxus itself being recognised as the northern boundary. Nothing could have been more indefinite or ill-conceived than this agreement.

In the first place it admitted the Panja to be the main Oxus river. This is by no means certain. The Murghábi or Aksú has considerable claims to the honour. In the first place, its local name, the Aksú, is very probably the origin of our name Oxus; and in the second, it has a longer course than the Great Pamír branch of the Panja. On the other hand, the volume of the Panja is, according to Mr. Ney Elias, greater than that of the Murghábi at their junction. If volume is to decide the question, the Panja no doubt must be accepted as the Oxus, and in that case it is the Sarhad branch, or Áb-i-Wakhán, to which the honour of the main source must be accorded, as not only is its course longer, but at its junction with the Great Pamír branch, it has certainly a greater volume of water than that branch. We may therefore conclude that the Oxus is either the Murghábi or the Sarhad branch of the Panja. It is decidedly not Wood's river, and therefore the agreement of 1873 rests on a false assumption. But, apart from this, there was the still graver error of making a river the boundary in a region of mountains. In such regions a river never is a boundary; all cultivation is naturally in the valleys, and the villages are always found on both banks.* The people inhabiting the villages on both banks are always, for any part of its course, of the same race, and naturally under the same rulers. Thus, in the Panja valley all the inhabitants above a certain point are Wakhis, while below in succession come Ishkasham, Gharán, Shighnán, Roshán, and Darwáz. It is the same in the tributary valleys. In no case do we find the people on one bank distinct from those on the other. The only exception to this rule is, as far as is known, that of Hunza and Nagar. Consequently, the riverain boundary, as laid down in Walker's map, is based on unscientific principles. On the other hand, in these mountainous countries, watersheds are universally recognised as boundaries. They are, as a rule, absolute physical barriers for six or eight months of the year, and the consequence is there is very little communication between the different valleys, with the natural result that these watersheds have ultimately become political frontiers, and very often linguistic ones as well. So true is this that practically the agreement of 1873 has been a dead letter from its commencement. The Bokháran State of

* This remark applies to the N.W. frontier, and not to the hill tribes on the N.E. frontier, such as the Nagas, Akas, and Daphlas, &c., whose villages are generally on the ridges themselves, and seldom down in the valleys. The hills here are, of course, of a gentler character and not so lofty as those referred to above.

Darwáz occupies both banks of the Oxus, while Wakhán never has been divided in the manner shown in the map. As this report does not deal with Shighnán and Roshán, it is superfluous to show where the real line of demarcation should be; but in any case the agreement of 1873 cannot remain in force, and either Wakhán and Ishkasham as a whole must be recognised as appendices to Badakhshán, or else the whole must be abandoned.

## Communications.

The roads traversing this area are fully described in the chapter devoted to routes. It may, however, convey a clearer idea of the region to give a brief summary on this subject here. The only means of communication are by road. None of the rivers are navigable, and boats are unknown. These roads are, as a rule, mere footpaths, often very difficult, and even dangerous for men on foot, so that, generally speaking, the traveller must depend on coolie carriage alone. This is the more essential, as the bridges are for the most part of a nature unsuitable for animals.

The whole region naturally divides itself into two parts, that north of the Hindú-Kush, and that to the south. In the northern portion the valleys are, generally speaking, wider, more level, and practicable in their beds; they are consequently much easier than the roads south of the Hindú-Kush, and as a rule, are practicable for pack-horses and even camels. Forage, too, is more easily procurable. The principle routes are:—

(1.) From Kala Panja to Yárkand, *viâ* the Great Pamír, a summer route.
(2.) From Kala Panja to Yárkand, *viâ* the Little Pamír, the winter route.
(3.) From Kala Panja to Zebák.
(4.) From Zébák to Faizábád.
(5.) From Zébák to the Dúráh pass.

All these routes are practicable for pack animals. The only passes across the Hindú-Kush by which pack animals can be taken are the Dúráh, the Baróghil, and the Kilik.

On the southern side of the Hindú-Kush the nature of the country changes. The valleys for the most part are very narrow, and the mountains which enclose them precipitous, rocky, and barren, right down to the water's edge, the roads consequently, instead of being in the valley bottoms, are generally carried along the face of the hills, and are very rocky, tortuous, and uneven. Practically the only mule roads are:—

(1.) That from Dúráh to Chitrál; very bad indeed.
(2.) From Chitrál to Aián.

(3.) From Chitrál to Pesháwar, *viâ* the Lowárí pass and Dír.

(4.) From Chitrál to Mastúj.

(*a.*) *Viâ* the left bank to Sanóghar, and thence along the right bank, recrossing at Mastúj.

(*b.*) *Viâ* Maroi, Prét, and Drásan.

(*c.*) *Viâ* Parsán, Ovír, and Kúsht.

The last is the best for laden animals, although it crosses spurs from Tirich Mír varying from 8,000 ft. to 13,000 ft. It is the route taken by traders going to Turikho for orpiment. It is, of course, only open in summer.

(5.) From Drasan to the orpiment mines at the mouth of the Lúnkú valley (Turikho).

(6.) From Mastúj to Gilgit, *viâ* the Shandúr pass and Gákúch.

(7.) From Mastúj to the Baróghil, *viâ* the Yárkhún valley. Practicable only in the winter.

(8.) From Gupis, *viâ* Yásín, to Handúr or Túi. Practicable only in winter, as the Ghizar river is unfordable in summer.

(9.) Gilgit to Astór.

Although the above are called pack roads, they would not be considered such in any other region of the world. From Gilgit to the Dúráh, and to Mírkani on the Dír route, they are simply abominable. The old road from Simla to Kálka is a magnificent *chaussée* compared with any one of these In addition to the difficulties of the road, there are those of finding supplies for animals. The grazing grounds are high up in the mountains or at the heads of the various valleys, and the stores of *bhúsa* and grain kept in the villages are limited. So from every point of view it is best to employ coolie carriage, and the best carriers are to be obtained from Baltistán.

## Climate.

As in the eastern Hindú-Kush region we have every variety of altitude from that of eternal snow to 5,000 and 4,000 feet, every variety of climate may naturally be expected, but there is one special characteristic of this region—its rainless character. From spring to autumn there is little or no rain, while during the winter months the fall is almost entirely in the shape of snow. The consequence of this is the general arid nature of the whole Hindú-Kush region. The pasturages are found usually at those elevations which are for several months under snow, and where basins or plateaux permit of the water soaking into the soil. There is certainly more pasturage and more wood to be found between 7,000 ft. and 10,000 ft. than at lower elevations. Cultivation can only be carried on by irrigation, and that again depends on the amount of snow water available. Consequently,



BALTI COOLIES.

what we call a bad or severe winter is for the Hindú-Kush regions a good winter, as it ensures an unfailing supply of water and a good harvest.

The cold in winter is, of course, intense at the higher elevations, say from 8,000 ft. upwards, while in the valleys and at lower elevations it varies considerably with the aspect. Valleys running north and south are very much colder than those running east and west. For instance, in the Gilgit valley, when snow falls it seldom lies for more than a few hours; while in the Chitrál valley, at almost exactly the same altitude and latitude, snow lies every winter for several weeks. The fact is, the valleys being so narrow, those running north and south get fewer hours of sunshine than those running east and west.

The months of April, May, September, and October are certainly the most agreeable in the Hindú-Kush, as June, July, and August are always very hot in the valleys. During those months Búnji is almost unbearable, and the Chitrál valley below Chitrál is also unpleasantly hot. But the heat can always be escaped by ascending 3,000 feet. At the beginning of July, when the heat of Chitrál was most oppressive, it was delightful in tents at Parsán, 3,800 feet above Chitrál. There is very little disease or sickness in the eastern Hindú-Kush, which presumably may be attributed to the dryness of the climate and the purity of the water. There is, of course, a certain amount of fever, and a good deal of goître, but on the whole it is probably as healthy a country as one would find in Asia. Nearly all the party were in excellent health from beginning to end of the expedition. The following are some meteorological observations recorded during the travels of the mission.

# Meteorological Observations from July 1885 to July 1886.

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 44,491 | 36,440 | | | |
| | 1885. | | | | ° | ° | ° | | | | | |
| Gilgit | July 29 | 2 p.m. | 23·80 | 24·60 | 86 | 87 | 73 | — | — | N.W. | 4,890 | Fine and bright all morning till 3½, cloudy and windy till 7 p.m. Bright night. |
| " | July 30 | 8½ a.m. | 24·00 | 24·75 | 77 | 81 | 69 | — | — | N.W. | — | Very cloudy day. Fine evening. Little wind during night. |
| " | July 31 | 8½ a.m. | 24·10 | 24·85 | 77 | 88 | 70 | — | — | W. | — | Fine all day. No breeze. |
| " | " | 3 p.m. | 23·90 | 24·65 | 87 | — | — | — | — | — | — | " " |
| " | Aug. 1 | 7 a.m. | 23·90 | 24·70 | 72 | 92 | 70 | — | — | — | — | Fine and still all day. |
| " | " | 3 p.m. | 23·80 | 24·55 | 92 | — | — | — | — | — | — | Fine and still. |
| " | Aug. 2 | Noon | 23·75 | 24·55 | 92 | 94 | 76 | — | — | — | — | " " |
| " | " | 5 p.m. | 23·70 | 24·45 | 93 | — | — | — | — | — | — | " " |
| " | Aug. 3 | 8½ a.m. | 23·85 | 24·65 | 84 | 95 | 75 | — | — | — | — | " " |
| " | " | 4 p.m. | 23·70 | 24·47 | 95 | — | — | — | — | — | — | " " |
| " | Aug. 4 | 8½ a.m. | 23·85 | 24·65 | 86 | 96 | 75 | — | — | — | — | " " |
| " | " | 12½ p.m. | 23·75 | 24·55 | 93 | — | — | — | — | — | — | " " |
| " | " | 4 p.m. | 23·70 | 24·50 | 95 | — | — | — | — | — | — | " " |
| " | Aug. 5 | 9½ p.m. | 23·65 | 24·45 | 86 | 96·5 | 77 | — | — | — | — | " " |
| " | Aug. 6 | 4 a.m. | — | 24·45 | 77 | 97 | 76 | — | — | — | — | " " |
| " | Aug. 7 | 9 a.m. | 23·80 | 24·55 | 86 | 98 | 77 | — | — | — | — | " " |
| " | Aug. 8 | 3 p.m. | — | 24·40 | 95 | 98 | — | — | — | — | — | " " |
| Hinzal | " | 7 p.m. | — | 24·2 | 85 | — | 85 | — | — | — | 5,200 | Fine hot clear day. |
| Sharót | Aug. 9 | 2 p.m. | — | 23·4 | 98 | 99* | 72 | — | — | — | 6,070 | |

The thermometer in the bungalow read 8° less than in the verandah when the maximum was taken. The readings in columns 6, 7, and 8, are from thermometers hung up in the verandah exposed to the air, but protected from the sun's rays.

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. 4. | No. 15. | | Max. | Min. | 44,491 | 36,440 | | | |
| | | | | | | During preceding 24 Hours. | | | | | | |
| | 1885. | | | | ° | ° | ° | | | | | |
| Sharót | Aug. 10 | 9 a.m. | — | 23·50 | 95 | 99 (*a*) 94 (*b*) | — | — | — | — | — | Dry clear day. (*a.*) In tent on table. (*b.*) In tent on ground, also under shade of trees. Few drops of rain at night. |
| „ | „ | Noon | 22·88 | 23·60 | 98 | — | — | — | — | — | — | |
| „ | „ | 3 p.m. | 23·80 | 23·60 | 95 | — | — | — | — | — | — | |
| Dalmati | Aug. 11 | 5 p.m. | — | 23·75 | 80 | — | 55 | — | — | — | 5,800 | Rainy morning. Cool and cloudy till 2. Bright afternoon and evening. |
| „ | „ | 10 p.m. | — | 23·80 | 74 | — | — | — | — | — | — | |
| „ | Aug. 12 | 5 a.m. | — | 23·90 | 64 | — | — | — | — | — | — | |
| Singal | „ | 3 p.m. | — | 23·45 | 90 | 92 | 62 | — | — | E. | 6,080 | Fine and bright, slight breeze. |
| „ | Aug. 13 | 6 a.m. | — | 23·65 | 65 | — | — | — | — | — | — | Fine. |
| Gókúch | „ | 4 p.m. | 21·85 | 22·50 | 85 | 90 | 62 | — | — | S.E. | 7,200 | Fine, very slight breeze. |
| „ | Aug. 14 | 6 a.m. | — | 22·65 | 66 | — | — | — | — | — | — | Fine. |
| Hupar | „ | 4 p.m. | — | 23·20 | 92 | 101 | 69 | — | — | — | 6,450 | Fine, no breeze. |
| „ | Aug. 15 | 6 a.m. | — | 23·20 | 72 | — | — | — | — | — | — | Fine. |
| Roshan | „ | 4 p.m. | — | 22·60 | 94 | 98 approx. | 72 | — | — | — | 7,050 | „ |
| „ | Aug. 16 | 5 a.m. | — | 22·80 | 72 | — | — | — | — | — | — | „ |
| Jandrot (or Janjirot) | „ | 4 p.m. | 21·35 | 22·10 | 91 | 98 | 66 | — | — | E. | 7,700 | Strong breeze till 8 p.m. |
| „ | Aug. 17 | 4 a.m. | 21·55 | 22·25 | 65 | 94 | 63 | — | — | — | — | „ „ |
| „ | „ | 4 p.m. | 21·40 | 22·15 | 86 | — | — | — | — | W. | — | Fine hot morning; heavy thunderstorm and violent wind from 3½ p.m. till 4½ p.m. |
| „ | Aug. 18 | 6 a.m. | 21·60 | 22·30 | 76 | 90 | 67 | — | — | — | — | |
| „ | „ | 4 p.m. | 21·45 | 22·15 | 86 | — | — | — | — | E. | — | Fine and still, slight fitful breeze in afternoon. |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. 4. | No. 15. | | Max. | Min. | 108,520 | 108,506 | | | |
| | | | | | | During preceding 24 Hours. | | | | | | |
| | 1885. | | | | ° | ° | ° | | | | | |
| On road above Khalta | Aug. 19 | 10 a.m. | | 21·30 | — | — | — | — | — | — | — | |
| Gendai | „ | 4 p.m. | | 22·05 | 75 | — | 67 | — | — | — | — | Dull early; fine from 10; showery evening, distant thunder, high wind from 7 to 8 p.m. |
| „ | „ | 10 p.m. | | 22·15 | 75 | — | — | — | — | W. | — | |
| „ | Aug. 20 | 6 a.m. | | 22·20 | 70 | — | — | — | — | — | — | Slight shower at 6 a.m.; fine till 4 p.m., shower till five, strong breeze most of afternoon. |
| Yasin | „ | — | | — | — | 67 | 65 | — | — | S. | — | |
| Handur | Aug. 21 | 2 p.m. | | 21·80 | 76 | — | 56 | — | — | — | — | Heavy showers from 3½ to 4½ a.m.; few drops rain at 11 a.m.; heavy showers at 8 p.m. |
| Darkot | Aug. 22 | — | | — | — | — | 56 | — | — | W. | — | Fine bright day, little breeze. |
| „ | Aug. 23 | 5 p.m. | | | 70 | 77 | 55 | 195·5 | 195·5 | — | 9,160 | „ „ |
| Camp below Darkot pass | Aug. 24 | — | | | — | — | 37 | — | — | — | 13,591(*a*) | Bivouac. Thermometer in open sheltered by a rock. Strong breeze during early morning. |
| (South of) „ | Aug. 25 | 6½ a.m. | | | 42 | — | 37 | 187·8 | 187·8 | — | 15,000* | Fine clear day and night. |
| Baroghil Plain | Aug. 26 | 8 a.m. | | | 68 | — | — | 190·8 | 190·8 | — | 11,960 | Fine day, cloudy evening; rain during the night. |
| Camp, Shona-i-dildi | „ | — | | | — | — | 55 | — | — | — | — | |
| Iskrolkench | Aug. 27 | — | | | — | — | 47 | — | — | — | — | Dull cheerless morning; fine evening and night. |
| Six miles above Topkhana on a little ketal. | Aug. 28 | — | | | — | — | 49 | — | — | — | — | Cloudy and cheerless day; windy, with a little rain during morning. |
| Three miles below Topkhana | Aug. 29 | — | | | — | — | 57 | — | — | — | — | Fine bright day with slight breeze. |
| Jhopu | Aug. 30 | — | | | — | 90 | 57 | — | — | — | — | Very hot bright day, clear pleasant night. |
| Miragrám | Aug. 31 | — | | | — | 68 | 58 | — | — | — | — | „ „ „ |
| Brop | Sept. 1 | — | | | — | 65 | 56 | — | — | — | — | Pleasant day, clear and bright, slight breeze. |
| Mastúj | Sept. 2 | — | | | — | 86 | — | — | — | W. | — | „ „ strong breeze in evening for a short time. |
| Sanóghar | Sept. 3 | — | | | — | approx. 83 | 62 | — | — | W. | — | „ „ |
| „ | Sept. 4 | 6 a.m. | 21·03 | | 62 | 84 | 62 | — | — | W. | 7,650 | „ „ |

This barometer did not work above 8,000 feet.

This barometer had a fall, and was thrown out of order.

* Deduced from (*a*).

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 108,520 | 108,506 | | | |
| | 1885. | | | | ° | ° | ° | | | | | |
| Buni | Sept. 5 | 6 a.m. | 21·9 | — | 65 | — | 56 | — | — | W. | 6,864 | Fine day, cloudy and windy evening. |
| Réshun | Sept. 6 | 6 a.m. | 22·2 | — | 68 | — | 68 | — | — | W. | 6,480 | Fine day, windy night and a little rain. |
| Baranas | „ | 3 p.m. | — | — | 76 | — | — | 200·7 | 200·7 | — | 6,110 | Rainy morning. Fine afternoon. |
| „ | Sept. 7 | 4 p.m. | 22·50 | — | 76 | 80 | 57 | — | — | W. | — | Rain about noon. Fine evening with gusts of wind. |
| „ | „ | 10 p.m. | 22·65 | — | — | — | — | — | — | — | — | |
| Mori | Sept. 8 | 4 p.m. | 22·05 | — | 85 | 91 | 62 | — | — | W. | 5,650 | Fine day. Very windy at sundown. |
| „ | Sept. 9 | 6 a.m. | 23·10 | — | 65 | 90 | 62 | — | — | W. | — | Fine day, slight breeze in afternoon. |
| Koghazi | Sept. 10 | — | — | — | — | 89 | 62 | — | — | W. | 5,450 | „ „ „ |
| Chitrál | Sept. 11 | 6 p.m. | 25·70* | — | 68 | 86 | 54 | — | — | — | 4,980 | Bright morning and evening. Thunder and little rain from 12 to 4 p.m. Cloudy evening. |
| „ | „ | 9 p.m. | 26·00 | — | 60 | — | — | — | — | — | — | |
| „ | Sept. 12 | 8 a.m. | 26·00 | — | 70 | 86 | 55 | — | — | W. | — | Bright fine day, breeze in afternoon. |
| „ | „ | 4 p.m. | 25·70 | — | 64 | — | — | — | — | W. | — | „ „ |
| „ | „ | 10 p.m. | 25·80 | — | 66 | — | — | — | — | W. | — | „ „ |
| „ | Sept. 13 | 8 a.m. | 25·90 | — | 68 | 85 | 56 | — | — | W. | — | „ „ |
| „ | Sept. 14 | 8 a.m. | 25·95 | — | 62 | 65 | 61 | — | — | N.W. | — | Bright fine morning. Cloudy afternoon and evening, thunder in distance, N.W., in afternoon. Breeze. |
| „ | „ | 4 p.m. | 25·50 | — | 80 | — | — | — | — | — | — | |
| „ | Sept. 15 | 8 a.m. | 25·95 | — | 63 | 85 | 56 | — | — | W. | — | Bright morning, little shower at 11 a.m. Windy afternoon. Bright evening. |
| „ | „ | 4 p.m. | 25·80 | — | 80 | — | — | — | — | — | — | |
| „ | Sept. 16 | 8 a.m. | 25·95 | — | 65 | 85 | 57 | — | — | S. | — | Fine day. Wind in afternoon. |
| „ | „ | 12 noon | 25·78 | — | 85 | — | — | 202·60 (7,364) 202·95 | 202·50 (11,899) 203·10 | — | 4,980 | |

* Fell into water with pony. Reset after drying.

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. 4. | No. 18. | | Max. | Min. | 7,364 | 44,294 | | | |
| | | | | | | During preceding 24 Hours. | | | | | | |
| | 1885. | | | | ° | ° | ° | | | | | |
| Chitrál | Sept. 16 | 4 p.m. | 25·75 | — | 63 | — | — | — | — | — | — | |
| " | Sept. 17 | 9 a.m. | 25·75 | — | 73 | — | — | — | — | — | — | |
| " | " | noon | 25·70 | — | 67 | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·75 | — | 75 | — | — | — | — | — | — | |
| " | Sept. 18 | 6 a.m. | 25·90 | — | 60 | 85 | 57 | — | — | — | — | Dull day, little rain in morning. Too cloudy for sun or star observations. |
| Shoghót | Sept. 19 | 6 a.m. | 24·8 | — | 58 | — | 57 | — | — | — | 6,200 | Fine morning, cloudy afternoon, a little rain about p.m. |
| Drushp | Sept. 20 | — | — | — | — | — | 44 | — | — | — | 7,000 | Fine all day. |
| " | Sept. 21 | 6 a.m. | 24·10 | — | 50 | — | — | — | — | — | — | |
| Parabek | " | — | — | — | — | — | 39 | — | — | — | 7,830 | Fine morning; dull, cheerless afternoon. |
| " | Sept. 22 | 6 a.m. | 23·40 | — | 45 | — | — | — | — | — | — | |
| Shâh Salim | " | — | — | — | — | — | 30* | — | — | — | — | Fine clear day. |
| Khoranez | Sept. 23 | — | — | — | — | — | 29 | — | — | W. | — | Cloudy midday, very sharp cold wind blowing over pass. |
| Dúráh Pass | " | 4 p.m. | — | — | 34 | — | — | 196·50 | 196·15 | — | 14,678<br>14,810 | Observations taken 20 feet below crest of pass. |
| Shâh Salim (Hot springs). | Sept. 24 | 11 a.m. | — | — | 60 | — | — | 193·35 | 193·10 | — | 10,763<br>10,839 | Bright clear day, little wind. |
| Samanak | Sept. 25 | 5 p.m. | — | — | 48 | 60 approx. | 29 | 191·50 | 191·25 | — | 11,788<br>11,857 | Fine day, slight snowstorm at noon. |
| Zidig Pass | — | — | — | — | — | — | — | — | — | — | 14,850 | Deduced from Samanak by vertical angles along route. |
| Achmeddiwana | Sept. 26 | — | — | — | — | — | 37 | — | — | — | — | Fine all day. |
| Shui (Pshur) | Sept. 27 | 8 a.m. | 23·30 | — | 32 | 70 | 42 | 198·30 | 198·10 | — | 7,836 | Very fine morning; dull afternoon. |
| Apsai | Sept. 28 | 8 a.m. | 23·65 | — | 50 | 70 | 47 | — | — | — | 7,230 | " " " " |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. 4. | No. 15. | | Max. | Min. | 7,364 | 44,204 | | | |
| | | | | | | During preceding 24 Hours. | | | | | | |
| | | | | | ° | ° | ° | | | | | |
| Lutdih (Bagrmatal) | Sept. 29 | 9 p.m. | 24·5 | — | 50 | 70 | 47 | — | — | — | 6,662 | Very fine morning; very cloudy afternoon threatening rain, thunder cloud. |
| „ „ | Sept. 30 | 6 a.m. | 24·5 | — | 50 | 65 | 45 | — | — | — | — | Very cloudy dull day. Heavy snowstorm on hills most of day. |
| „ „ | Oct. 1 | 4 p.m. | 24·5 | — | 61 | 65 | 45 | — | — | — | — | Very cloudy dull day, with rain in afternoon. |
| „ „ camp below. | Oct. 2 | 6 a.m. | — | — | 50 | 65 | 45 | — | — | — | — | „ „ „ „ |
| Shawal Pass | Oct. 3 | 8 a.m. | — | — | 35 | — | 29 | — | — | — | 10,256<br>10,323 | Fine morning, slight fall of snow in afternoon. |
| Utarshish | Oct. 4 | 10 a.m. | — | — | 55 | — | 29 | 193·55 | — | — | 10,622 | Fine morning and evening; crossed the Shawal pass in a slight snowstorm. |
| Bumburet | Oct. 5 | 10 a.m. | — | — | 48 | — | 44 | 200·30 | — | — | 6,660 | Very fine day. |
| | | | | | | | | | -(36,444)* | | | |
| Aiân | Oct. 6 | 6 a.m. | 26·25 | — | 53 | 60 | 51 | 204·00 | 203·60 | — | 4,559 | Fine clear day and night. |
| „ | „ | Noon | 26·25 | — | 76 | — | — | — | — | — | — | |
| Chitrál | Oct. 7 | 9 p.m. | 25·90 | — | 60 | 75 | 53 | — | — | — | 4,990 | „ „ „ cloudy in evening. |
| „ | Oct. 8 | 6 a.m. | 25·90 | — | 55 | 75 | 51 | — | — | — | — | Fine morning, rain at intervals from noon. |
| „ | „ | 4 p.m. | 25·85 | — | 69 | — | — | — | — | — | — | |
| „ | Oct. 9 | 6 a.m. | 25·95 | — | 52 | 74 | 52 | — | — | — | — | Fine generally, though cloudy at times. |
| „ | „ | Noon | 25·85 | — | 69 | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·80 | — | — | — | — | — | — | — | — | |
| „ | Oct. 10 | 5 a.m. | 25·90 | — | 58 | 70 | 52 | — | — | — | — | Dull drizzling morning, turning to very wet afternoon. Fine but cloudy night. |
| „ | „ | 4 p.m. | 25·95 | — | 55 | — | — | — | — | — | — | |
| „ | Oct. 11 | Noon | 26·95 | — | 65 | 70 | 52·5 | — | — | — | — | Rainy morning till about 10 a.m. Fine day, though cloudy at times. |
| „ | „ | 9 p.m. | 26·00 | — | 60 | — | — | — | — | — | — | |

* No. 44,204 broken by a fall in the Shawal Pass

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 7,364 | 36,444 | | | |
| | 1885. | | | | ° | ° | ° | | | | | |
| Chitrál | Oct. 12 | 6½ a.m. | 25·93 | — | 53 | 70 | 47 | — | — | — | — | Cloudy, a few drops of rain about midday. |
| " | " | 4 p.m. | 26·00 | — | 65 | — | — | — | — | — | — | |
| " | Oct. 13 | 7 a.m. | 26·00 | — | 53 | 76 | 47 | — | — | — | — | Fine and bright. |
| " | " | 2 p.m. | 25·85 | — | 76 | — | — | 203·50 (198,520) 202·8 | 202·95 | — | — | |
| " | Oct. 14 | — | — | — | — | 76 | 47 | — | — | — | — | " " |
| " | Oct. 15 | 9 a.m. | 25·95 | — | 60 | 75 | 47 | — | — | — | — | " " |
| " | " | 6 a.m. | 26·10 | — | 55 | — | — | — | — | — | — | Fine, but threatening rain. |
| " | " | 9 p.m. | 26·05 | — | 60 | — | — | — | — | — | — | |
| " | Oct. 16 | 6 a.m. | 26·00 | — | 55 | 65 | 49 | — | — | S. | 4,980 | Fine morning, but windy. |
| " | " | 9 a.m. | 26·00 | — | 55 | — | — | — | — | — | — | " " |
| " | " | 4 p.m. | 25·95 | — | 60 | — | — | — | — | — | — | " " |
| " | Oct. 17 | 6 a.m. | 26·00 | — | 50 | 66 | 47 | — | — | S. | — | Fine morning, but cloudy, very cloudy and threatening afternoon. |
| " | " | Noon | 25·90 | — | 65 | — | — | — | — | — | — | Several violent gusts of wind during afternoon, very rainy nights. |
| " | " | 4 p.m. | 25·85 | — | 65 | — | — | — | — | — | — | |
| " | Oct. 18 | 6 a.m. | 26·00 | — | 60 | 65 | 45 | — | — | S.S.W. | — | Showery till 7 a.m. Cloudy and gusty afternoon. |
| " | " | Noon | 25·90 | — | 65 | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·90 | — | 60 | — | — | — | — | — | — | |
| " | Oct. 19 | — | — | — | — | 70 | 44 | — | — | — | — | Fine and bright all day, little gusty in the afternoon. |
| " | Oct. 20 | 6 a.m. | 26·05 | — | 50 | 74 | 44 | — | — | N.E. | — | Fine bright clear morning, strong cold wind, which went down towards noon. Fine afternoon and night. |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. 4. | No. 15. | | Max. | Min. | 44,491 | 36,440 | | | |
| | | | | | | During preceding 24 Hours. | | | | | | |
| | 1885. | | | | ° | ° | ° | | | | | |
| Chitrál | Oct. 20 | 9 a.m. | 26·10 | — | 55 | — | — | 204·10 | 203·35 | — | — | |
| ,, | ,, | Noon | 26·00 | — | 70 | — | — | — | — | — | — | |
| ,, | ,, | 4 p.m. | 25·95 | — | 67 | — | — | — | — | — | — | |
| ,, | ,, | 9 p.m. | 26·10 | — | 50 | — | — | — | — | — | — | |
| ,, | Oct. 21 | 6 a.m. | — | — | 44 | 71 | 45 | — | — | N.N.E. | — | Fine bright day. Breeze from 8 or 9 a.m. Sudden muddying of river during day. |
| ,, | ,, | Noon | — | — | 70 | — | — | — | — | — | — | |
| ,, | ,, | 9 p.m. | — | — | 50 | — | — | — | — | — | — | |
| ,, | Oct. 22 | 6 a.m. | 26·10 | — | 50 | 70 | 46 | — | — | N.N.E. | — | Same as yesterday morning. River clearer again. Looked like rain in afternoon. |
| ,, | ,, | 9 a.m. | 26·00 | — | 60 | — | — | — | — | — | — | |
| ,, | ,, | 4 p.m. | 25·95 | — | 65 | — | — | — | — | — | — | |
| ,, | ,, | 9 p.m. | 26·00 | — | 54 | — | — | — | — | — | — | |
| ,, | Oct. 23 | 6 a.m. | 26·00 | — | 50 | 68 | 46 | — | — | S.S.W. | — | Fine morning; sudden burst of wind and rain from 4 to 5 p.m. Fine night, but cloudy. |
| ,, | ,, | 9 a.m. | 26·00 | — | 60 | — | — | — | — | — | — | |
| ,, | ,, | 1 p.m. | — | — | 68 | — | — | 203·65 | 203·15 | — | — | |
| ,, | ,, | 4 p.m. | 26·00 | — | 60 | — | — | — | — | — | — | |
| ,, | Oct. 24 | 6 a.m. | 26·00 | — | 46 | 65 | 40 | — | — | S.S.W. | — | Fine bright morning; dark and threatening, and little wind from noon till 6. Fine night. |
| ,, | ,, | 4 p.m. | 25·98 | — | 59 | — | — | — | — | — | — | |
| ,, | Oct. 25 | 6 a.m. | 26·10 | — | 42 | 65 | 41 | — | — | — | — | Fine all day. |
| ,, | ,, | Noon | 26·00 | — | 65 | — | — | — | — | — | — | |
| ,, | ,, | 4 p.m. | 25·90 | — | 59 | — | — | — | — | — | — | |
| ,, | ,, | 9 p.m. | 26·00 | — | 48 | — | — | — | — | — | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. 4. | No. 15. | | Max. | Min. | 44,491 | 44,492 | | | |
| | | | | | | During preceding 24 Hours. | | | | | | |
| | 1885. | | | | ° | ° | ° | | | | | |
| Chitrál | Oct. 26 | 6 a.m. | 26·10 | — | 47 | 70 | 52 | — | — | N.E. | — | Fine and clear all day; high wind from 8 to 11 a.m. Very high wind from midnight. |
| „ | „ | 10 a.m. | 26·10 | — | 61 | — | — | — | — | — | — | |
| „ | „ | Noon | 25·98 | — | 75 | — | — | — | — | N.E. | 4,980 | |
| „ | „ | 6 p.m. | 26·00 | — | 59 | — | — | — | — | — | — | |
| „ | „ | 9 p.m. | 26·05 | — | 52 | — | — | — | — | — | — | |
| „ | Oct. 27 | — | — | — | — | — | 41 | — | — | — | — | Very high wind from about midnight till 8 a.m. Calmer, then clear. |
| „ | Oct. 28 | 6 a.m. | 26·10 | — | 42 | 70 | 42 | — | — | N.E. | — | Fine bright day, high wind at times till noon. Clouds on Tirich Mir, came from E. apparently. |
| „ | „ | Noon | 25·93 | — | 70 | — | — | — | — | — | — | |
| „ | Oct. 29 | 6 a.m. | 26·10 | — | 42 | 70 | 42 | — | — | — | — | Fine bright day. |
| Jughur | Oct. 30 | * | — | — | — | — | 42 | — | — | — | 4,600 approx. | „ |
| Bróz | Oct. 31 | — | — | — | — | — | 41 | — | — | S.W. | 4,500 approx. | „ Slight breeze. |
| Késu | Nov. 1 | — | — | — | — | — | 40 | — | — | — | 4,400 approx. | „ |
| Kala Drósh | Nov. 2 | — | — | — | 69 | — | 40 | 204·60 | 204·95 | — | 4,500 | „ |
| Kalkatak | Nov. 3 | — | — | — | — | — | 39 | — | — | — | 4,200 approx. | „ |
| Kala Drósh | Nov. 4 | — | — | — | — | — | 40 | — | — | — | — | |
| Ghairait | Nov. 5 | — | — | — | — | — | 36 | — | — | — | — | Fine morning, though fleecy clouds about. Dull afternoon. |
| Bróz | Nov. 6 | — | — | — | — | — | 39 | — | — | S.W. | — | Bright morning, dull afternoon; breezy. |
| Chitrál | Nov. 7 | — | — | — | — | — | 39 | — | — | S.W. | — | Fine bright day; slight breeze in afternoon. |
| „ | Nov. 8 | — | — | — | — | 69 | 39 | — | — | — | — | Clouds on Tirich Mir from 10 a.m. Cloudy towards evening. |

* Aneroids not working satisfactorily between 30th October and 7th November, must have had a jerk on the road to Kalkatak. Reset on the 8th November.

## METEOROLOGICAL OBSERVATIONS from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 44,491 | 44,492 | | | |
| | 1885. | | | | | | | | | | | |
| Chitrál | Nov. 9 | 6 a.m. | 26·10 | 26·15 | 40° | 65° | 37° | — | — | S.W. | — | Fine morning, dull afternoon rather. Stormy looking over Tirich Mir, which has been cloudy all day. Slight breeze in afternoon. |
| „ | „ | 3 p.m. | 26·00 | 26·08 | 64 | — | — | — | — | — | — | |
| | „ | 6 p.m. | 26·10 | 26·18 | 60 | — | — | — | — | — | — | |
| „ | Nov. 10 | 6 a.m. | 26·25 | 26·28 | 40 | — | — | — | — | — | — | Fine still morning. |
| Shoghót | „ | 5 p.m. | 25·25 | 25·25 | 46 | — | 39* | 201·85 | 202·00 | — | 6,260 | Fine day. |
| „ | Nov. 11 | — | — | — | — | 62 | 39 | — | — | — | — | Fine clear morning. Cold. Ice in swamps at 8,000 ft. at 11 a.m. after sun had been on it for two hours. Snowing on high ranges. Cloudy evening. |
| Chitrál | Nov. 12 | — | — | — | — | — | 35 | — | — | S. | — | Very fine morning, slight breeze in afternoon and light clouds. |
| „ | Nov. 13 | — | — | — | — | 60 | 48 | — | — | — | — | Fine morning, dull afternoon. Snow falling heavily in higher ranges down to about 9,000 ft. |
| „ | Nov. 14 | 6 a.m. | 26·25 | 26·25 | 48 | 62 | 41 | — | — | N. | — | Cloudy all day, with gleams of sunlight. Snow melting on lower levels, gusts of wind at 6 p.m. |
| „ | „ | 9 a.m. | 26·30 | 26·30 | 52 | — | — | — | — | — | — | Little wind and rain rest of evening. |
| „ | „ | 11 a.m. | 26·25 | 26·32 | 60 | — | — | 204·10 | — | — | — | |
| „ | „ | 9 p.m. | 26·25 | 26·30 | 54 | — | — | — | — | — | — | |
| „ | Nov. 15 | — | — | — | — | 62 | 41 | — | — | — | — | Very fine bright morning. Gloomy afternoon. Moonlight night. |
| „ | Nov. 16 | 6 a.m. | 26·25 | 26·30 | 46 | 62 | 40 | — | — | — | — | Fine and bright all day. Very slight breeze at times. |
| „ | Nov. 17 | 9 a.m. | 26·25 | — | 50 | — | — | — | — | — | — | Very fine. |
| Koghazi | „ | 5 p.m. | 25·80 | — | 50 | — | 41 | — | — | N.E. | — | Fine morning. Dull cloudy afternoon, little rain during night. |
| Prét | Nov. 18 | 5 p.m. | 25·20 | 25·00 | 50 | 60 | 41 | — | — | S.W. | — | Very dull cheerless day, cold wind. Rain during night. |
| „ | Nov. 19 | 7 a.m. | 25·22 | — | 45 | — | — | — | — | — | — | Cloudy; rain clearing off. |
| Parpish | „ | 5 p.m. | 25·02 | 24·82 | 50 | 60 | 37 | — | — | S.W. | — | Cloudy morning; strong wind after sundown. Moonlight and fine night. |

* In partially closed tent.

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 44,491 | 44,492 | | | |
| | 1885. | | | | ° | ° | ° | | | | | |
| Parpish | Nov. 20 | 7 a.m. | 25·15 | 24·95 | 40 | — | — | — | — | — | — | Very wet from dawn till about 10. Cloudy afternoon and evening. Moonlight night, clouding over about midnight. |
| Gurkir | „ | 2 p.m. | 23·10 | — | 50 | 55 approx. | 28 | — | — | — | — | |
| „ | „ | 9 p.m. | 23·30 | 23·10 | 40 | — | — | — | — | — | — | |
| „ | Nov. 21 | 7 a.m. | 23·30 | 23·50 | 35 | — | — | — | — | — | — | Snowing a little. |
| Kósht | „ | 2 p.m. | 23·63 | 23·45 | 40 | — | — | — | — | — | — | Slight fall of snow all morning. Lifted slightly and gleam of sun at noon. Dull afternoon; mist on all hill tops. Fine night. |
| „ | „ | 5 p.m. | 23·70 | — | 38 | — | — | — | — | — | — | |
| „ | Nov. 22 | 7 a.m. | 23·80 | — | — | — | — | — | — | — | — | |
| Kala Drásan | „ | 3 p.m. | 24·60 | 24·35 | 35 | — | — | 200·90 | 201·00 | — | 6,634 | Very fine bright day. Little snow on tents in the morning. Clear night. |
| „ | Nov. 23 | 7 a.m. | 24·70 | — | 32 | — | 27 | — | — | — | — | |
| Sanóghar | „ | 9 p.m. | 24·20 | — | 34 | — | 25 | — | — | — | — | Clear bright day. Fine moonlight night. |
| „ | Nov. 24 | 7 a.m. | 24·00 | — | 30 | — | — | — | — | — | — | Bright fine morning, but clouds on Tirich Mir; cloudy dull afternoon. Aneroids did not work again. |
| Mastúj | „ | 5 p.m. | 23·80 | 23·50 | 39 | — | 22 | 199·10 | 199·30 | — | 7,760 | |
| Rahman | Nov. 25 | — | — | — | — | 40 | 20 | — | — | W. | — | Dull, cloudy, and cheerless all day. Snowing on high ranges. |
| Sor Láspúr | Nov. 26 | 5 p.m. | — | — | 32 | 35 | 10 | 195·45 | 195·65 | S.W. | 9,819 | „ „ „ Few gleams of sunshine occasionally. |
| Shandur Pass | Nov. 27 | Noon | — | — | 24 | — | — | 191·00 | 191·20 | — | 12,250 | |
| Chamarkand | Nov. 27 | — | — | — | — | — | — | — | — | — | — | Very fine bright day. Somewhat cloudy towards evening. Thermometer in sun on Shandur at 12.30, 37°; in shade, 24°. |
| Ghizar | Nov. 28 | 10 a.m. | — | — | 25 | — | 5 | 195·70 | 195·90 | — | 9,635 | Very fine bright day and night. Thermometer in shade at 10 a.m., 18°; in sun, 24°. |
| Chashi | Nov. 29 | — | — | — | — | — | 10 | — | — | — | — | Very fine bright day and night. Thermometer in tent at 8. a.m., 20°. Bright clear night. |
| Pringal | Nov. 30 | — | — | — | — | — | 18 | — | — | — | — | Fine bright day. Pringal is in shadow early in afternoon and till late in morning. |
| Dahimal | Dec. 1 | — | — | — | — | — | 20 | — | — | — | — | „ „ „ „ |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. 4. | No. 15. | | Max. | Min. | 44,491. | 44,492. | | | |
| | | | | | | During preceding 24 Hours. | | | | | | |
| | 1885. | | | | ° | ° | ° | | | | | |
| Janjrot | Dec. 2 | Noon | — | — | 50 | — | 26 | 199·90 | 200·15 | — | 7,354 200 feet below village. | Fine bright morning. Rather dull towards afternoon. |
| Róshan | Dec. 3 | 10 a.m. | — | — | — | — | 36 | 200·50 | 200·80 | — | 7,000 70 feet below fort. | Fine bright morning. Cloudy in afternoon. Dim night. |
| Húpar | Dec. 4 | — | — | — | — | 50 | 41 | — | — | — | — | Dull cloudy day and night. Damp air. |
| Gákúch | Dec. 5 | 10 a.m. | — | — | 39 | 50 | 32 | 200·25 | 200·45 | — | 7,136 | Dull cloudy morning. Little rain at intervals; cleared in afternoon. |
| Singal | Dec. 6 | — | — | — | — | 50 | 33 | — | — | E. | — | Cloudy cheerless day; slight cold wind. Cloudy night. |
| Gulapur | Dec. 7 | — | — | — | — | 60 | 43 | — | — | — | — | Very fine bright day. Clear evening. |
| Five miles above Hinzal | Dec. 8 | — | — | — | — | 60 | 39 | — | — | — | — | " " " |
| Gilgit | Dec. 9 | — | — | — | — | — | 32 | — | — | — | — | " " " |
| " | Dec. 10 | — | — | — | — | — | 32 | — | — | — | — | Dull day. |
| " | Dec. 11 | — | — | — | — | — | 32 | — | — | — | — | " |
| " | Dec. 12 | — | — | — | — | — | 32 | — | — | — | 4,890 | Fine and bright. |
| " | Dec. 13 | — | — | — | — | — | 32 | — | — | — | — | " " |
| " | Dec. 14 | — | — | — | — | — | 32 | — | — | — | — | " " |
| " | Dec. 15 | — | — | — | — | 50 | 30 | — | — | — | — | Very bright day. Clear moonlight night. |
| " | Dec. 16 | — | — | — | — | 49 | 32·5 | — | — | — | — | Dull day with few faint gleams of sunshine. Clear night. |
| " | Dec. 17 | — | — | — | — | 44 | 36 | — | — | W. | — | Very dull indeed all day. Snowing on hills around. |
| " | Dec. 18 | — | — | — | — | 44 | 36 | — | — | — | — | Snow down to within 500 feet of bungalow in early morning. Very dull all day, mist and clouds low down. Fine bright night though cloudy at times. |

## Meteorological Observations from July 1885 to July 1886—*continued*.

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. 4. | No. 15. | | Max. | Min. | 44,491. | 36,440. | | | |
| | | | | | | During preceding 24 Hours. | | | | | | |
| | 1885. | | | | ° | ° | ° | | | | | |
| Gilgit | Dec. 19 | — | — | — | — | 49 | 36 | — | — | — | — | Fine and bright all day and night. |
| " | Dec. 20 | — | — | — | — | 52 | 28 | — | — | — | — | " " " with a few light clouds. Clear evening. |
| " | Dec. 21 | — | — | — | — | 50 | 36 | — | — | — | — | Fine bright morning. Cloudy night. |
| " | Dec. 22 | — | — | — | 50 | 51 | 35 | 203·65 | 203·20 | — | — | Dull cloudy day. Snowing on hilltops around. Dull afternoon and evening. |
| " | Dec. 23 | — | — | — | 46 | 50 | 36 | 203·60 | 203·10 | — | — | Dull and cloudy day. Cloudy evening and night. |
| " | Dec. 24 | — | — | — | — | 52 | 30 | Other hypsometers were also read always with these as a check, and to test them for future use: it is unnecessary to insert the readings in these tables. | | — | — | Bright morning. Fine but somewhat dull afternoon. Cloudy night. |
| " | Dec. 25 | — | — | — | — | 49 | 29 | | | — | — | Very fine clear day throughout. Fine night. |
| " | Dec. 26 | — | — | — | — | 45 | 29 | | | — | — | Very bright day. Fine night. |
| " | Dec. 27 | — | — | — | — | 48 | 28 | | | — | — | Rather dull day. Very cloudy afternoon and evening. |
| " | Dec. 28 | — | — | — | — | 47 | 25·5 | | | — | — | Very bright and fine all day and night. |
| " | Dec. 29 | — | — | — | — | 46 | 28·5 | — | — | — | — | " " " |
| " | Dec. 30 | — | — | — | — | 45 | 30 | — | — | — | — | " " " |
| " | Dec. 31 | — | — | — | — | 49 | 22 | — | — | — | — | " " " |
| | 1886. | | | | Temperature in a room where barometers were hung. | | | | | | | |
| " | Jan. 1 | 9 a.m. | 25·95 | 25·90 | 49 | 44 | 21 | — | — | — | — | " " " |
| " | " | 9 p.m. | 25·65 | 25·82 | 53 | — | — | — | — | — | — | " " " |
| " | Jan. 2 | 9 a.m. | 25·95 | 25·90 | 50 | 45 | 23 | — | — | — | — | " " " |
| " | " | 9 p.m. | 25·85 | 25·80 | 51 | — | — | — | — | — | — | " " " |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Rcom. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 44,490 | 36,440 | | | |
| Gilgit | 1886. Jan. 3 | Noon | 25·80 | 25·70 | 53° | 44° | 31° | — | — | — | — | Very dull and cloudy all day. Hilltops invisible. |
| „ | Jan. 4 | 9 a.m. | 25·82 | 25·75 | 52 | 44 | 30 | — | — | — | — | Dull morning, sunny midday, cloudy evening. |
| „ | „ | Noon | 25·80 | 25·70 | 54 | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·75 | 25·70 | 54 | — | — | — | — | — | — | |
| „ | „ | 9 p.m. | 25·90 | 25·85 | 54 | — | — | — | — | — | — | |
| „ | Jan. 5 | 9 a.m. | 25·06 | 25·92 | 52 | 46 | 35 | — | — | — | — | Very dull all day. |
| „ | „ | Noon | 25·95 | 25·90 | 54 | — | — | — | — | — | — | |
| „ | „ | 9 p.m. | 26·00 | 25·95 | 54 | — | — | — | — | — | — | |
| „ | Jan. 6 | 9 a.m. | 26·05 | 26·00 | 53 | 43 | 36 | — | — | — | 4,990 | Very dull sleeting morning. Snow within 500 feet. Cloudy rest of day, but no sleet after 10 a.m. |
| „ | „ | 4 p.m. | 26·00 | 25·97 | 54 | — | — | — | — | — | — | |
| „ | Jan. 7 | 9 a.m. | — | 25·95 | 50 | 51 | 32 | — | — | — | — | Cloudy morning; bright afternoon and evening. |
| „ | „ | Noon | — | 25·90 | 54 | — | — | — | — | — | — | |
| „ | „ | 5 p.m. | 25·90 | 25·90 | 53 | — | — | — | — | — | — | |
| „ | Jan. 8 | 9 a.m. | — | 25·98 | 52 | 51 | 33 | — | — | — | — | Cloudy all day, but bright. |
| „ | „ | Noon | — | 25·06 | 53 | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·95 | 25·90 | 52 | — | — | — | — | — | — | |
| „ | Jan. 9 | 9 p.m. | 25·87 | 25·92 | 53 | 51 | 33 | — | — | — | — | Very fine and bright. A few clouds in afternoon. |
| „ | Jan. 10 | 9 a.m. | 25·90 | 25·92 | 52 | 54 | 33 | — | — | W. | — | Fine and bright at times, but not very sunny. Strong wind 7—9 p.m. |
| „ | Jan. 11 | 9 a.m. | 25·85 | 25·90 | 54 | 53 | 35 | — | — | — | — | Fine bright day; clear night till 9h, cloudy. |
| „ | „ | Noon | 25·85 | 25·89 | 58 | — | — | — | — | — | — | |
| „ | „ | 9 p.m. | 25·80 | 25·85 | 56 | — | — | — | — | — | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Room. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 15. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491. | 36,440. | | | |
| | 1886. | | | | | | | | | | | | | |
| Gilgit | Jan. 12 | 9 a.m. | 25·80 | 25·83 | 58 | — | 51 | 35 | — | — | — | W. | — | Cloudy, dull day. Cold wind in early morning. |
| " | " | Noon | 25·77 | 25·82 | 58 | 40 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·70 | 25·75 | 58 | — | — | — | — | — | — | — | — | |
| " | Jan. 13 | 9 a.m. | 25·70 | 25·75 | 53 | 40 | 50 | 32 | — | — | — | — | — | Cloudy; occasional gleams of light. |
| " | " | Noon | 25·69 | 25·73 | 58 | — | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·64 | 25·67 | 56 | — | — | — | — | — | — | — | — | |
| " | " | 9 p.m. | 25·65 | 25·70 | 55 | — | — | — | — | — | — | — | — | |
| " | Jan. 14 | 9 a.m. | 25·70 | 25·74 | 58 | — | 52 | 39 | — | — | — | — | — | Bright generally, but a few clouds about. Watery-looking moon and fleecy clouds. |
| " | " | Noon | 25·68 | 25·72 | 58 | 39 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·64 | 25·67 | 58 | — | — | — | — | — | — | — | — | |
| " | " | 9 p.m. | 25·70 | 25·73 | 54 | — | — | — | — | — | — | — | — | |
| " | Jan. 15 | 9 a.m. | 25·75 | 25·75 | 55 | — | 52 | 38 | — | — | — | W. | — | Bright day, but cloudy evening. Wind in morning. |
| " | " | Noon | 25·76 | 25·76 | 57 | 41 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·69 | 25·69 | 57 | — | — | — | — | — | — | — | — | |
| " | " | 9 p.m. | 25·70 | 25·73 | 54 | — | — | — | — | — | — | — | — | |
| " | Jan. 16 | 9 a.m. | 25·76 | 25·78 | 54 | — | 52 | 39 | — | — | — | S.W.W. | — | Bright morning; cloudy rest of day. High wind all day. |
| " | " | Noon | 25·77 | 25·76 | 57 | 45 | — | — | — | 203·80 | 203·85 | — | — | |
| " | " | 4 p.m. | 25·71 | 25·73 | 57 | — | — | — | — | — | — | — | — | |
| " | " | 9 p.m. | 25·70 | 25·72 | 53 | — | — | — | — | — | — | — | — | |
| " | Jan. 17 | 9 a.m. | 25·80 | 25·80 | 55 | 44 | 52 | 40 | — | — | — | — | — | Snow within 1,000 feet in morning. Sleet. |
| " | " | Noon | 25·80 | 25·80 | 58 | — | 52 | 40 | — | — | — | — | 4,890 | Cloudy all day, with rain at 5 p.m. Cloudy night. |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Room. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 15. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491. | 36,444. | | | |
| | 1886. | | | | ° | ° | ° | ° | ° | | | | | |
| Gilgit | Jan. 17 | 4 p.m. | 25·75 | 25·75 | 55 | — | — | — | — | — | — | — | — | |
| „ | „ | 9 p.m. | 25·77 | 25·80 | 55 | — | — | — | — | — | — | — | — | |
| „ | Jan. 18 | Noon | 25·86 | 25·88 | 56 | — | 52 | 40 | — | — | — | N.W. | — | Cloudy and sleety morning. Snow within 1,000 ft. Sunshine during day at times. |
| „ | „ | 4 p.m. | 25·83 | 25·83 | 56 | 48 | — | — | — | — | — | — | — | |
| „ | „ | 9 p.m. | 25·80 | 25·83 | 55 | — | — | — | — | — | — | — | — | |
| „ | Jan. 19 | 9 a.m. | 25·64 | 25·65 | 57 | — | 52 | 39 | — | — | — | S.W.W. | — | Cloudy, light rain, later sleet. High wind. |
| „ | „ | Noon | 25·60 | 25·60 | 57 | 45 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·50 | 25·50 | 57 | — | — | — | — | — | — | — | — | |
| „ | „ | 9 p.m. | 25·55 | 25·53 | 55 | — | — | — | — | — | — | — | — | |
| „ | Jan. 20 | 9 a.m. | 25·65 | 25·62 | 55 | — | 52 | — | — | — | — | N. | — | Misty dull morning. Bright but cloud wreaths rather low down during day. Bright night; clouds high. |
| „ | „ | Noon | 25·60 | 25·58 | 55 | — | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·56 | 25·60 | 53 | — | — | — | — | — | — | — | — | |
| „ | „ | 9 p.m. | 25·65 | 25·63 | In air 41 | — | — | — | — | — | — | — | — | |
| | | | Inside* | Outside* | | | | | | | | | | |
| „ | Jan. 21 | 9 a.m. | 25·75 | 25·77 | 41 | 39 | 55 | 36 | 36 | 203·65 | 203·35 | S.W.W. | — | Very fine bright day. Large clouds on highest hill-ranges, moving slowly northwards. Strong wind from 5–8 p.m. Light night, but cloudy. |
| „ | „ | Noon | 25·76 | 25·77 | 47 | 42 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·70 | 25·71 | 50 | 44 | — | — | — | — | — | — | — | |
| „ | „ | 9 p.m. | 25·68 | 25·75 | 43 | 41 | — | — | — | — | — | — | — | |
| „ | Jan. 23 | 9 a.m. | 25·65 | 25·70 | 39 | 36 | 53 | 38 | 38 | — | — | S.W.W. | — | Dull misty morning. Snow down to within 1,000. Sunshine from 9¼ to 11¼. Cloudy again in afternoon and evening. Very slight wind. |
| „ | „ | Noon | 25·62 | 25·66 | 48 | 43 | — | — | — | — | — | — | — | |
| „ | „ | 9 p.m. | 25·57 | 25·63 | 41 | 37 | — | — | — | — | — | — | — | |

* The average difference between the temperature inside the room and in the open in shade was 12°.

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. 4. | No. 15. | Dry Bulb. | Wet Bulb. | Max. | Min. | | 41,491. | 36,444. | | | |
| | | | | | | | During preceding 24 Hours. | | | | | | | |
| Gilgit | 1886. Jan. 23 | 9 a.m. | 25·55 | 25·62 | 41°5 | 38 | 52 | 36°5 | 35 | — | — | S.W.W. | — | Dull morning. Snowing on higher ranges. Few faint gleams of sickly sunshine at times. Very little wind. |
| " | " | Noon | 25·53 | 25·60 | 47 | 43 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·40 | 25·48 | 44 | 40 | — | — | — | — | — | — | — | Cloudy threatening afternoon. Dull night, snow falling. |
| " | " | 10 p.m. | 25·45 | 25·50 | 43 | 38 | — | — | — | — | — | — | — | |
| " | Jan. 24 | 9 a.m. | 25·63 | 25·67 | 40 | 37 | 50·5 | 36 | 35 | — | — | S.W.W. | — | Fine bright morning. Heavy clouds to N.E. on hilltops. Light clouds overhead. Clouds gathered about noon, but still bright. |
| " | " | Noon | 25·65 | 25·67 | 48 | 42 | — | — | — | — | — | — | — | |
| " | " | 3½ p.m. | 25·60 | 25·62 | 50 | 43 | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·68 | 25·65 | 40 | 34 | — | — | — | — | — | — | — | Fine clear evening. Clouds on high hills here and there. |
| " | Jan. 25 | 9 a.m. | 25·60 | 25·65 | 40 | 35·5 | 54 | 31·5 | 31 | — | — | — | — | Fine morning, light clouds. About noon sky clouded, seemed to threaten snow. Clouds cleared off towards N.N.E. after sunset. |
| " | " | Noon | 25·55 | 25·60 | 46 | 33·5 | — | — | — | — | — | — | — | |
| " | " | 6 p.m. | 25·45 | 25·50 | 42 | 36 | — | — | — | — | — | — | — | |
| " | " | 9 p.m. | — | — | — | — | — | — | — | — | — | — | — | |
| " | Jan. 26 | 9 a.m. | 25·60 | 25·65 | 43 | 39 | 53 | 36 | 35 | — | — | S.W. | 4,890 | Bright morning, fleecy sky. Few large clouds on peaks, slowly moving N.E. Very bright afternoon and evening, and comparatively cloudless night. |
| " | " | 6 p.m. | 25·58 | 25·63 | 41 | 37 | — | — | — | — | — | — | — | |
| " | " | 9 p.m. | 25·60 | 25·65 | 37 | 32 | — | — | — | — | — | — | — | |
| " | Jan. 27 | 9 a.m. | 25·75 | 25·80 | 38 | 32 | 51 | 30·5 | 30 | — | — | S.W. | — | Bright cloudless morning. Sharp breeze all day, increasing towards nightfall. Very few clouds all day; bright clear evening and night. |
| " | " | Noon | 25·75 | 25·78 | 44 | 36·5 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·68 | 25·73 | 47 | 37 | — | — | — | — | — | — | — | |
| " | " | 9 p.m. | 25·80 | 25·85 | 41 | 31 | — | — | — | — | — | — | — | |
| " | Jan. 28 | 9 a.m. | 25·85 | 25·88 | 38 | 34 | 49 | 33 | 33 | 204·1 | 203·60 | S.W. | — | Very fine bright morning, but very strong cold wind, which fell during the morning. Very cloudless day and night. Wind rose at sundown, and was strong during night. |
| " | " | Noon | 25·83 | 25·83 | 42 | 33 | — | — | — | — | — | — | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 15. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491 | 36,444 | | | |
| | 1886. | | | | ° | ° | ° | ° | ° | | | | | |
| Gilgit | Jan. 28 | 4 p.m. | 25·73 | 25·75 | 45 | 35 | — | — | — | — | — | S.W. | — | |
| " | " | 10 p.m. | 25·80 | 25·83 | 40 | 36 | — | — | — | — | — | — | — | |
| " | Jan. 29 | 9 a.m. | 25·85 | 25·85 | 37 | 32 | 46 | 33·5 | 33 | — | — | A little S. of W. | — | Very strong cold wind. Grey clouds high. Sun breaking through occasionally. Wind dropped a little during day. Little wind at night. |
| " | " | Noon | 25·81 | 25·81 | 43 | 33 | — | — | — | — | — | — | — | |
| " | " | 3 p.m. | 25·70 | 25·75 | 46 | 36 | — | — | — | — | — | — | — | |
| " | " | 9 p.m. | 25·74 | 25·80 | 34 | 31 | — | — | — | — | — | — | — | |
| " | Jan. 30 | 9 a.m. | 25·74 | 25·80 | 34 | 31 | 47 | 27 | 27 | — | — | — | — | Very fine and bright morning. No wind. A few white flecks of cloud about high peaks, otherwise cloudless sky till midday at 2 p.m. Sunlight disappeared altogether. Dull gloomy afternoon and overcast night. |
| " | " | Noon | 25·72 | 25·75 | 42 | 36 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·58 | 25·62 | 45 | 36 | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·55 | 25·60 | 38 | 32 | — | — | — | — | — | — | — | |
| " | Jan. 31 | 9 a.m. | 25·50 | 25·50 | 38 | 34 | 48 | 35 | 35 | — | — | — | — | Very dark dull day. No wind. Clouds and mist on most of the higher peaks. |
| " | " | Noon | 25·40 | 25·44 | 42 | 35 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·38 | 25·39 | 44 | 37 | — | — | — | — | — | — | — | |
| " | " | 9½ p.m. | 25·35 | 25·38 | 36 | 33 | — | — | — | — | — | — | — | |
| " | Feb. 1 | 9 a.m. | 25·30 | 25·38 | 37 | 34 | 46 | 33 | 32 | — | — | S.S.W. | — | Very dark morning, heavy clouds and fog to the east, faint patches of blue sky to the west. Light wind. Wind changed at noon, and blew very strongly till sunset, when it fell, and the clouds cleared off a little. Stars visible at 10. |
| " | " | Noon | 25·35 | 25·40 | 44·5 | 37 | — | — | — | — | — | E. | — | |
| " | " | 4½ p.m. | 25·35 | 25·43 | 44 | 35 | — | — | — | — | — | — | — | |
| " | " | 9½ p.m. | 25·48 | 25·50 | 38 | 32 | — | — | — | — | — | — | — | |
| " | Feb. 2 | 9 a.m. | 25·45 | 25·50 | 37 | 32 | 46 | 34 | 33 | — | — | E. | — | Dull dark morning. Fog low down on hills to east. Clouds and fog to west, but higher. No wind. Cloudy all day. Wind sprung up after 2 p.m., not very strong; fell again at 7 p.m. |
| " | " | Noon | 25·45 | 25·50 | 38 | 33 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·43 | 25·50 | 39 | 33 | — | — | — | — | — | — | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 15. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491 | 36,444 | | | |
| | 1886. | | | | ° | ° | ° | ° | ° | | | | | |
| Gilgit | Feb. 2 | 10½ p.m. | 25·55 | 25·60 | 34 | 31 | — | — | — | — | — | — | — | |
| „ | Feb. 3 | 9 a.m. | 25·70 | 25·75 | 36 | 32 | 41 | 26·5 | 26 | — | — | E. | — | Bright fine morning. Clear day. Clouds on hills to east. Light wind, which dropped at noon. Fine clear evening and night. |
| „ | „ | Noon | 25·68 | 25·72 | 38 | 31 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·63 | 25·67 | 39 | 32 | — | — | — | — | — | E. | 4,890 | |
| „ | „ | 11 p.m. | 25·75 | 26·80 | 28 | 25 | — | — | — | — | — | — | — | |
| „ | Feb. 4 | 9 a.m. | 25·85 | 25·90 | 33 | 31 | 43 | 24 | 24 | — | — | E. | — | Very bright clear morning. Few mare's tails high up to east. Light breeze, fine afternoon. Somewhat cloudy evening, very cloudy night. |
| „ | „ | Noon | 25·85 | 25·89 | 38 | 36 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·75 | 25·80 | 41 | 33 | — | — | — | — | — | — | — | |
| „ | „ | 11 p.m. | 25·75 | 25·80 | 34 | — | — | — | — | — | — | — | — | |
| „ | Feb. 5 | 9 a.m. | 25·65 | 25·70 | 34 | — | 44 | 32 | 32 | 203·70 | 203·10 | E. | — | Dull and foggy. Dense fogs up valley to the east, snow falling on upper slopes. Slight breeze at times. Sun came out towards noon. Fine afternoon and evening. Few clouds on peaks to east. |
| „ | „ | Noon | 25·67 | 25·72 | 37 | — | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·65 | 25·70 | 34 | — | — | — | — | — | — | — | — | |
| „ | „ | 9 p.m. | 25·70 | 25·75 | 31 | 27 | — | — | — | — | — | — | — | |
| „ | Feb. 6 | 9 a.m. | 25·67 | 25·90 | 34 | 31 | 42 | 26 | 25 | — | — | — | — | Very fine bright morning. Cloudless sky, no breeze. |
| „ | „ | 5 p.m. | 25·75 | 25·76 | 36 | — | — | — | — | — | — | — | — | Clear all day and fine clear night. |
| „ | „ | 9½ p.m. | 25·75 | 25·80 | 34 | 29 | — | — | — | — | — | — | — | |
| „ | Feb. 7 | 9 a.m. | 25·80 | 25·80 | 36 | 33 | 47 | 26·5 | 26 | — | — | — | — | Dull cloudy day. Few sickly gleams of sunlight. Very little breeze. |
| „ | „ | 1½ p.m. | 25·75 | 25·78 | 41 | 34 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·70 | 25·75 | 42 | 36 | — | — | — | — | — | — | — | |
| „ | Feb. 8 | 12½ p.m. | 25·55 | 25·60 | 45 | 35 | 45 | 32 | — | — | — | N.E. | — | Dull cloudy day, very dark morning. Slight breeze, no sun. |

METEOROLOGICAL OBSERVATIONS from July 1885 to July 1886—*continued*.

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Min. | Max. | | | | | | |
| | | | No. 4. | No. 15. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491. | 36,444. | | | |
| | 1886. | | | | | | | | | | | | | |
| Gilgit | Feb. 8 | 10 p.m. | 25·65 | 25·70 | 35° | 31° | — | — | 32° | — | — | — | — | |
| „ | Feb. 9 | 6 a.m. | 25·70 | 25·75 | 35 | 32 | 47 | 31 | 31 | — | — | E. | — | Bright morning, cloudy day and night. Slight cold wind nearly all day. |
| „ | Feb. 10 | 9 a.m. | 25·85 | 25·80 | 37 | 32 | 49 | 29 | 29 | — | — | S. | — | Very bright fine morning. Cloudless to west. Cold wind; dropped after noon. Very fine afternoon, evening and night, clear moon and starlight. |
| „ | „ | Noon | 25·85 | 25·75 | 43 | 35·5 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·75 | 25·68 | 44 | 34 | — | — | — | — | — | — | — | |
| „ | „ | 9 p.m. | 25·80 | 25·75 | 37 | 32 | — | — | — | — | — | — | — | |
| „ | Feb. 11 | 9 a.m. | 25·90 | 25·82 | 37 | — | 49 | 33 | 32 | — | — | S.W.W. | — | Very bright cloudless morning. Strong wind, fell about noon. Fine afternoon and evening. Somewhat watery moon. |
| „ | „ | Noon | 25·90 | 25·80 | 42 | 35 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·80 | 25·70 | 46 | — | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·75 | 25·70 | 34 | 28 | — | — | — | — | — | — | — | |
| „ | Feb. 12 | 9 a.m. | 25·85 | 25·80 | 37 | 33 | 48 | 27 | 27 | — | — | — | — | Very fine bright morning, cloudless and no wind. Cloudy afternoon, fine night. |
| „ | „ | Noon | 25·85 | 25·80 | 45 | 37 | — | — | — | — | — | — | — | |
| „ | „ | 4½ p.m. | 25·78 | 25·70 | 47 | 37 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·80 | 25·75 | 37 | 31 | — | — | 30 | — | — | — | — | |
| „ | Feb. 13 | 9 a.m. | — | 25·78 | 36 | 32 | 53 | 30 | — | 204·15 | 203·65 | S.W. | 4,890 | Cloudy, but fine morning. Light wind. Sun came out at intervals, but not strongly. Cloudy afternoon and evening. |
| „ | „ | Noon | 25·90 | 25·80 | 47 | 37 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·85 | 25·82 | 38 | 34 | — | — | — | — | — | — | — | |
| „ | Feb. 14 | 9 a.m. | 25·83 | 25·80 | 38 | 38 | 56 | 38 | 37 | — | — | — | — | Dull, misty morning. Snow low down. Sleet and rain falling. Stopped at 10 a.m. Sun came out in a few fitful gleams after 10 a.m. Cloudy rest of day and night. |
| „ | „ | Noon | 25·80 | 25·70 | 43 | 41 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·67 | 25·60 | 48 | 42 | — | — | — | — | — | — | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 15. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491 | 36,444 | | | |
| | 1886. | | | | ° | ° | ° | ° | ° | | | | | |
| Gilgit | Feb. 15 | 9 a.m. | 25·65 | 25·60 | 39 | 38 | 55 | 38 | 37 | — | — | — | — | Clouds and mist low down. Rain till about 10, cleared up then. Cloudy rest of day with little sunlight now and then. Cloudy evening. |
| " | " | Noon | 25·60 | 25·55 | 46 | 43 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·50 | 25·45 | 47 | 42 | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·45 | 25·40 | 41 | 37 | — | — | — | — | — | — | — | |
| " | Feb. 16 | 9 a.m. | 25·35 | 25·30 | 39 | 37 | 51 | 39 | 38 | — | — | — | — | Very misty morning, all hills hidden, little rain. Snow within 1,000 feet. Rain and sleet all day, turning to snow at night (6 p.m.). At 8 p.m. about ½ inch snow on ground. |
| " | " | Noon | 25·22 | 25·27 | 40 | 38 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·25 | 25·30 | 36 | 35 | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·25 | 25·30 | 35 | 34 | — | — | — | — | — | — | — | |
| " | Feb. 17 | 9 a.m. | 25·52 | 25·48 | 39 | 32 | 41 | 34 | 34 | — | — | N.E. | — | Cloudy, misty morning, but fine. Snow in little patches still on ground on bungalow level. It soon melted up to 500 feet above Gilgit, and a little sun came out. Cloudy but fine afternoon and night. Wind rather cutting. |
| " | " | Noon | 25·55 | 25·50 | 41 | 35 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·55 | 25·50 | 42 | 35 | — | — | — | — | — | — | — | |
| " | " | 9½ p.m. | 25·63 | 25·60 | 35 | 31 | — | — | — | — | — | — | — | |
| " | Feb. 18 | 9 a.m. | — | 25·65 | 37 | 34 | 45 | 32 | 32 | — | — | N.E. | — | Light mists and clouds in early morning, which cleared off about 9. Beautifully fine rest of day and evening. Brilliant night. Little wind at times. |
| " | " | Noon | 25·65 | 25·65 | 48 | 38 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·60 | 25·60 | 42 | 33 | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·65 | 25·65 | 34 | 31 | — | — | — | — | — | — | — | |
| " | Feb. 19 | 9 a.m. | 25·87 | 25·88 | 36 | 31 | 47 | 28 | 28 | — | — | N.E. | — | Very fine, bright, clear morning, continued all day. Slight wind. Brilliant night. |
| " | " | Noon | 25·85 | 25·85 | 42 | 34 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·80 | 25·80 | 45 | 36 | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·90 | 25·90 | 36 | 30 | — | — | — | — | — | — | — | |
| " | Feb. 20 | 9 a.m. | 26·10 | 26·05 | 36 | 32 | 47 | 26·5 | — | — | — | S.W.W. | — | Very fine bright morning, rather strong cold wind. Fine bright day and evening, cloudy dull night. |

METEOROLOGICAL OBSERVATIONS from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 15. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491 | 36,444 | | | |
| | 1886. | | | | ° | ° | ° | ° | ° | | | | | |
| Gilgit | Feb. 20 | Noon | 25·95 | 26·00 | 44 | 35 | — | — | 25·5 | — | — | — | — | |
| „ | „ | 4 p.m. | 25·95 | 25·90 | 46 | 37 | — | — | — | — | — | — | — | |
| „ | „ | 10½ p.m. | 25·95 | 25·90 | 39 | 33 | — | — | — | — | — | — | — | |
| „ | Feb. 21 | 9 a.m. | 25·95 | 25·88 | 40 | 36 | 49 | 33 | 32 | 204·20 | 203·65 | — | — | Dull, clouds on all hills till about 1 p.m., cleared up. Fine afternoon, evening, and night. |
| „ | „ | Noon | 25·90 | 25·85 | 46 | 40 | — | — | — | — | — | — | — | |
| „ | „ | 3½ p.m. | 25·80 | 25·75 | 47 | 40 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·83 | 25·80 | 36 | 32 | — | — | — | — | — | — | — | |
| „ | Feb 22 | 9 a.m. | 25·95 | 25·90 | 44 | 39 | 53 | 32 | 31 | — | — | — | — | Fine bright morning. Few fleecy clouds high up and motionless. Fine all day. Few clouds towards evening. Clear night. |
| „ | „ | Noon | 25·90 | 26·85 | 49·5 | 41 | — | — | — | — | — | — | 4,890 | |
| „ | „ | 4 p.m. | 25·80 | 25·75 | 53·5 | 44 | — | — | — | — | — | — | — | |
| „ | „ | 10½ p.m. | 25·90 | 25·85 | 42 | 35 | — | — | — | — | — | — | — | |
| „ | Feb. 23 | 9 a.m. | 25·90 | 25·85 | 47 | 39 | 57 | 38 | 37 | — | — | — | — | Dull cloudy morning. Few gleams of sunlight now and then, but dark and gloomy afternoon. Cloudy night. |
| „ | „ | Noon | 25·85 | 25·80 | 51·5 | 43 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·75 | 25·70 | 52 | 41 | — | — | — | — | — | — | — | |
| „ | „ | 11 p.m. | 25·75 | 25·75 | 46 | 39 | — | — | — | — | — | — | — | |
| „ | Feb. 24 | 9 a.m. | 25·80 | 25·75 | 46 | 41 | 56 | 43 | 42 | — | — | E. | — | Dull, gloomy morning. Heavy mist on the hills and up the valleys. Few gleams of sunlight now and then. Fine afternoon, evening, and night. Little wind at times. |
| „ | „ | Noon | 25·80 | 25·75 | 54 | 46 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·75 | 25·70 | 54 | 46 | — | — | — | — | — | — | — | |
| „ | „ | 11 p.m. | 25·90 | 25·85 | 44 | — | — | — | — | — | — | — | — | |
| „ | Feb. 25 | 10 a.m. | 25·90 | 25·83 | 49 | 44 | 61 | 36 | 36 | — | — | — | — | Very bright early morning. Cloudy, gloomy day and evening. Dull night. |
| „ | „ | Noon | 25·85 | 25·80 | 52 | 42 | — | — | — | — | — | — | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 15. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491 | 36,444 | | | |
| | 1886. | | | | ° | ° | ° | ° | ° | | | | | |
| Gilgit | Feb. 25 | 11 p.m. | 25·78 | 25·73 | 49 | 41 | — | — | — | — | — | — | — | |
| „ | Feb. 26 | 9 a.m. | 25·72 | 25·70 | 47 | 44 | 57 | 45 | 45 | — | — | — | — | Raining slightly. Mists very low down. Snow to 1,500 feet. Very fine afternoon; cloudy, misty, evening and night. |
| „ | „ | Noon | 25·70 | 25·65 | 49 | 47 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·60 | 25·55 | 52 | 47 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·50 | 25·45 | 47 | 43 | — | — | — | — | — | — | — | |
| „ | Feb. 27 | 6½ a.m. | 25·50 | 25·45 | 45 | 42 | 59 | 42 | 41 | — | — | S.W.W. a.m. | — | Good deal of rain in night. Fine morning till about 9. Soft rain for a short time. Fine but cloudy till 1. Bright afternoon for a couple of hours. Gloomy evening and cloudy night. Little rain falling. |
| „ | „ | 1 p.m. | 25·53 | 25·50 | 50 | 45 | — | — | — | — | — | N.E.E. p.m. | — | |
| „ | „ | 4 p.m. | 25·45 | 25·40 | 53 | 46 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·43 | 25·43 | 48 | 43 | — | — | — | — | — | — | — | |
| „ | Feb. 28 | 9 a.m. | 25·57 | 25·50 | 47 | 42 | 58 | 43 | 42 | 203·45 | 202·90 | N.E. | — | Gloomy early and little rain, cleared at 7. Very bright till 10. Cloudy and snowing in turns till 1½. Dull gloomy afternoon, evening, and night. |
| „ | „ | Noon | 25·55 | 25·43 | 51 | 45 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·50 | 25·40 | 44 | 38 | — | — | — | — | — | — | — | |
| „ | Mar. 1 | 8½ a.m. | 25·60 | 25·50 | 43 | 39 | 59 | 40 | 38·5 | — | — | N.E. | — | Bright early, but soon clouded over. Cleared after 10, and was a beautiful day till 3 p.m. Clouded again and several gusts of wind in several directions till 5. Fine evening and night. |
| „ | „ | Noon | 25·60 | 25·55 | 52 | 44 | — | — | — | — | — | N. | — | |
| „ | „ | 4 p.m. | 25·55 | 25·50 | 52 | 41 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·60 | 25·55 | 42 | 33 | — | — | — | — | — | — | — | |
| „ | Mar. 2 | 8½ a.m. | 25·75 | 25·67 | 44 | 37 | 58 | 56·5 | 35·5 | — | — | — | — | Fine, but somewhat cloudy. Very bright and fine from 10 a.m. for rest of day. Fine night. |
| „ | „ | Noon | 25·70 | 5·65 | 52 | 44 | — | — | — | — | — | S.W. | — | |
| „ | „ | 4 p.m. | 25·67 | 25·60 | 55 | 44 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·65 | 25·60 | 46 | 36 | — | — | — | — | — | — | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 15. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491 | 36,444 | | | |
| | 1886. | | | | | | | | | | | | | |
| Gilgit | Mar. 3 | 9 a.m. | 25·72 | 25·65 | 49° | 40° | 58° | 40° | — | — | — | N.E. | 4,890 | Bright morning, soon clouded over. Rather cold wind, very strong during middle of the day. Gloomy afternoon. Wind dropped at sunset. Fine clear evening and night till 9 p.m. Cloudy. |
| „ | „ | Noon | 25·70 | 25·63 | 52·5 | 43 | — | — | — | — | — | S.W. | — | |
| „ | „ | 4 p.m. | 25·65 | 25·60 | 52 | 41 | — | — | — | — | — | — | — | |
| „ | „ | 11 p.m. | 25·75 | 25·68 | 45 | 37 | — | — | — | — | — | — | — | |
| „ | Mar. 4 | 8½ a.m. | 25·85 | 25·78 | 47 | 38 | 58 | 44 | 44 | — | — | S.W. | — | Cloudy morning with gleams of sun now and then. Strong cold wind which continued throughout the day till about 10 p.m., dropped then. Fine evening and night. |
| „ | „ | Noon | 25·83 | 25·75 | 56 | 44 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·70 | 25·65 | 56 | 44 | — | — | — | — | — | — | — | |
| „ | „ | 10½ p.m. | 25·78 | 25·70 | 47 | 35 | — | — | — | — | — | — | — | |
| „ | Mar. 5 | 9½ a.m. | 25·87 | 25·80 | 49 | 37 | 61 | 41 | 41 | — | — | S.W. | — | Very fine bright morning. Few cirrus clouds high up. Strong cold breeze. Brilliant day. Wind fell towards evening. Cloudy night. |
| „ | „ | Noon | 25·85 | 25·78 | 53 | 42 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·70 | 25·65 | 55 | 42 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·72 | 25·65 | 47 | 37 | — | — | — | — | — | — | — | |
| „ | Mar. 6 | 9 a.m. | 25·70 | 25·65 | 49 | 38 | 59·5 | 42 | 41 | — | — | S.W. | — | Dull cloudy morning till about 2 p.m. Sun came out. Little breeze. Fine afternoon and evening. Rather misty night. |
| „ | „ | Noon | 25·68 | 25·62 | 54 | 41 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·55 | 25·50 | 57 | 45 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·60 | 25·55 | 46 | 37 | — | — | — | — | — | — | — | |
| „ | Mar. 7 | 9 a.m. | 25·63 | 25·57 | 51 | 40 | 61 | 39 | 37·5 | — | — | S.W. | — | Bright fine morning. Few cirrus clouds high up. Light breeze all day. Fine throughout the day and evening. Clear night. |
| „ | „ | Noon | 25·57 | 25·50 | 57 | 45 | — | — | — | — | — | S. | — | |
| „ | „ | 4 p.m. | 25·47 | 25·42 | 60 | 46 | — | — | — | — | — | S.W. | — | |
| „ | „ | 10 p.m. | 25·50 | 25·45 | 50 | 45 | — | — | — | — | — | — | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 14. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491 | 36,444 | | | |
| | 1886. | | | | ° | ° | ° | ° | ° | | | | | |
| Gilgit | Mar. 8 | 9 a.m. | 25·58 | 25·52 | 56 | 44 | 66 | 45 | — | 203·60 | 203·00 | S.W. | — | Bright fine morning, few cirrus clouds high up. Light breeze. Somewhat cloudy midday. Bright afternoon and evening. Wind got up at night. |
| „ | „ | Noon | 25·53 | 25·48 | 60 | 47 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·45 | 25·40 | 63 | 46 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·53 | 25·47 | 55 | 43 | — | — | — | — | — | — | — | |
| „ | Mar. 9 | 9 a.m. | 25·62 | 25·56 | 53 | 43 | 68 | 48 | — | — | — | — | — | Fine but cloudy, no wind. Few gleams through the clouds. Dull all day and evening. Cloudy night. Strong wind during afternoon. |
| „ | „ | Noon | 25·55 | 25·50 | 62 | — | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·50 | 25·45 | 60 | 48 | — | — | — | — | — | S.W. | — | |
| „ | „ | 10 p.m. | 25·55 | 25·50 | 54 | 43 | — | — | — | — | — | — | — | |
| „ | Mar. 10 | 8½ a.m. | 25·63 | 25·55 | 55 | 45 | 68 | 48 | — | — | — | S.W. | — | Fine bright morning. Clouded over a little. Slight wind. Cloudy afternoon till 4½. Slight shower. Fine clear evening and night. |
| „ | „ | Noon | 25·63 | 25·55 | 61 | 51 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·55 | 25·50 | 60 | 48 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·70 | 25·65 | 54 | 46 | — | — | — | — | — | — | — | |
| „ | Mar. 11 | 8 a.m. | 25·80 | 25·78 | 49 | 44 | 68 | 44 | — | — | — | — | — | Very fine bright morning and still. Fine clear evening. |
| „ | „ | Noon | — | 25·70 | 59 | 49 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | — | 25·60 | 62 | 47 | — | — | — | — | — | — | — | |
| „ | „ | 8 p.m. | — | 25·70 | 55 | 42 | — | — | — | — | — | — | — | |
| „ | Mar. 12 | 9 a.m. | — | 25·80 | 53 | 41 | 66 | 47 | — | — | — | — | — | Bright morning, strong sun from noon till sunset, cloudy whole night. |
| „ | „ | Noon | — | 25·73 | 63 | 49 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | — | 25·65 | 63 | 48 | — | — | — | — | — | — | — | |
| „ | „ | 8 p.m. | — | 25·62 | 58 | 47 | — | — | — | — | — | — | — | |
| „ | Mar. 13 | 8 a.m. | — | 25·70 | 50 | 44 | 68 | 51 | — | — | — | S.W. | — | Cloudy whole day, rain drizzling. Slight wind blowing. Somewhat clearing at 8 p.m. |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 14. | Dry Bulb. | Wet Bulb | During preceding 24 Hours. | | | 44,491 | 36,444 | | | |
| Gilgit | 1886. Mar. 13 | Noon | — | 25·73 | 53 | 46 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | — | 25·65 | 56 | 47 | — | — | — | — | — | — | — | |
| " | " | 8½ p.m. | — | 25·65 | 53 | 46 | — | — | — | — | — | — | — | |
| " | Mar. 14 | 8 a.m. | — | 25·65 | 53 | 47 | 68 | 53 | — | — | — | — | — | Cloudy whole day and nigh except very little sunshine at 1 a.m |
| " | " | Noon | — | 25·65 | 60 | 49 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | — | 25·50 | 05 | 53 | — | — | — | — | — | — | — | |
| " | " | 8 p.m. | — | 25·50 | 61 | 49 | — | — | — | — | — | — | — | |
| " | Mar 15 | 8½ a.m. | — | 25·60 | 55 | 49 | 70 | 51·5 | — | 203·70 | 203·10 | W. | — | Dull cloudy morning. Little sprinkle of rain. Cloudy afternoon and evening. Little breeze at night. |
| " | " | 1 p.m. | — | 25·60 | 64 | 51 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | — | 25·55 | 64 | 54 | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·60 | 25·60 | 59 | 50 | — | — | — | — | — | — | — | |
| " | Mar. 16 | 9½ a.m. | 25·65 | 25·63 | 56 | 50 | 70 | 53 | 53 | — | — | S. | — | Dull and cloudy all day. Little breeze occasionally. |
| " | " | Noon | 25·64 | 25·60 | 62 | 53 | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·63 | 25·63 | 53 | 53 | — | — | — | — | — | — | — | |
| " | Mar. 17 | 8 a.m. | 25·60 | 25·58 | 54 | 40 | 68 | 53 | 53 | — | — | S. | — | Very dull dark day, cloudy evening. Raining after dark. Little wind at night. |
| " | " | Noon | 25·58 | 25·55 | 57 | 51 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·45 | 25·45 | 59 | 50 | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·45 | 25·45 | 55 | 50 | — | — | — | — | — | — | — | |
| " | Mar. 18 | 9 a.m. | 25·50 | 25·48 | 49 | 47 | 62 | 48 | 48 | — | — | S.W. | — | Very wet morning, very wet all day and night. Slight wind. |
| " | " | Noon | 25·50 | 25·47 | 49 | 47 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·50 | 25·47 | 47 | 45 | — | — | — | — | — | — | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 14. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491 | 36,444 | | | |
| | 1886. | | | | ° | ° | ° | ° | ° | | | | | |
| Gilgit | Mar. 18 | 10 p.m. | 25·58 | 25·55 | 44 | 43 | — | — | — | -- | — | — | — | |
| | Mar. 19 | 9 a.m. | 25·70 | 25·68 | 45 | 42 | 60 | 41·5 | 41·5 | — | — | — | — | Very fine all day. Rather cloudy evening and night, but bright. |
| „ | „ | Noon | 25·72 | 25·68 | 54 | 50 | — | — | — | — | — | — | — | |
| | „ | 4 p.m. | 25·65 | 25·60 | 58 | 49 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·68 | 25·65 | 52 | 48 | — | — | — | — | — | — | — | |
| „ | Mar. 20 | Noon | 25·68 | 25·64 | 56 | 46 | 62 | 47 | 47 | — | — | S.W. | — | Fine, but generally gloomy. Few gleams of richly sunlight at intervals. Very dull, threatening evening. Wind at times during the day. |
| „ | „ | 4 p.m. | 25·60 | 25·60 | 57 | 46 | — | — | — | — | — | — | — | |
| „ | „ | 10½ p.m. | 25·60 | 25·60 | 49 | 44 | — | — | — | — | — | — | — | |
| „ | Mar. 21 | 9 a.m. | 25·68 | 25·65 | 54 | 45 | 65 | 47 | 46·5 | — | — | S.W. | — | Cloudy, but gleams of sunshine. Fresh breeze. Bright sun from 11 to 1. Cloudy afternoon; threatened snow about 4. Few drops of rain. Bright night. |
| „ | „ | Noon | 25·68 | 25·65 | 58 | 49 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·60 | 25·57 | 53 | 46 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·62 | 25·60 | 52 | 45 | — | — | — | — | — | — | — | |
| „ | Mar. 22 | 8½ a.m. | 25·73 | 25·70 | 49 | 45 | 64 | 43 | 42 | — | — | S.W. | — | Bright all day. Few cumuli at times, and cirri in the afternoon and evening. Clear night. Chill breeze in evening. |
| „ | „ | Noon | 25·70 | 25·66 | 59 | 49 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·60 | 25·56 | 62 | 51 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·63 | 25·60 | 53 | 42 | — | — | — | — | — | — | — | |
| „ | Mar. 23 | 8 a.m. | 25·68 | 25·65 | 54 | 43 | 65 | 50 | 50 | — | — | S.W.W. | — | Bright morning. Few cirri high up. Strong breeze. |
| „ | „ | Noon | 25·65 | 25·60 | 63 | 50 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·54 | 25·50 | 66 | 51 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·55 | 25·50 | 55 | 44 | — | — | — | — | — | — | — | |
| | Mar. 24 | 8 a.m. | 25·58 | 25 55 | 55 | 45 | 68 | 53 | 53 | 203·65 | 203·65 | — | — | Fine, bright morning. Few clouds high. Bright afternoon, evening, and night. |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 14. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491 | 36,444. | | | |
| | 1886. | | | | | | | | | | | | | |
| Gilgit | Mar. 24 | Noon | 25·53 | 25·50 | 61°5 | 49 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·40 | 25·40 | 65 | 50 | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·45 | 25·45 | 53 | 44 | — | — | — | — | — | — | — | |
| " | Mar. 25 | 6½ a.m. | 25·50 | 25·48 | 55 | 48 | 71 | 49 | — | — | — | — | — | Very fine bright day. Few clouds occasionally. Clouded over gradually after sunset. Dim and misty night. |
| " | " | 1 p.m. | 25·43 | 25·40 | 62 | 50 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·35 | 25·32 | 65 | 51 | — | — | — | — | — | — | — | |
| " | " | 8 p.m. | 25·33 | 25·30 | 58 | 54 | — | — | — | — | — | — | — | |
| " | " | 11 p.m. | 25·30 | 25·25 | 55 | 53 | — | — | — | — | — | — | — | |
| " | Mar. 26 | 9 a.m. | 25·33 | 25·30 | 55 | 47 | 70 | 48 | 47 | — | — | S.W.W. | — | Misty, wet morning. Light wind. Cleared up gradually, and from noon was very bright and fine, but with strong wind, which dropped in afternoon. Fine night. |
| " | " | Noon | 25·35 | 25·33 | 55 | 47 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·35 | 25·35 | 61 | 45 | — | — | — | — | — | N.E.E. | — | |
| " | " | 10 p.m. | 25·45 | 25·45 | 52 | 43 | — | — | — | — | — | E. & S. | — | |
| " | Mar. 27 | 8½ a.m. | 25·52 | 25·50 | 58 | 48 | 63 | 48 | 48 | — | — | — | — | Fine, bright morning and till afternoon, when few clouds got up; and night was dim and misty. |
| " | " | Noon | 25·47 | 25·45 | 62 | 48 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·40 | 25·37 | 66 | 49 | — | — | — | — | — | — | — | |
| " | " | 10½ p.m. | 25·43 | 25·40 | 57 | 45 | — | — | — | — | — | — | — | |
| " | Mar. 28 | 9 a.m. | 25·50 | 25·47 | 61 | 49 | 72 | 52 | — | — | — | E. | 4,890 | Fine and bright, but a few clouds and mist on hills. Cloudy and dull after 10 a.m. with only a few gleams of sunlight. Strong wind at intervals during day. |
| " | " | Noon | 25·48 | 25·45 | 61 | 47 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·40 | 25·37 | 63 | 48 | — | — | — | — | — | — | — | |
| " | " | 1 p.m. | 25·47 | 25·45 | 57 | 45 | — | — | — | — | — | — | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 14. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491 | 36,444 | | | |
| | 1886. | | | | | | | | | | | | | |
| Gilgit | Mar. 29 | 9 a.m. | 25·47 | 25·45 | 57° | 49° | 66° | 53° | 52° | — | — | — | — | Cloudy, gloomy morning. Hills hidden in mist. Gloomy all day, slight wind towards evening. Little rain in evening. Cloudy dark night. |
| " | " | Noon | 25·45 | 25·40 | 61 | 51 | — | — | — | — | — | W. | — | |
| " | " | 4 p.m. | 25·38 | 25·35 | 55 | 47 | — | — | — | — | — | — | — | |
| " | " | 10½ p.m. | 25·25 | 25·25 | 52 | 46 | — | — | — | — | — | — | — | |
| " | Mar. 30 | 10 a.m. | 25·25 | 25·25 | 49 | 41 | 63 | 43 | 43 | — | — | — | — | Very wet all day. Dull and misty. Rain cleared off about 5 p.m. Fine clear night. |
| " | " | 1 p.m. | 25·25 | 25·25 | 42 | 40 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·30 | 25·25 | 43 | 41 | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·45 | 25·43 | 43 | 39 | — | — | — | — | — | — | — | |
| " | Mar. 31 | 8 a.m. | 25·45 | 25·43 | 45 | 42 | 46 | 38 | 38 | — | — | — | — | Fine bright morning, but very dark mist over eastern hills. Light clouds clearing off to west. Not very bright during day, and dull evening and night. |
| " | " | Noon | 25·45 | 25·43 | 47 | 43 | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·45 | 25·45 | 46 | 42 | — | — | — | — | — | — | — | |
| " | April 1 | 9 a.m. | 25·50 | 25·48 | 48 | — | 49 | 41 | 41 | — | — | — | — | Dull and cloudy most of day. Curious haze—brown, like hot weather haze over hills, although it was cold and no wind to cause dust. |
| " | " | Noon | 25·50 | 25·48 | 50 | 43 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·45 | 25·42 | 54 | 44 | — | — | — | — | — | — | — | |
| " | " | 10½ p.m. | 25·50 | 25·50 | 46 | 41 | — | — | — | — | — | — | — | |
| " | April 2 | 9 a.m. | 25·56 | 25·52 | 51 | 42 | 56 | 41 | 41 | — | — | W. | — | Dull, hazy morning. Little sunlight during day and afternoon. Cloudy evening and night. Strong wind in afternoon and night. |
| " | " | Noon | 25·53 | 25·50 | 55 | 45 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·50 | 25·47 | 55 | 43 | — | — | — | — | — | — | — | |
| " | " | 10½ p.m. | 25·55 | 25·52 | 49 | 39 | — | — | — | — | — | — | — | |
| " | April 3 | 10 a.m. | 25·65 | 25·62 | 54 | 42 | 63 | 43 | 43 | — | — | — | — | Somewhat cloudy morning. Fine rest of day. Clear evening and night. |
| " | " | Noon | 25·60 | 25·59 | 57 | — | — | — | — | — | — | — | — | |

| 1886. | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| April 3 | 4 p.m. | 25·50 | 25·50 | 60 | 47 | — | — | — | — | — | — | — | | |
| „ | 10 p.m. | 25·60 | 25·56 | 49 | 39 | — | — | — | — | — | — | — | | |
| April 4 | 9 a.m. | 25·70 | 25·65 | 55 | 42 | 63 | 41 | 40·5 | — | — | W. | — | Very fine clear morning, and all day. Strong breeze. Clear bright night. | |
| „ | Noon | 25·65 | 25·63 | 56 | 43 | — | — | — | — | — | — | — | | |
| „ | 4 p.m. | 25·55 | 25·55 | 60 | 44 | — | — | — | — | — | — | — | | |
| „ | 11 p.m. | 25·05 | 25·05 | 50 | 39 | — | — | — | — | — | — | — | | |
| April 5 | 9½ a.m. | 25·75 | 25·72 | 56 | 42 | 65 | 42 | 41·5 | — | — | S.W.W. | — | Very fine bright morning. Few light clouds strong breeze. Clouded over about noon. Cloudy dull evening and night. Wind fell afternoon. | |
| „ | Noon | 25·65 | 25·62 | 64 | 51 | — | — | — | — | — | — | — | | |
| „ | 10 p.m. | 25·62 | 25·60 | 56 | 44 | — | — | — | — | — | — | — | | |
| April 6 | 9 a.m. | 25·65 | 25·62 | 56 | 48 | 70 | 52 | 52 | — | — | N.E.E. | — | Cloudy dull morning. Heavy mist on all hills: cleared up about 10. Fine and sunny rest of day. Fine clear night. Strong wind in afternoon. | |
| „ | Noon | 25·64 | 25·62 | 55 | 47 | — | — | — | — | — | — | — | | |
| „ | 4 p.m. | 25·58 | 25·55 | 61 | 50 | — | — | — | — | — | — | — | | |
| „ | 10 p.m. | 25·62 | 25·60 | 51 | 45 | — | — | — | — | — | — | — | | |
| April 7 | 6 a.m. | 25·68 | 25·65 | 58 | 51 | 62 | 45 | 44 | — | — | — | — | Very fine bright morning. Few clouds high up. Fine all day. Bright clear night. | |
| „ | Noon | 25·63 | 25·60 | 65 | 54 | — | — | — | — | — | — | — | | |
| „ | 4 p.m. | 25·53 | 25·50 | 69 | 56 | — | — | — | — | — | — | — | | |
| „ | 10½ p.m. | 25·60 | 25·60 | 56 | 46 | — | — | — | — | — | — | — | | |
| April 8 | 6 a.m. | 25·65 | 25·65 | 61 | 48 | 73 | 45 | 44 | — | — | — | — | Fine bright morning and day. Cloudy afternoon and evening. | |
| „ | Noon | 25·60 | 25·60 | 63 | 52 | — | — | — | — | — | — | — | | |
| „ | 5 p.m. | 25·55 | 25·55 | 69 | 53 | — | — | — | — | — | — | — | | |
| „ | 10½ p.m. | 25·57 | 25·57 | 62 | 52 | — | — | — | — | — | — | — | | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. | | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Max. | Min. | | | | | | |
| | | | No. 4. | No. 14. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491 | 36,444 | | | |
| | 1886. | | | | ° | ° | ° | ° | ° | | | | | |
| Gilgit | April 9 | 8 a.m. | 25·57 | 25·55 | 63 | 52 | 76 | 53 | — | — | — | S.W.W. | — | Fine morning, but somewhat cloudy. Light breeze, dull afternoon, and cloudy night. Few specks of rains about 4 p.m. Light winds. |
| " | " | 1 p.m. | 25·50 | 25·47 | 69 | 55 | — | — | — | — | — | W. | — | |
| " | " | 4 p.m. | 25·45 | 25·43 | 68 | 55 | — | — | — | — | — | — | — | |
| " | " | 11 p.m. | 25·50 | 25·48 | 58 | 50 | — | — | — | — | — | — | — | |
| " | April 10 | 9 a.m. | 25·52 | 25·49 | 57 | 52 | 72 | 52 | — | — | — | S.W.W. | — | Dull gloomy morning, heavy mist on hills. Sun came out in afternoon; very bright till 5 p.m. Clouds and a little rain and strong wind at night. |
| " | " | Noon | 25·50 | 25·47 | 62 | 55 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·43 | 25·40 | 67 | — | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·43 | 25·40 | 59 | 48 | — | — | — | — | — | — | — | |
| " | April 11 | 10 a.m. | 25·53 | 25·50 | 58 | 50 | 69 | 49 | — | — | — | W. | — | Fine bright morning; continued so till the afternoon. Clouds high up. Dull windy evening. Little rain at 5 p.m. Misty, but moonlight night. |
| " | " | Noon | 25·47 | 25·45 | 64 | 53 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·40 | 25·37 | 67 | 59 | — | — | — | — | — | — | — | |
| " | " | 10 p.m. | 25·45 | 25·40 | 59 | 46 | — | — | — | — | — | — | — | |
| " | April 12 | 9 a.m. | 25·50 | 25·48 | 60 | 50 | 71 | 51 | — | — | — | E. | — | Very bright clouds high up and on hill ranges. Clouded over about 11. Very dull threatening afternoon. Strong gusts of wind. Dull evening and night. |
| " | " | Noon | 25·50 | 25·48 | 65 | 52 | — | — | — | — | — | — | — | |
| " | " | 4 p.m. | 25·45 | 25·42 | 64 | 5 | — | — | — | — | — | — | — | |
| " | " | 11 p.m. | 25·55 | 25·52 | 56 | 49 | — | — | — | — | — | — | — | |
| " | April 13 | 9 a.m. | 25·57 | 25·55 | 52 | 49 | 70 | 49 | — | — | — | E. | — | Very fine morning; clouded over in afternoon. Little rain in evening. Very strong wind at times throughout day. Fine clear night. |
| " | " | Noon | 25·50 | 25·50 | 60 | 48 | — | — | — | — | — | W. | — | |
| " | " | 4 p.m. | 25·45 | 25·42 | 60 | 48 | — | — | — | — | — | — | — | |
| " | " | 10½ p.m. | 25·52 | 25·50 | 50 | 44 | — | — | — | — | — | — | — | |
| " | April 14 | 9 a.m. | 25·55 | 25·52 | 55 | 48 | 65·5 | — | — | — | — | E. | 4,390 | Fine bright morning early. Silvery clouds about 9. |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | | In Shade. Max. | In Shade. Min. | Min. in Open. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. 4. | No. 14. | Dry Bulb. | Wet Bulb. | During preceding 24 Hours. | | | 44,491 | 36,444 | | | |
| Gilgit | 1886. April 14 | Noon | 25·50 | 25·49 | ° 60 | ° 50 | ° — | ° — | ° — | — | — | — | — | Dull afternoon and evening. Gusts of wind at times. |
| „ | „ | 4 p.m. | 25·43 | 25·40 | 63 | 50 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 25·52 | 25·50 | 55 | 44 | — | — | — | — | — | — | — | |
| „ | April 15 | 9 a.m. | 25·55 | 25·50 | 57 | 50 | 70 | 49·5 | — | — | — | E. | — | Bright morning. Heavy clouds about turned to a dull and gloomy day, with heavy gusts of wind, which fell towards evening. Cloudy evening though light. |
| „ | „ | Noon | 25·55 | 25·55 | 61 | 50 | — | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 25·50 | 25·47 | 61 | — | — | — | — | — | — | — | — | |
| „ | „ | 11 p.m. | 25·52 | 25·50 | 55 | 46 | — | — | — | — | — | — | — | |

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. Max. | In Shade. Min. | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 44,491 | 44,492 | | | |
| Pilchi | 1886. April 16 | — | — | — | ° — | ° 65 | ° — | — | — | — | — | |
| Nomal | April 17 | — | — | — | — | 65 | 54 | — | — | — | — | |
| Gwech | April 18 | — | — | — | — | 65 | 55 | — | — | — | — | |
| Chalt | April 19 | — | — | — | — | 65 | — | — | — | — | — | |
| „ | April 20 | 9 a.m. | 24·65 | 24·55 | 60 | 65 | 50 | 201·55 | 201·75 | S.W. | 6,120 | Cloudy morning with gleams of sun just enough to observe for time. Strong wind which dropped towards afternoon. Heavy gusts and rain in afternoon. Very cloudy rainy night. |
| „ | „ | Noon | 24·60 | 24·50 | 64 | — | — | — | — | — | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 44,491 | 44,492 | | | |
| | 1886. | | | | ° | ° | ° | | | | | |
| Chalt | April 20 | 4 p.m. | 24·52 | 24·5 | 58 | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 24·55 | 24·45 | — | — | — | — | — | — | — | |
| Chaprot | April 21 | 8 a.m. | — | 23·70 | 50 | 60 | 45 | — | — | — | 7,050 | Dull cloudy day. Heavy rain early morning and showery during day. Little wind. |
| Maiun | „ | 8 p.m. | 24·30 | 24·30 | 50 | — | — | — | — | W. | 6,350 | |
| „ | April 22 | 8 a.m. | 24·35 | 24·30 | 48 | 60 | 47 | — | — | — | — | Rain till 6 a.m. Dull showery morning. Fine afternoon and evening. |
| Hini | „ | 4 p.m. | 24·00 | 24·00 | 55 | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 24·01 | 24·00 | — | — | — | — | — | — | — | |
| „ | April 23 | 8 a.m. | 24·05 | 24·00 | — | 65 | 45 | — | — | W. | — | Very wet morning. Windy evening. |
| Aliabad | April 24 | 8 a.m. | 23·85 | 23·85 | 50 | — | 43 | — | — | — | — | Fine morning turning to bright fine day, evening, and night. |
| Hunza | „ | 4 p.m. | 22·65 | 23·30 | 55 | — | — | — | — | — | — | |
| „ | April 25 | 8 a.m. | 22·87 | 23·40 | 53 | 65 | 40 | 198·90 | 199·10 | — | 7,579 | Fine clear morning, beautiful day. |
| „ | „ | Noon | 22·85 | 23·30 | 64 | — | — | — | — | — | — | Camp 400 feet below fort. |
| „ | „ | 10 p.m. | 22·85 | 23·40 | 53 | — | — | — | — | — | — | |
| „ | April 26 | 7 a.m. | 22·90 | 23·45 | 47 | 66 | 43 | — | — | — | 7,300 | Very fine bright morning, all day and night. |
| Altit | „ | 10 p.m. | 22·95 | 23·50 | — | — | — | — | — | — | — | |
| „ | April 27 | 8 a.m. | 23·10 | 23·65 | 50 | — | 47 | — | — | — | — | Bright morning, light clouds. |
| Ata-ábád | April 28 | 6 a.m. | 22·90 | 23·40 | — | — | 50 | — | — | — | — | Fine day, somewhat cloudy evening. Strong gusts at times. |
| Gulmit | „ | 10 p.m. | 22·55 | 22·90 | 57 | — | — | — | — | W. | — | |
| „ | April 29 | 7 a.m. | 22·52 | 22·85 | 50 | — | 45 | — | — | — | — | |
| Gulkin | April 30 | 7 a.m. | 22·35 | 22·80 | 50 | 73 | 47 | — | — | — | — | Fine morning. Little rain in middle day. Lovely afternoon, evening, and night. |
| Passu | „ | 4 p.m. | 22·50 | 22·95 | 70 | — | — | — | — | — | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 44,491 | 44,492 | | | |
| | 1886. | | | | ° | ° | ° | | | | | |
| Passu | April 30 | 10 p.m. | 22·55 | 23·00 | 55 | — | — | — | — | — | — | |
| „ | May 1 | 6 a.m. | 22·60 | 23·05 | 48 | — | 44 | — | — | — | — | Beautiful day throughout. |
| Khaibar | „ | 6 p.m. | 22·00 | 22·40 | 60 | — | — | — | — | — | — | |
| „ | May 2 | 7 a.m. | 22·00 | 22·47 | 45 | — | 40 | — | — | W. | — | „ „ Little windy. |
| Gircha | „ | 4 p.m. | 22·00 | 22 30 | 50 | — | — | — | — | — | — | |
| „ | „ | 9 p.m. | 22·05 | 22·35 | 50 | — | — | — | — | — | — | |
| „ | May 3 | 8 a.m. | 22·10 | 22·45 | 50 | — | 39 | — | — | W. | 8,750 | „ „ Gusts in midday. |
| „ | „ | Noon | 21·95 | 22·35 | 73 | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 21·90 | 22·30 | 65 | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 21·90 | 22·30 | 55 | — | — | — | — | — | — | |
| „ | May 4 | 6 a.m. | 22·00 | 22·35 | 45 | 74 | 41 | — | — | — | — | Fine morning, cloudy afternoon. |
| Misgah | May 5 | 6 a.m. | 21·65 | 21·80 | 49 | — | 44 | 194·58 | 194·75 | — | 10,050* | Fine early, but clouded over about midday. Snowstorms on hills around in midday. Fine evening. |
| Murish | May 6 | 6 a.m. | 20·55 | 20·75 | 40 | — | 38 | — | — | — | — | Fine morning, but soon clouded over. Heavy mist on hills, little sleet. Fine evening. Cold wind all day. |
| „ | „ | 4 p.m. | — | 19·60 | 40 | — | — | — | — | E. | ? 12,270 | |
| Kotal-i-Kilik | May 7 | 7½ a.m. | — | 18·90 | 40 | — | 22 | — | — | — | — | Fine early morning. Clouded about 9. Heavy sleet and snowstorm with bitter wind from 11 to 1. Fine afternoon and evening. |
| Camp Ghil | „ | 4 p.m. | — | 19·50 | 40 | — | — | — | — | E. | 14,000 approx. | |
| „ | May 8 | 8 a.m. | — | 19·60 | 35 | — | 15 approx. | 186·70 | — | Gusts in circles. | 14,525 | Very fine morning, but soon clouded. Snow and sleet from noon. Strong cold wind. |
| Wakhujrúi Kotal | May 9 | Noon | — | — | 26·2 | 35 | 9 | 183·8 | — | W. | 16,146 | Very fine all day, but cloudy in afternoon. Strong cold wind. |
| Camp below Wakhujrúi 1 | May 10 | 10 a.m. | — | — | 38 | — | 12 | 186·4 | — | W. | 14,721 | Strong wind and snowstorm till afternoon; fine evening. |
| „ 2 | May 11 | 6 a.m. | — | — | 20 | — | 12 | 187·5 | — | W. | 13,959 | Fine day, very strong cold wind. |

* 100 feet below fort.

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Winds. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. 4. | No. 15. | | Max. | Min. | 44,491 | 36,440 | | | |
| | | | | | | During preceding 24 Hours. | | | | | | |
| | 1886. | | | | ° | ° | ° | | | | | |
| Campbelow Wakhujrúi 3 | May 12 | 7 a.m. | — | — | 25 | — | 9 | 139·0 | — | W. | 13,250 | Fine day, very strong cold wind. |
| „ | „ | Noon | — | — | — | — | — | — | — | — | — | Temperature of the Gumbez Stream, 50°; of the Wakhújrui, 42°; below junction, 45°; temperature of the air in shade, 32°; in sun, 42°. |
| Dasht-i-Mirza-Murád | May 13 | 9 a.m. | — | — | — | — | 15 | — | — | W. | — | Very fine all day. Rather strong wind. |
| Langar | May 14 | 9 a.m. | — | — | — | 45 | 18 | — | — | W. | — | Snowstorm from 5 to 7 a.m. Fine till 1. Wind and snowstorms rest of day. |
| „ | May 15 | 7 a.m. | — | — | — | 35 | 30 | 190·3 | — | W | 12,450 | Fine day, windy. Bright evening and night. |
| Shaer | May 16 | 9 a.m. | — | — | — | — | 15 | — | — | W. | — | Fine morning. Very windy all day. Cloudy afternoon. |
| Sarhad | May 17 | 9 a.m. | 21·20 | 19·60 | 45 | — | 18 | 193·65 | 193·15 (108,506) | E. W. | 10,460 | Very fine day till afternoon. Cloudy then. Light wind all day. |
| „ | May 18 | 6 a.m. | 21·23 | 19·60 | — | 55 | 23 | — | 193·00 | W. | — | Very fine all day. Light wind. |
| „ | May 19 | 4 p.m. | 21·18 | 19·50 | — | — | 28* | — | 189·70† | W. | 12,457† | Fine morning. Cloudy and windy afternoon. |
| „ | May 20 | 7 a.m. | — | 19·70 | — | 64 | 29 | — | — | W. | — | Hurricane‡ most of day. |
| Rachao | May 21 | 7 a.m. | 21·40 | 19·80 | — | — | 26 | — | — | — | 10,200 | Very fine all day. |
| Bábatangi | May 22 | 7 a.m. | 22·00 | 19·70 | 46 | — | 29 | — | — | — | ? 9,500 | „ „ Temperature of the river 42°. |
| Ghaz Khán | May 23 | 7 a.m. | — | — | 50 | — | 45 | — | — | W. | — | Fine morning. Hurricane, duststorm 12—2. Little rain. Still evening. |
| Kala Panja | May 24 | 7 a.m. | 22·00 | 20·60 | — | — | — | — | — | W. | — | Fine till 10. Wind and rain all day and part of night. |
| „ | May 25 | 7 a.m. | 21·90 | 20·50 | 46 | In tent 50 | 31 | 196·4 | 195·88 | W. | — | Very fine all day. Wind in evening. |
| „ | May 26 | 7 a.m. | 21·90 | 20·50 | 50 | Outside 66 | 48 | — | — | W. | — | „ „ Breeze in evening, turning to wind at night. |
| „ | „ | 4 p.m. | 21·95 | 20·60 | — | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 21·90 | 20·50 | 55 | — | — | — | — | — | — | |
| „ | May 27 | 9 a.m. | 21·90 | 20·50 | 50 | — | 47 | — | — | Variable chiefly from W. | 8,900 | Strong wind and little rain till about noon. Fine afternoon and evening. |

* Camp Pirkar. † Baroghal Pass, 3 p.m., temp. in air 47°. ‡ Bad-i-Wakhán.

METEOROLOGICAL OBSERVATIONS from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 44,491 | 36,440 | | | |
| Kala Panja | 1886. May 27 | Noon | 21·94 | 20·53 | 66° | — | — | — | — | — | — | |
| " | " | 9 p.m. | 21·90 | 20·53 | 45 | — | — | — | — | — | — | |
| " | May 28 | 9 a.m. | 21·85 | 20·45 | 60 | 72 | 38 | — | — | W. | — | Very fine all day. Cloudy for a little while in afternoon. |
| " | " | 4 p.m. | 21·85 | 20·45 | — | — | — | — | — | — | — | Windy, |
| " | May 29 | 9 a.m. | 21·85 | 20·40 | 50 | 78 | 30* | — | — | — | — | Very fine but windy. Stormy gusts in afternoon and night with clouds, but no rain, though it looked threatening at times. |
| " | " | Noon | 21·83 | 20·35 | 74 | — | — | — | — | W. | — | |
| " | " | 4 p.m. | 21·82 | 20·33 | 60 | — | — | — | — | Occasional gusts from E. | — | |
| " | " | 10 p.m. | 21·82 | 20·30 | 55 | — | — | — | — | " | — | |
| " | May 30 | 7 a.m. | 21·75 | 20·30 | 50 | 78 | 40 | — | — | " | — | Very fine all day, but as usual very windy and somewhat cloudy in afternoon. |
| " | " | Noon | 21·78 | 20·33 | 70 | — | — | — | — | " | — | |
| " | " | 4 p.m. | 21·75 | 22·25 | 60 | — | — | — | — | " | — | |
| " | May 31 | 9 a.m. | 21·80 | 20·30 | — | 71 | 40 | — | — | W. | — | Same as yesterday. Very strong wind in afternoon and at night. |
| " | June 1 | 9 a.m. | 21·85 | 20·35 | 55 | 66 | 38† | — | — | E. | — | Fine day, but very strong wind all day. Lulled a little towards evening. |
| " | " | 4 p.m. | 21·85 | 20·35 | 55 | — | — | — | — | — | — | " " " |
| " | June 2 | 10 a.m. | 21·90 | 20·40 | 55 | — | 30‡ | — | — | W. | — | " " " |
| " | " | 4 p.m. | 21·95 | 20·45 | — | — | — | — | — | — | — | " " " |
| " | June 3 | 9 a.m. | 21·90 | 20·40 | — | — | 30 | — | — | — | — | " " " |
| " | June 4 | 9 a.m. | 21·85 | 29·35 | 60 | 66§ in tent. | 38‖ | 195·90 | 195·35 | W. | 9,250 | Very fine, but strong wind. |
| " | " | 4 p.m. | 21·80 | 20·30 | — | — | — | — | — | — | — | |

* Under tentfly in enclosure. Outside on ground there was ice at 7 a.m. † This temperature is in enclosure of tent. On ground there is sharp frost.
‡ On wall; on ground about 25°. § Temperature in sun and out of wind, 120°; in sun and wind, 70°; difference never less than 20°. ‖ No ice anywhere.

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 44,491. | 36,440. | | | |
| | 1886. | | | | ° | ° | ° | | | | | |
| Khandut | June 5 | 4 p.m. | 22·00 | 20·60 | 50 | — | — | — | — | W. | 9,870 | Fine morning. Very strong storm of wind 4—6 p.m. |
| „ | June 6 | 5 a.m. | 22·00 | 20·60 | — | — | 43 | — | — | W. | — | Fine all day, though somewhat cloudy evening. Little wind. |
| Urgand | „ | 5 p.m. | 22·10 | 20·75 | — | — | — | — | — | W. | 9,750 | |
| Warg | June 7 | 5 p.m. | 22·20 | 20·80 | — | — | 46 | — | — | — | 9,750 | Very fine all day. |
| „ | June 8 | 5 a.m. | 22·20 | 20·80 | — | — | 43 | — | — | — | — | Fine till midday. Dull till 4. Wet afternoon and evening. |
| Ishkashm | „ | 5 p.m. | 22·20 | 20·90 | 50 | — | — | 197·05 | 196·50 | W. | 8,600 | |
| „ | June 9 | 5 a.m. | 22·20 | 20·90 | — | — | 47 | — | — | S.W. | — | Very heavy storm, sleet and rain and biting wind from 5 to 6½ a.m., then cleared. Beautiful day and night. No wind. |
| Pass (Sardáb Kotal) | „ | 8 a.m. | 21·65 | 20·35 | — | — | — | — | — | — | ?9,200 | |
| Zerkhwán | June 10 | 5 a.m. | 22·30 | 20·95 | — | — | 43 | — | — | E. & S.E. | 8,500 | Beautiful day and night. Very strong wind in gusts from 11 p.m. till 4 a.m. |
| Zébák | „ | 4 p.m. | 22·30 | 21·10 | — | — | — | — | — | — | — | |
| „ | June 11 | 4 p.m. | 22·35 | 21·25 | — | 75 | 53 | — | — | E. | — | Beautiful day and night. Same strong wind during night. |
| „ | June 12 | 8 a.m. | 22·25 | 21·15 | — | 78 | 56 | — | — | E. | — | Very windy early. Fell about 6 or 7 a.m. Dull and hazy. Rain at noon, with occasional gusts. Thunder and heavy rain from 5 p.m. and during night. |
| „ | „ | Noon | 22·25 | 21·10 | 67 | — | — | 197·4 | 196·80 | — | 8,450 | |
| „ | „ | 4 p.m. | 22·25 | 21·15 | 61 | — | — | — | — | N.E. | — | |
| „ | „ | 10 p.m. | 22·32 | 21·30 | 53 | — | — | — | — | — | — | |
| „ | June 13 | 7 a.m. | 22·32 | 21·20 | — | 75 | 51 | — | — | N.E. | — | Very fine morning. Cloudy, very windy, and little rain in afternoon. Fine evening and night. |
| „ | Noon | 22·25 | 21·15 | 69 | — | — | — | — | — | — | | |
| „ | „ | 4 p.m. | 22·20 | 21·13 | 58 | — | — | — | — | — | — | |
| „ | June 14 | 9 a.m. | 22·13 | 21·10 | 60 | 79 | 48 | — | — | N.E. | — | Very fine morning. Little wind. |
| „ | „ | Noon | 22·19 | 21·10 | 66 | — | — | — | — | — | — | |
| „ | June 15 | — | — | — | — | 66 | 45 | — | — | — | — | Fine morning. Very cloudy, windy, and little rain in afternoon. |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | No. 4. | No. 15. | | Max. | Min. | 44,491. | 36,440. | | | |
| | | | | | | During preceding 24 Hours. | | | | | | |
| | 1886. | | | | ° | ° | ° | | | | | |
| Zébák | June 16 | — | — | — | — | — | — | — | — | — | — | Same as yesterday, but lovely night. |
| „ | June 17 | 6½ a.m. | 22·25 | 21·05 | 50 | 65 | 46 | — | — | — | — | Very fine all day. |
| Askatul | June 18 | 6 a.m. | 21·80 | 20·25 | — | — | 44 | — | — | N.E. | ?8,900 | „ „ Little wind. |
| Sanglich | June 19 | 6 a.m. | 21·20 | 19·90 | 50 | — | 44 | — | — | — | ?9,300 | „ „ „ |
| Gazikistán | June 20 | 6 a.m. | 20·30 | 18·60 | — | — | 34* | — | — | N.E. | — | „ „ Strong wind. |
| Camp between lakes | „ | 6 p.m. | — | — | 50 | — | — | — | 190·28 | — | 12,150 | |
| Hauz-i-Dúráh | June 21 | 5 a.m. | — | — | 33 | — | 33 | — | 189·50† | — | 12,470 | Very fine indeed. Little wind during night. |
| Shah Salim | „ | 5 p.m. | — | — | 58 | — | — | — | 192·65‡ | — | 10,829 | |
| Parabek | June 22 | 6 p.m. | 22·40 | 21·15 | 64 | — | — | — | — | W. | — | „ „ „ „ gusty afternoon. |
| „ | June 23 | 6 a.m. | 22·30 | 21·10 | 58 | 64 | 54 | — | — | — | — | „ „ „ „ „ |
| Drushp | „ | 4 p.m. | 22·75 | 21·75 | 70 | — | — | — | — | W. | — | |
| „ | June 24 | 6 a.m. | 22·90 | 21·90 | 52 | 77 | 51 | — | — | W. | — | „ „ Very windy night. |
| Shoghót | June 25 | 6 a.m. | 23·80 | 22·60 | — | — | 54 | — | — | W. | — | Fine and hot all day. Little breeze in afternoon. |
| Chitrál | June 26 | 6 a.m. | 24·60 | 23·20 | 78 | 90 ? | 65 | — | — | S.W. | — | „ „ „ „ |
| „ | „ | Noon | 24·53 | 23·15 | 84§ | — | — | — | — | — | — | |
| „ | „ | 6 p.m. | 24·40 | 23·05 | — | — | — | — | — | — | — | |
| „ | June 27 | 8 a.m. | 24·55 | 23·20 | 62 | 88 | 66 | — | — | W. | — | Very fine and hot, scarcely any breeze. |
| „ | „ | 4 p.m. | 24·45 | 23·05 | 90 | 88 | 66 | — | — | W. | — | |
| „ | June 28 | 8 a.m. | 24·60 | 23·20 | 76 | 90 | 66 | — | — | W. | — | Very fine and hot, scarcely any breeze. Cloudy afternoon, cool evening. |
| „ | „ | 4 p.m. | 24·50 | 23·10 | 85 | — | — | — | — | — | — | |

* Freezing on ground in open. † 20 feet above lake. ‡ 100 feet above springs. § 85° and 90° in tents.

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 44,491 | 36,440 | | | |
| | 1886. | | | | ° | ° | ° | | | | | |
| Chitrál | June 30 | 6 a.m. | 24·73 | 23·25 | 70 | 90 | 68 | — | — | E. and variable. | — | Very fine hot day, little breeze occasionally, cloudy afternoon. |
| Koghazi | „ | 6 p.m. | 24·25 | 22·35 | 90 in tents, 88 in open. | — | — | — | — | — | — | Very fine hot day, little breeze at times. |
| „ | July 1 | 5 a.m. | 24·40 | 22·95 | 68 | — | 68 | — | — | — | — | „ „ somewhat cooler than yesterday. |
| Baranas | „ | 6 p.m. | 23·70 | 22·40 | 73 | — | — | — | — | Variable, generally W. | — | |
| „ | July 2 | 5 a.m. | 23·75 | 22·40 | 68 | 85 | 65 | — | — | Variable | — | Bright, fine, and hot, little breeze in afternoon and during night. |
| Reshún | „ | 5 p.m. | 23·48 | 22·15 | 82 | — | — | — | — | W. | — | |
| „ | July 3 | 5 a.m. | 23·60 | 22·25 | 62 | 85 | 61 | — | — | W. | — | Bright, fine, and hot, strong breeze in afternoon and evening, fell at night. |
| Buni | „ | 4 p.m. | 23·00 | 21·67 | 81 | — | — | — | — | — | — | |
| „ | July 4 | 5 a.m. | 23·15 | 21·80 | 61 | 87 | 60 | — | — | — | — | Very fine day. |
| Sanóghar | „ | Noon | 22·70 | 21·40 | 80 | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 22·65 | 21·25 | 76 | — | — | — | — | — | — | |
| „ | July 5 | 8 a.m. | 22·70 | 21·40 | 60 | 82 | 56 | — | — | — | — | Very fine day, little breeze. |
| „ | „ | 4 p.m. | 22·70 | 21·35 | 79 | — | — | — | — | N.E. | — | |
| Mastúj | July 6 | 10 p.m. | 22·60 | 21·30 | 65 | 84 | 55 | — | — | — | — | „ good breeze. |
| „ | July 7 | Noon | 22·55 | 21·25 | 78 | 83 | 50 | — | — | N.E. | — | „ light „ |
| „ | „ | 6 p.m. | 22·55 | 21·20 | 74 | — | — | — | — | — | — | |
| „ | July 8 | 6 a.m. | 22·70 | 21·30 | 56 | 85 | 55 | — | — | W. | — | „ strong gusts of wind during night from 9 p.m. |
| „ | „ | Noon | 22·63 | 21·25 | 85 | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 22·50 | 21·15 | 90 | — | — | — | — | — | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 44,491 | 36,440 | | | |
| | 1886. | | | | ° | ° | ° | | | | | |
| Mastúj | July 8 | 10 p.m. | 22·55 | 21·28 | 79 | — | — | — | — | — | — | |
| „ | July 9 | 6 a.m. | 22·60 | 21·30 | 62 | 91 | 62 | — | — | W. | — | Very fine day. Strong gusts of wind. |
| Brep | „ | 4 p.m. | 22·20 | 20·80 | 89 | — | — | — | — | — | — | „ |
| „ | July 10 | 5 a.m. | 22·28 | 20·90 | 61 | 85 | 60 | — | — | W. | — | „ Cumuli on high hills in morning to W. Light clouds high up in afternoon. |
| Miragrám | „ | 4 p.m. | 21·90 | 20·35 | 84 | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 21·95 | 20·40 | 66 | — | — | — | — | — | — | |
| „ | July 11 | 5 a.m. | 21·99 | 20·60 | 61 | 87 | 60 | — | — | Variable | — | Very fine day, light breeze, few light clouds high. |
| Jhopu | „ | 4 p.m. | 21·75 | 20·80 | 95 | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 21·85 | 20·40 | 77 | — | — | — | — | — | — | |
| „ | July 12 | 5 a.m. | 21·88 | 20·40 | 66 | 95 | 66 | — | — | Variable | — | Same as yesterday. |
| Sháhjanáli | „ | Noon | 20·00 | 18·50 | 80 | — | — | — | — | — | — | |
| „ | „ | 4 p.m. | 20·05 | 18·45 | 75 | 95 | 66 | — | — | Variable | — | |
| Foot of glacier | July 13 | 4 p.m. | 20·95 | 19·25 | 73 | 85 | 45 | — | — | „ | — | Same as yesterday. Few drops of rain at 2 p.m. Cloudy evening. |
| „ „ | „ | 10 p.m. | 20·98 | 19·30 | 66 | — | — | — | — | — | — | |
| Nalti | July 14 | 4 p.m. | 21·57 | 20·18 | 73 | 79 | 62 | — | — | N.W. | — | Fine bright morning. Clouded about 1. Strong wind and little rain during afternoon. |
| „ | „ | 10 p.m. | 21·59 | 20·20 | 65 | — | — | — | — | — | — | |
| „ | July 15 | 5 a.m. | 21·60 | 20·30 | 60 | 60 | 60 | — | — | — | — | Fine morning. Cloudy, windy, and rainy afternoon. |
| Hualti | „ | 4 p.m. | 21·20 | 21·10 | 70 | — | — | — | — | N.E. | — | |
| „ | „ | 9 p.m. | 21·20 | 21·15 | 65 | — | — | — | — | — | — | |
| „ | July 16 | 5 a.m. | 22·20 | 21·03 | 60 | 72 | 61 | — | — | — | — | Cloudy, threatening morning till about 9. Cleared up. Sunny till midday, light breeze, little rain at intervals. Clear night, windy. |
| Yásin | „ | Noon | 22·30 | 21·13 | 78 | — | — | — | — | E. | — | |

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 44,491 | 36,440 | | | |
| | 1886. | | | | ° | ° | ° | | | | | |
| Yásin | July 16 | 4 p.m. | 22·30 | 21·18 | 72 | — | — | — | — | — | — | |
| " | " | 10 p.m. | 22·30 | 21·20 | 66 | — | — | — | — | — | — | |
| " | July 17 | 5 a.m. | 22·35 | 21·22 | 58 | 80 | 56 | — | — | — | — | Very fine. A few big clouds at times and strong gusts of wind occasionally. |
| " | | Noon | 22·38 | 21·30 | 80 | — | — | — | — | S.E. | — | |
| Gendai | " | 4 p.m. | 22·38 | 21·35 | 78 | — | — | — | — | — | — | |
| " | " | 10 p.m. | 22·35 | 21·40 | 65 | — | — | — | — | — | — | |
| " | July 18 | 5 a.m. | 22·40 | 21·45 | 60 | 81 | 58 | — | — | W. | — | Very fine, little breeze. |
| " | July 19 | 5 a.m. | 22·70 | 21·70 | 60 | 91 | 60 | — | — | — | — | Fine bright morning. Somewhat dull and cloudy at midday, bright after. Little breeze. |
| Roshan | | | | | | | | | | | | |
| Hupar | " | 4 p.m. | 22·98 | 21·88 | 93 | — | — | — | — | Variable | — | |
| " | " | 10 p.m. | 22·97 | 22·00 | 84 | — | — | — | — | — | — | |
| " | July 20 | 5 a.m. | 23·03 | 22·03 | 68 | 103 | 68 | — | — | — | — | Fine hot day. Curious appearance as of a dust storm in afternoon, the air appeared full of dust, but very little reached our tents. Strong gusts now and then. |
| " | " | 10 p.m. | 22·60 | 21·60 | 70 | — | — | — | — | — | — | |
| Gákúch | July 21 | 9 a.m. | 22·60 | 21·60 | 74 | 95 | 65 | — | — | W. | — | Fine hot day, very little breeze. |
| " | " | Noon | 22·55 | 21·58 | 98 | — | — | — | — | — | — | |
| " | July 22 | 9 a.m. | 22·50 | 21·45 | 72 | 86 | 60 | — | — | W. | — | " " " |
| " | " | Noon | 22·50 | 21·45 | 80 | — | — | — | — | — | — | |
| " | " | 6 p.m. | 22·45 | 21·38 | 78 | — | — | — | — | — | — | |
| " | " | 10 p.m. | 22·50 | 21·40 | 72 | — | — | — | — | — | — | |
| " | July 23 | 5 a.m. | 22·53 | 21·45 | 68 | 84 | 68 | — | — | — | — | " " " |
| " | " | Noon | 23·30 | 22·25 | 82 | — | — | — | — | — | — | |
| Singal | " | 10 p.m. | 23·30 | 22·25 | 70 | — | — | — | — | — | — | |

These values are outside tent just above ground. Inside tent temperature is from 4°—6° higher.

## Meteorological Observations from July 1885 to July 1886—*continued.*

| Place. | Date. | Time. | Aneroids. | | Temperature in Air. | In Shade. | | Hypsometers. | | Direction of Wind. | Computed Height. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Max. | Min. | | | | | |
| | | | No. 4. | No. 15. | | During preceding 24 Hours. | | 44,491 | 36,440 | | | |
| | 1886. | | | | | | | | | | | |
| Singal | July 24 | 5 a.m. | 23·45 | 22·35 | 72° | 83° | 65° | — | — | S.W. | — | Fine hot day, very little breeze. |
| Dalmati | „ | 4 p.m. | 23·60 | 22·50 | 85 | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 23·60 | 22·50 | 77 | 83 | 65 | — | — | S.W. | — | „ „ „ |
| „ | July 25 | 5 a.m. | 23·73 | 22·60 | 77 | — | — | — | — | — | — | „ „ „ |
| Sharót | „ | Noon | 23·60 | 22·50 | 94 | 90 | 68 | — | — | E. | — | |
| „ | „ | 4 p.m. | 23·49 | 22·38 | 97 | — | — | — | — | — | — | |
| „ | July 26 | 5 a.m. | 23·65 | 22·50 | 77 | 103 | 77 | — | — | — | — | Very fine and hot. Few big clouds towards afternoon. Thunder storm in hills. Good breeze most of day. |
| Hinzal | „ | 1 p.m. | 24·00 | 22·90 | 99 | — | — | — | — | S.E. | — | |
| „ | „ | 4 p.m. | 23·90 | 22·80 | 102 | — | — | — | — | — | — | |
| „ | July 27 | 5 a.m. | 24·08 | 22·90 | 78 | 104 | 77 | — | — | E. | — | Heavy shower at 5 a.m. Fine, but cloudy. Breeze. Rainy and windy at night. |
| Gilgit | „ | 4 p.m. | 24·35 | 23·13 | 86 | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 24·40 | 23·15 | 82 | — | — | — | — | — | — | |
| „ | July 28 | Noon | 24·45 | 23·25 | 82 | 87 | 74 | — | — | E. | — | Wet morning till about 8½. Fine rest of day, but not very sunny. Very little breeze. |
| „ | „ | 4 p.m. | 24·35 | 23·15 | 88 | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 24·35 | 23·15 | 84 | — | — | — | — | — | — | |
| „ | July 29 | 6 a.m. | 24·50 | 23·30 | 78 | 88 | 77 | — | — | — | — | Fine hot day. |
| „ | „ | Noon | 24·45 | 23·25 | 91 | — | — | — | — | — | — | |
| „ | „ | 10 p.m. | 24·38 | 23·17 | 85 | — | — | — | — | — | — | |
| „ | July 30 | 6 a.m. | 24·50 | 23·30 | — | 94 | 79 | — | — | E. | — | Fine morning. Cloudy and windy afternoon. Little rain. Cloudy night. |

## CHAPTER III.

### Description of Chitrál and its subordinate districts and Hunza, Nagar, and Káfiristán.

The districts may now be considered more in detail. The independent countries included within the limits of exploration are Chitrál, Hunza, and portions of Káfiristán, Wakhán, and Badakhshán.

### CHITRÁL.

To the north of Chitrál, and separated from it by the Hindú-Kush, lie Wakhán and Badakhshán: to the south of Chitrál are the states of Asmár, Swát, and the Panjkora Kóhistáns, including the turbulent districts of Dír and Tangír, into which no opportunity offered of penetrating. To the west lies Káfiristán, and to the east, Hunza and Gilgit.

Kashkár is the name by which Chitrál is generally known in Pushtú speaking countries. The inhabitants themselves call their country Chitrár, but this name has been corrupted through the Afgháns into Chitrál, by which it is generally known to outsiders, and the Chitrálís themselves in speaking to foreigners often use the corrupted name.

This country is now one state, under the rule of Amán-ul-Mulk, Mehtar of Chitrál. It was formerly divided into two departments, upper and lower (Bálá and Páin), the former including Yásin, Ghizar, and Mastúj, but within the last few years the whole country has been consolidated into one kingdom by Amán-ul-Mulk. It is drained by the Chitrál river (called also, at different parts of its course, the Yárkhún, the Mastúj, the Asmár, and the Kunar), and its tributaries, and by the Yásin, Ghizar, and Ashkúman or Karumbar: these three last are tributaries of the Gilgit river. The Moshabar mountains form the watershed between the tributaries of the Chitrál river and those of the Gilgit river, thus naturally splitting the country into two great divisions. Those divisions are connected by the Darkót, Túi, Chamurkund and Shandúr passes, the last-named being by far the best, and practicable for horses nearly all the year round.

The total extent of country under the Mehtar's rule may be roughly estimated at 9,000 square miles of map area, its greatest length, from Karumbar Sar to Bailám on the Asmár border, being about 200 miles. Throughout this area we have a mass of lofty, rocky, and precipitous



DANIL.

mountains, intersected by narrow valleys. None of these valleys present a continuous stretch of cultivation, and it is only where fans, or plateaux of alluvial soil occur that villages are met with. Those who are familiar with the valleys of Astor and Gilgit will be able to form a fairly good idea of Chitrál and its dependencies.

The interest of Chitrál centres in the passes by which the great range of the Hindú-Kush can be crossed. Of these the principal are the Baróghil, and Dúráh, the former of which is practicable for wheeled artillery for 10 months in the year, while the latter is practicable for laden horses for about four or five months. The value of the Baróghil must however be measured by the Darkót, and not by its own merits.

The minor passes into Badakhshán are the Agram, Khatinza, and Nuksán; and into Wakhán the Yúr, or Khán-Kón, the Rich, or Janáli, the Uchil, the Kachen, and the Sad Ishtrágh. There is also the Karumbar or Ashkúman route, leading from Gákúch to Sarhad-i-Wakhán. All these will be found described in detail in a separate chapter.

Chitrál is the capital of the dominions of Amán-ul-Mulk "Mehtar" of Chitrál. It is situated in lat. 35°·51′ 12″ and long. 71° 49′ 50″, with an elevation above the sea of 4,980 feet.

Properly speaking, it consists of only the fort and half a dozen scattered villages on the right bank of the Chitrál river. The villages of Daníl and Joghúr, on the left bank, as well as Sangúr on the right bank near the junction of the Lutkú river, are sometimes included; as the whole of these lie in one distinct valley, of which Chitrál fort is, roughly speaking, the centre. The valley is about 6 miles long by 1 to 1½ wide. It is not one dead level, but a succession of undulating slopes. Although the land is entirely dependent on irrigation, almost the whole of the low ground is cultivated, but the hills bounding the valley are steep and bare, except towards their summits, where deodár forests appear.

The villages of Chitrál proper occupy a space of about 2½ miles by ¾ of a mile, and contain probably about 2,000 people. If the outlying villages of Daníl, Sangúr, and Joghúr be added, this estimate must be doubled.

The Mehtar resides in the fort, which is a square block of mud and stone with five towers. The north face is along the river bank. The east and west faces are completely hidden by extensive enclosed gardens and trees while the south face gives on some open fields.

The forts in this part of the world are all very similar in plan and construction, and to describe one is to describe all. They are generally built on the edge of a plateau overlooking the river, one face being along the river bank. The general ground plan is a square, guarded at the four

corners by lofty towers; a strong covered way, sometimes ending in a detached tower at the river's edge, secures the water supply in case of siege. The walls are all built of mud, mixed with chopped straw to bind it, and large round stones; the whole obtaining shape and being kept together, by a framework of timbers roughly squared and fitted into each other. There are two of these frameworks to each wall, an inner and an outer, tied together at intervals (forming a kind of huge crate), the space between, varying with the required thickness of the wall, being filled in with the mud and stones. The horizontal beams on the exterior of the wall give, from a little distance, all the appearance of regular courses of masonry. It is needless to remark, that they would not be proof against even the poorest artillery. Within the fort are the private apartments of the chief, those of his harem and retainers, and his winter reception chamber; for, in summer, audience is generally granted under the *chinár* trees outside, on a spot specially prepared with mud seats, a dais, &c., on which carpets and rugs are spread. In all the chambers the fireplace is sunk in the centre of the room, and the smoke escapes from an opening in the roof which is ingeniously constructed. Broad beams are laid across the walls at the corners; on those thick planks are laid parallel to the direction of the walls. On these more planks, or flat stones in some instances, are laid in series alternately parallel, and at an angle of 45°, to the sides of the room, thereby always and continually covering the angles, or corners left by the last series, till an opening is obtained of about one foot only in diameter, the whole being covered thickly with mud. This arrangement gives a slightly conical form to the exterior of the roof. Rain and snow are kept out by an inverted conical basket placed over the opening, when necessary. Round the fireplace are generally some raised seats. The woodwork (beams, uprights, and seats) is often very elaborately carved in usual Muhammadan patterns. There is not much originality about the Chitráli artizan. The small masjids scattered about, among or near the villages are sometimes very pretty from the amount of carving lavished on them.

The noble *chinárs* and stately poplars which surround the Chitrál fort give it a most picturesque appearance, but from a military point of view it is of no value, being completely commanded from the Daníl side of the river. Besides the fort the only other public building is the sarai, which is an enclosure about 80 yards long and 50 broad, surrounded by low mud houses, or rather rooms, which are intended to give shelter to travellers and traders. This sarai, with the merchandise temporarily lodged in it by passing *káfilas*, offers the only approach to a bazar to be found in all Chitrál, or for the



CHITRÁL FORT.



CHITRÁL
(LOOKING NORTH).



BRIDGE AT CHITRÁL

matter of that, between India and the Hindú-Kush. There are no good houses in Chitrál, and even the *masjids* are mean-looking buildings.*

As regards products; rice, wheat, barley, and Indian-corn are the chief cereals; a little cotton too is grown. There are two crops in the year, and the agriculturists seem fairly well to do. Fruit is plentiful, particularly grapes, apricots, mulberries, and walnuts. The river at Chitrál is, in summer, very deep and rapid, but in winter it becomes fordable. It is crossed by a bridge about half a mile above the fort. The bridge across it is a strongly made single-span timber bridge, on the cantilever principle before described, exactly 41 yards long and 5 feet broad, guarded by a stone tower at each end, and further protected by two more towers crowning a precipitous height on the right bank. Laden animals can be taken across it. The configuration of the ground surrounding the Chitrál valley lends itself to defence whether an attack be made from the south, from the Dúráh, or from Mastúj.

For administrative purposes the Mehtar's dominions are divided into several districts, Chitrál being the one which is under the immediate supervision of the Mehtar. Roughly speaking, it comprises the main valley from the junction of the Turíkho river to Aián, as also the Gúland Gol and the Lutkú valley from Shoghót to its junction with the Chitrál river. A more accurate definition is, however, the left bank of the Chitrál river, from and including Baranas, and the right bank, from and including Kusht; the greatest length of the district is therefore about 45 or 50 miles. The total population may be estimated at 15,000 souls. Chitrál and Shoghót are the only forts in the district. Villages are numerous, and, as a rule, only two or three miles apart; the principal ones are Chitrál, Bróz, Ovír, and Kusht. Wheat, barley, and rice are the principal crops. The best wheat comes from Kusht and Gurkir, while rice is not grown above Baranas. Fruit trees are abundant in every village, especially the mulberry and apricot. Forage and firewood are somewhat scarce.

The following general description of the district is extracted from Biddulph's Tribes of the Hindoo Koosh:—

"Below the converging point of the valleys of Kashkár Bálá, the main valley again contracts and the Kashkár river, flowing between precipitous rocks, has a depth which varies in places 20 feet between its summer and winter levels. The land, where cultivable, is rich and fertile; the villages are large and populous, and the neat cultivation gives evidence of a considerable amount of prosperity. The rocks become more precipitous, and the channel

* The houses are low square buildings containing two or three small rooms, a few feet square, and about 6 feet high; they stand in small enclosures, generally orchards. They are built of mud and round stones, with mud roofs, constructed as before described. The masjids are small square buildings with a verandah on two sides.

narrower and more tortuous, till, bursting through a rock-bound gorge, the Kashkár river receives the Lútkú or Injgám stream. The valley then suddenly widens, its whole character changes, and at 4 miles below the junction Chitrál is reached. The hills, no longer rocky and bare, slope back gradually into grassy rounded tops, the sides clad with pine forest, and the distant peaks on either hand are hidden by the lower intervening hills. The climate too is changed, and instead of the arid rainless character peculiar to the valleys hitherto described, it becomes like that of Kashmír, with heavy and frequent rainfalls. Further to the south the population increases in density."

None of the rivers in Chitrál are navigable, and the only communications are paths which in any other country would be considered impracticable for laden animals. Of these the principal ones, and in fact the only ones which are used for laden animals, are :—

(1.) The road from Gákúch to Mastúj by the Shandúr pass.

(2.) That from Darkót down the Yásín valley.

(3.) The road from Mastúj to Chitrál *viâ* Sanóghar and the left bank of the Chitrál river.

(4.) Mastúj to Drásan.

(5.) Drásan to the orpiment mines in Lunkú.

(6.) Drásan to Chitrál *viâ* the right bank as far as Prét and then by (3).

(7.) Drásan to Chitrál *viâ* Ovír and Parsán. This route is open in summer. It is the one usually taken by traders going from Chitrál to the orpiment mines.

(8.) Chitrál to the Dúráh pass.

(9.) Chitrál to Dír *viâ* the Lowarai pass.

Exploring parties or missions of any sort to Chitrál should, as before stated, be equipped with coolie carriage in preference to pack transport, the great difficulty of travelling in Chitrál with animals being the passage of rivers, which in summer are, generally speaking, unfordable rapids. The bridges are abominable.

There are no towns, properly so called, and no bazárs. The principal places in Chitrál are—Chitrál, Yásín, Mastúj, Buní, Drásan, Rích, Kusht, Ovír, Bróz, Aián, and Drósh. The only forts of any importance are Yásín, Barkulti, Mastúj, Drásan, Chitrál, Shoghót, Gabar, and Drósh.

All the forts in Kashkár differ in construction from those inhabited by the Shín and Burish races, having inordinately high towers, rising 18 feet above the ramparts, which are themselves 30 feet high. Their distribution also gives evidence of a more secure state of society. Instead of every village having one, and sometimes two forts, sufficient to hold all the inhabitants, as is the case in the valleys draining directly into the Indus, the only forts in

Kashkár are the abodes of rulers of districts, or persons nearly related to the ruler.

The climate of Chitrál is, on the whole, temperate, but owing to its higher elevation and the nature of the soil, the extremes of heat and cold are somewhat greater than in the similarly land-locked valleys of Kashmír. When the Mullá* visited Chitrál, they had an unusually severe winter, and snow lay continually on the ground from the 13th November to early in March, during which period it fell four or five times a month.

The winter in question must, however, from all accounts, have been exceptionally severe, for even at Mastúj, 3,300 feet higher than Chitrál, it seldom falls in the valley before December. The winter is very severe in the Sor Laspúr valley, the upper part of the Ghizar and Lutkú valleys, and in Turikho and Tirich. Below the Shishi Kú valley snow never falls.

The country, generally speaking, is very healthy, the air being dry, and the water pure, but about Chitrál itself there is a good deal of fever in the summer months. Goître is a very common complaint. Dr. Giles attributed this, not to the water, but to the low close rooms, and the want of ventilation. In summer the heat of the Chitrál valley is very great, but almost any variety of climate may be obtained by altering the elevation. Excellent summer sites may be found at Parsán, Ovír, and perhaps the Karál hill, all within easy reach of Chitrál.

## Yásín.

The administrative district next in importance is Yásín, lying between Mastúj or Kashkár Bálá on the west, and Puniál on the south-east. It is politically the eastern division of Upper Chitrál, Mastúj being the western. The two divisions are separated by the Moshabar mountains, and connected over the latter by the Túi, Chamarkand, and Shandúr passes. The southern limit of the province is the great range (Hindú Ráj), separating the valley of the Ghizar and Gilgit rivers from the Swát and Panjkorah basins. To the east it is bounded by the Ashkúman valley. On the north it is bounded by that branch of the Hindú-Kush over which runs the Darkót pass.

The village and fort of Yásín together form the chief place in the Yásín valley and the residence of the ruler Nizám-ul-Mulk, eldest son of the Mehtar of Chitrál. The fort is a square of about 100 yards side, with towers at the corners; it is within a hundred yards of the river. The

* A native explorer who travelled in Chitrál in 1876.

walls are broken down in several places, having been pulled down by the troops of the Mahárája of Kashmír when Yásín was invaded by them in 1863. It is a place of no strength, and is commanded by the cliffs on the opposite side of the river. The fort contains a *masjid* and one or two wells, besides dwelling-rooms for the Sardár and his retainers. The village consists of about 200 houses, scattered about in small groups. There is a good deal of cultivation, chiefly wheat and barley, and fruit trees are abundant, especially the apricot. The fort is situated in lat. 32° 22′ 30″ and long. 73° 23′ 0″, with an elevation above the sea of 7,800 feet.

Below Gendai the Yásín valley is rocky and sterile, a succession of stony fans sloping down from the bare precipitous mountain sides which hem in the valley. About Gendai and Nú, however, there is a good deal of cultivation, and after passing the second bridge, that near Dúmán, the valley opens out and is, generally speaking, about a mile in width, being bounded, as usual, by rocky precipitous mountains rising 8,000 or 9,000 feet above the valley. From Dúmán to the Nasbúr Gól, just beyond Yásín, cultivation is almost continuous along the right bank of the river, which here hugs the mountains on the left bank. On crossing the Nasbúr Gól one reaches the Dasht-i-Taos, an elevated alluvial plain about three miles long and one wide, now a perfect desert, but once evidently under cultivation. From here northwards as far as Mír Walí's fort cultivation is chiefly to be found on the left bank; between Gujalti and Mandúri it is almost continuous. At Sandi the river bed suddenly widens from about 50 yards to over 1,000, but at Mír Walí's fort the valley again closes in and is not more than half a mile wide, the river being confined to a narrow bed. Cultivation from this point, as far as Handúr, is confined almost entirely to the right bank, while beyond Handúr there is no cultivation on the right bank, and on the left only that about Amalchat. Three miles beyond, the whole level area of the valley is only about 400 yards wide, and this level space is all occupied by a swampy jungle of low scrub willow and birch, which continues all the way to the village of Darkót. At Darkót the narrow valley suddenly opens out, and one enters a sort of huge amphitheatre surrounded by gigantic snow-clad mountains and watered by three important streams, which, when united, form the Yásín river. Out of this amphitheatre there are only two exits besides the Yásín river valley, namely, that by the Darkót pass and that by Dadang Balsi into the Ashkúman valley. The above description of the Yásín valley may be supplemented by Biddulph's account, as the two taken together ought to give a fairly correct idea of the topography of the country.



YÁSÍN FORT.



THE YÁSIN VALLEY
(LOOKING NORTH).

"Passing into Yásín territory (at Roshan) the valley slightly opens out, the hills on both sides rising to a great height in fantastic pinnacles and castle-like crags with perpendicular scarps. Sixteen miles from the Puniál frontier the mouth of the Warshigúm valley is reached, and 10 miles beyond the junction is the village of Yásín. The valley here opens out to more than a mile in width, and the mountains on both sides lose their precipitous appearance. Ten miles further on the valley again contracts, and at about 25 miles from Yásín the foot of the Darkót pass is reached, whence Sarhad, on the right bank of the Oxus, is at a distance of only two days' journey."

The villages in the Yásín valley generally consist of scattered groups of houses, which are, as a rule, made of boulders and mud with flat roofs, composed of beams and rafters covered with stone slabs plastered over with mud. In some instances where the ground is terraced for cultivation the roof of a house is on a level with the field behind it, the revetment of the terrace forming the back wall of the house. Riding along an embanked road the uninitiated traveller here and there sees it suddenly and unaccountably widen as if for a resting place, but a hole, from which a little smoke is rising, tells him it is the roof of a hut. There are only two forts in the valley, Yásín and that called Mir Walí's, near Barkulti.

The soil is particularly rich and fertile, although the climate will not permit of its yielding more than one crop in the year; wheat, barley, and millet are the principal crops. Fruit trees grow in the greatest profusion as high up as Amalchat; apricot, apple, mulberry, and walnut being the principal trees. The climate is excellent and the people are healthy They have few wants, salt and a little sugar being practically the only imports.

As regards routes, the road up the valley is, of course, only a path, but it is fairly level and good throughout for laden animals though stony in places. The only roads out of the valley are:—

(1.) The footpath to the rope-bridge at Roshan, impracticable for horses.

(2.) The path to Khalta on the Ghizar river, practicable for unladen horses, but very bad indeed. This leads to the route by the Ghizar valley and Sor Láspúr to Mastúj, which is open all the year round. This route is also called the Shandúr pass route. The Chamarkand pass is merely a bifurcation from the Ghizar route.

(3.) In winter the ford at Gupis, which is the only route for laden animals.

(4.) The Túi pass route, practicable for unladen horses, but difficult This route is only open for about five months.

(5.) The Darkót pass route to the Yárkhún valley and Wakhán. This is a very difficult road, but is used by laden animals.

(6.) Two difficult paths from the Ashkúman valley, which enter Yásín between Sandi and Mandúri.

(7.) The route from Darkót up the Dadang Balsi valley into Ashkúman. This seems fairly easy and is practicable for horses. It is open for about eight or nine months of the year.

The river which waters the Yásín valley or Warshik-gúm* is known as the Yásín river. Just below Darkót three streams, the Dadang Balsi, the Darkót, and another, unite and form together what may properly be called the Yásín river. From this point to its junction with the Ghizar the river has a total length of about 32 miles. From Darkót to Handúr the bed of the river lies in a deep narrow valley. At Handúr it begins to open out, and the valley, as far as Dúmán, is a mile or two wide. It then closes in again and becomes a narrow defile. The actual river-channel is from 30 to 60 yards broad. Between Barkulti and Sandi the bed of the river spreads out considerably, being nearly a mile wide. It is here, of course, a waste of sand and shingle. The depth of the river varies considerably with the season. In summer it is nowhere fordable, while in winter it is fordable almost everywhere, though below Yásín it is only fordable for men on horseback, owing to the strength of the current. The river is too rapid for boats to be employed with advantage, and there is not a boat in the country. It is bridged (1) 1½ miles above Handúr, (2) just above Barkulti, (3) at Mir Walí's fort, (4) at Sandi, (5) just below Dúmán, (6) two miles above its junction with the Ghizar. These bridges are considered practicable for laden animals, but they are all very narrow and some of them very rickety. They each consist of a couple of poles thrown across the river, with short chesses or hurdles laid over them.

The principal affluents on the right bank are the Túi and Nasbúr Gol, while on the left bank there is the stream which joins it just below Mandúri. Fish abound in the river.

The Ashkúman Valley lies between Yásín and Hunza; and is under the Government of Yásín. It is formed by the junction of two streams, one the Barúgah, flowing from the hills above Darkot in an easterly direction, the other the Ashkúman, flowing in a south-westerly direction from the high peaks south of the Ghazkúl or Karumbar Sar (Lake). These meet at a

* "Gum" = valley.

village called Dalti, and, united, flow south in to the Gilgit River opposite Gákúch. The larger of these two, the Karumbar, is supposed to have its source in the Ghazkúl (Goose Lake). The lake also gives rise to the Chitrál river; of this there is no doubt, as Muhammad Sháh travelled along this river from the Baróghil Bridge to the lake, reaching it on the third day from Pirkhar, near Sarhad-i-Wakhan. It seems, from Muhammad Shah's account, to be about 15 miles long, by one or two broad; but, as elsewhere mentioned, his estimates are not always to be trusted. The elevation is probably 14,000 or 15,000 feet. He describes it as a great body of calm blue water, surrounded on all sides by vast mountains, which rise up from the very shores. At the eastern end the mountains rise up like a wall to a height of about 6,000 feet above the lake. Several glaciers come down to the water's edge. He did not explore the lake to any great extent, but on the southern side he saw, or thought he saw, a great opening in the mountains by which the lake is supposed to have an exit into the Ashkúman or Karumbar valley. This cleft is said to be full of glacier ice, so that the waters can only escape by a sub-glacial channel. Hayward fully believed that the Karumbar or Ashkúman river rises in this lake, but his views are only founded on hearsay, though they would seem to be borne out by the fact that the lake is called indifferently Ghazkul or Karumbar Sar. This is all pure theory, though, and can only be accepted as possible.

It is said that the upper waters of the Hunza river may be reached by a difficult road along the northern edge of the lake, but it must be a very difficult one indeed by reason of the glaciers to be crossed. This path probably leads to the Chiling Pass. The highest village in the valley is Karumbar or Ímit, and 13 miles above this the valley is closed by a glacier: from the glacier to the mouth of the valley is about 35 miles. Up the Barugáh is a route, *viâ* Dadangbalsi, to Darkót, a two days' march. Besides this route into the Yásín valley there is another to the south of it up the Asúmbar valley to Mandúri, also a two days' march. In summer, *i.e.*, for about five months, the routes in the Ashkúman valley are very difficult, owing to the swollen rivers and want of bridges; they are during that period quite impracticable for horses. The valley is very bare, and there are no fruit trees. The principal villages are Ímit, Shiniki, Ashkúman, Dain, and Chator Kand. Ashkúman is the only fort in the valley. Here the official in charge of the district resides. At one time the valley seems to have been more populous, as seen in traces of former cultivation, but oppression and ever-recurring floods have caused a steady decrease.

"In 1844 and in 1865 floods occurred in the Gilgit valley, caused by the glaciers in the Karumbar valley completely damming up the water till it accumulated sufficiently to burst through the obstruction and sweep a passage

for itself. This must always be liable to occur from time to time, and it might easily happen on such an occasion that so large a portion of the glacier may be swept away as to clear the main valley sufficiently to allow of its being easily traversed for a longer or shorter period till the glacier's action again closes it."—(*Biddulph.*)

This valley was explored early in 1886 by Naik Nawáb Khán, who described the glacier as quite impassable, "not even a goat could pass by it."

Where the Ashkúman river joins the Gilgit river opposite Gákúch, the bed of the river is very wide, and many islands are formed between the shallow channels. The same thing occurs at the junction of the Yásín and Gilgit rivers.

## Mastúj.

The third administrative division of Chitrál is Mastúj, at present (1886-87) governed by Afzal-ul-Mulk, one of the Mehtar's sons. It comprises the main valley of the Yárkhún or Mastúj river, on both banks as far down as Sanóghar, and below Sanóghar, the left bank only as far as Reshún. To it are subordinate the Ghizar valley above Pingal, and the Sor Láspúr valley, and the Drásan District, which includes Murikho and Tirich.

Mastúj, the capital of the district, is merely the fort in which the governor occasionally resides. This fort is situated in the middle of a gently sloping plain between the Yárkhún and Láspúr rivers, and is a square structure of mud and stone, with towers at the angles. It is about 50 yards square. Speaking generally, the villages on both banks, within a radius of several miles, are included in Mastúj, which may thus be said to contain over 200 houses; Chavinj, Pargas, and Parmadi would be included in this estimate. There is much uncultivated, but cultivable, ground about Mastúj, which doubtless has supported, and could again support, a much larger population. Mastúj was besieged by the Chinese in the reign of Khush Ámad, who, after a seven months' siege, came to terms with his besiegers. It is undoubtedly a very ancient place, and was formerly a *rendezvous* for *káfilas*. The Emperor Taimúr is said to have visited it more than once.

Though tactically the fort of Mastúj is of no importance, strategically the position is most important, commanding, as it does, routes to Chitrál, Gilgit, Yásín, Baróghil, and Dír. At Mastúj is the first permanent bridge (not including rope-bridges), across the Yárkhún river.

Drásan, a fort on the right bank of the river in Murikho of Chitrál, was the actual residency of Afzal-ul-Mulk in 1885–86. The fort is of the usual type, a square mud and rubble structure, with towers at the angles. There



MASTUJ FORT.

is no village called Drásan, but there are over a dozen small hamlets round it, within, say, two miles, which may be included in the township of Drásan, such as Wariún, Torigrám, Karath, Sarath, Yúndel, Awarókh, Shtári, &c., which together contain nearly 300 houses. There is a good deal of level ground about Drásan, and supplies are plentiful. About a mile above Drásan a bridge crosses the river. This bridge is about 70 feet by 6 feet, and in very good order, but the approaches on both sides are bad.

The soil yields two crops. Wheat is the staple food, but rice is grown in some part of the district. Fruit trees are not too plentiful above Mastúj, and there is no export of dried fruits. The climate is comparatively mild. Goats are numerous, cattle and sheep not so plentiful. Lead and antimony are found near Mastúj on the opposite bank of the river. These metals are State monopolies. Gold washing is carried on, but is not very profitable. *Chogas, pattú,* and socks are largely manufactured.

The Drásan district includes the valleys of Tirich, Turikho, and Mulkho or Murikho. The Tirich runs N.E. from Tirich Mír, and at Sarwat meets the Turikho running S.W. The two together then forming the Mulkho, continue on in a S.W. direction to the Yárkhún river. The range which separates the Turikho and Mulkho valleys from that of the Yárkhún river ends in some curious undulating downs known by the name of the Kargáh Lasht. They are about 8 miles long and from 1 to 2 miles broad. The Kargáh Lasht rises very steeply to a general level of about 1,200 feet above the rivers, and completely commands Drásan, Buní, etc. The general elevation above the sea is from 8,000 to 8,500 feet. There is no water on the hill, which might otherwise be cultivated, as the soil is alluvial; there is, however, good pasturage in spring. Several paths cross the hill from Astári and Drásan to Buní and Awi.

The Tirich valley is a narrow one, lying between steep stony slopes and is 25 miles in length. Hamlets are numerous and cultivation in patches extends all along the hillsides as in Murikho. There is only one crop raised in Tirich, and this consists chiefly of barley, wheat, and millet. Fruit, especially apple, trees are fairly plentiful. The river is a rapid one, 20 or 30 yards broad; bridges are frequent, but in winter the river is fordable almost anywhere. The bed of the river is stony, and usually about 100 yards broad. The road up the valley is really only practicable for laden horses as far as Nikrach, about 2 miles above the junction of the Lún Kú valley. Near Nikrach on the left bank of the river there are some orpiment mines, and at this village the Mehtar keeps a customs guard. The total population of the Tirich valley is about 1,500 souls, there being some 20 or 30 small hamlets, but no village of any size or importance. The elevation of the inhabited part of the valley

at its upper end is about 9,300 feet, and at its junction with the Turikho 7,180 feet.

The Turikho, or Upper Kho, is about 45 miles long, on the left bank it extends to Astári—on the right bank it stops short at Sarwat. Like the Tirich, the valley is a narrow one, never much more than a mile wide, and is enclosed by stupendous mountains. One or two subsidiary valleys, such as Khút and Malp, help to form the Turikho district. The chief villages are Rích, Shugrám, and Khút. There are also Astári, Warkúp, Raián, Malp, Sarwat-Torigrám, and Ujnú. The total population numbers between 4,500 and 5,000 souls. There is a considerable amount of cultivation near the villages, chiefly wheat and barley. Fruit trees are plentiful, especially the apple, walnut, and apricot.

*Chogas* of various sorts are manufactured. The inhabitants are healthy and fair in appearance. The houses are low and badly constructed. Cattle are scarce, but sheep and goats are plentiful.

Several passes lead out of Turikho, namely, the Kachen, Úchli, and Rích, which lead to Kala Panja, in Wakhán—the Kóksin, Bangól, and Khút, which lead into Yárkhún. The road up the Turikho valley is practicable for laden animals as far as Rích, but in many places the road is difficult, and loads must be taken off. Turikho is the patrimony of Sardár Nizám-ul-Mulk, the heir-apparent to Chitrál, but Rích, though subordinate to him, is the jágír of Mozaffar Khán, Khán of Rích. The Sardár, when he comes to Turikho, lives at Shugrám.

The general course of the Turikho river is south-west. The river is only fordable in winter. In summer it is a deep and rapid stream. There are several bridges by which the river may be crossed. Villages are numerous. The only fort along its entire course is Drásan. In the upper part of its course the mountains are precipitous and often come right down to the river's edge. In Murikho the slopes are gentle and the hills covered with earth.

Murikho extends along the right bank of the Turikho river from the junction of the Tirich river to Kusht, the Mujhgol being the actual southern boundary. It also includes the Kargáh Lasht. It has therefore a length of less than 20 miles. It is separated from Tirich valley on the north by a fine bold ridge. Murikho means "Lower Kho." It is extremely fertile and populous, the cultivation being almost continuous. The soil is mostly clay and gravel, the hillsides bare and of gentle slope, the villages extending high up the mountain sides. The cultivation is almost entirely on the right bank, extending along a considerable portion of the range dividing it from the Tirich valley. Sheep and goats are plentiful. Fruit trees abound, but firewood is scarce. Falcon and hawk catching for export is largely carried on. This

is done as follows:—A small pit 3 feet square is dug in the ground, of sufficient depth to allow of a man crouching inside. It is roofed over with stones and mud, a small aperture big enough to admit a hawk's body being left. A man sits in this: a fowl controlled by a string being placed on the top. The hawk sees it and pounces on it and it is then gradually drawn into the hole till the man can clutch the hawk's legs and secure it.

The woollen dresses worn by the inhabitants are made by themselves. *Chogas* form quite an article of trade, the *Kirbiri* and *Margalun* command a ready sale. The former is made from the wool of unborn lambs, the latter from the down of ducks worked up with woollen threads. The population is about 5,000, and has the reputation of being very exclusive, mixing little with the people of other valleys.

The river pouring through the Mastúj district is known from its source to Mastúj as the Yárkhún river (Yárkhún meaning "The friend's murder," from the fatal termination of a quarrel which once took place between two friends when travelling in this valley). The explorations of Muhammad Sháh show that this river rises in Ghazkul, and even a short distance below the point where it leaves the lake, its main channel "is 47* paces broad, with a rapid current and thigh-deep water."

In the next 15 miles it receives one or two affluents from the mountains on the left. At about 30 miles from Ghazkul is the point where the Darkót-Baróghil road crosses the river. Here used to be a bridge destroyed in 1883 by Alí Mardán Sháh when fleeing from Wakhán. Above this the river would appear to flow through a Pamír-like country of undulating hills, but below it becomes a narrow defile between stupendous barren rocky mountains. The river is a rapid one and in summer unfordable. It presents a series of narrow gorges, alternating with broad lake-like beds of sand or shingle, through which the river flows by numerous shifting channels. In winter the river bed offers an easy route, but in summer it is quite impracticable. About 25 miles below the bridge is the ruined tower of Topkhána Ziábeg, so called after a former Badakhshán official, and 10 miles below this again is Darband, a fortified position which closes the route from Baróghil to Mastúj. It is situated a mile and a half above the junction of the Gazan river, and consists of a line of towers and *sangars*† carried across the valley and completely closing it, the flanks being covered by precipitous cliffs which are utterly inaccessible. There are three towers on the left bank, one on an island, and four on the right bank. The total length of the line may be

* Muhammad Sháh's estimate of the width is probably excessive. He has a tendency to exaggerate in respect of heights and distances.

† Sangars = breastworks of stone.

about 400 yards. It was here that the Chitrálís utterly routed Muhammad Sháh's force from Badakhsháu. (*See* Appendix.)

Above Darband the valley is known as Yárkhún Bálá,* below it Yárkhún Páín. In Yárkhún Bálá there are no habitations, but plenty of forage and firewood. Traces of cultivation, however, show that there was once a considerable population here. It is supposed to have been laid waste during the Chinese invasions, but it must have been partially, at any rate, inhabited and cultivated since that time, and the tyranny exercised by Gauhar Amán and Pahlwán Bahádur is generally credited with the present desolation. In Yárkhún Páín villages are numerous, the highest in the main valley being Jhopú. The valley is nowhere much more than a mile wide, and is generally only a few hundred yards. Wherever side streams join the main river, a fan of alluvial soil is formed, which, if not too stony, is usually, in Yárkhún Páín, the cultivated side of a village. No doubt much more land might be brought under cultivation, and ruined water cuts and deserted terraces show that at one time the population must have been much denser. The chief tributaries of the Yárkhún river are the Gazan Gól and Kóksin Gól. It is crossed by three rope bridges—(1) near the mouth of the Kóksin Gól, (2) between Donich and Pawar, (3) between Disg and Istarchi.

The Mastúj is the name applied to the Chitrál river from Mastúj down to Chitrál itself. The first considerable affluent it receives below Mastúj is the Sor Láspúr stream. About 20 miles below Mastúj it receives an important tributary on the right, the stream which waters the valleys of Turikho and Mulkho. At 20 miles or so below this it is joined on its left by the Guland Gól, up which lies a direct route to the Sor Laspúr valley from Chitrál. Four miles above Chitrál it receives, through the Lutkú river, the whole drainage of the mountains in the direction of the Nuksán and Dúráh passes, while from Chitrál downwards the river is known as the Chitrál river. In this portion of its course the river, generally speaking, is from 50 to 100 yards wide, and too rapid to be navigable. In winter the river is fordable at Mastúj, and perhaps at one or two other places. The volume of water is in winter considerably less than in summer, and consequently where the bed is deep it contracts a good deal. Just below Kóghazi there is a very remarkable contraction; the whole volume of the river dashes through a narrow rockbound channel, about nine feet wide, though in summer at this very same spot the river must be at least 50 yards wide, covering a large area of huge slippery boulders. The river is permanently bridged at Mastúj, Sanóghar, Maroi, Móri, and Chitrál. There is also a rope bridge two miles below

* Bálá = Upper. Páin = Lower.

Kóghazi. In winter several temporary bridges are erected at other places, and, in fact, at that season the river may be bridged almost anywhere.

The valley, generally speaking, is a deep narrow defile between rocky and precipitous mountains, with here and there an alluvial plateau, or fan, on which a village is perched.

*Drósh.*—The southern division of Chitrál is the Drósh district. It extends from Tópkhána-i-Késú* to the Asmár border, its eastern boundary being the Lowarai range, and its western, the mountains of Káfiristán and Kaláshgum. The district is governed by Sháh-i-Mulk, one of the Mehtar's sons, a well-educated man, who has considerable influence in Dír, Asmár, and Bajáwar. The southern portion of the district, that is to say, from Mírkaní to Bailám, is held in jágír by Amír-i-Mulk, a son of the Mehtar by a daughter of the Khán of Asmár. The hill sides in the Drósh district are well clothed with wood, and present a pleasing contrast to the bare mountains met with elsewhere in Chitrál. The population of the whole district has been estimated at 6,000 souls. Each house has to furnish a fighting man, armed with matchlock or bow, so that the district can turn out over a thousand fighting men. Two crops of wheat are annually raised in the district. Cotton also is grown in small quantities. Timber is exported from the district, being floated down to Nowshera.† Cattle and sheep are comparatively scarce. The principal place, in fact the only large one, is Drósh. There are, however, two miserable forts at Kalkatak and Naghar. The roads throughout this district are infested by Káfirs. The only bridge across the Chitrál river is that at Drósh. Jamadár Muhammad Nawáz Khán gives the following account of the valley below Mírkáni:—

"The valley below Mírkaní belongs to Chitrál as far as Bargam (called Bailám by the Chitrális), but the people, though Dárds, dress like Patháns. The road along the right bank is infinitely better, but is seldom or never used, for fear of the Káfirs. Even that along the left bank might in a day or two be made practicable for laden animals by sappers or pioneers, as it is only in places that it is very difficult. Horses can be taken, unladen, by the left bank even now."

* Tópkhána-i-Késú is a darband or fortified passage on the left bank of the Chitrál river about a mile below Késú. The road to Drósh here crosses a projecting rocky spur, which has been strengthened by a stone tower and some rude walls. It is here that the Chitrális usually resist any attack from the south. The position might, no doubt, be made a very strong one. The wall and tower were said to have been built to resist Jahángír's invasion, and here the Moghal force was brought to bay. Finding further progress impossible, the Moghals retired.

† In the spring of 1888 the Amír imposed an additional tax upon the timber floated down the Kunar river, which, it is said, will interfere materially with the Chitrál timber trade.

Drósh fort and village are the capital of the Drósh district. They are situated on the left bank of the Chitrál river, about 27 miles below Chitrál.

Drósh appears to have once been the capital of Chitrál, and was then probably a larger place. Raverty speaks of it as a town with 10,000 inhabitants, and says :—

"All the chief men of the country have dwellings of considerable size in the capital, where they are expected chiefly to reside. Merchants and artizans also dwell almost exclusively at Darúsh."

It was in 1885 merely a large scattered village of about 800 houses and a fort about 40 yards square, with square towers at the angles Cultivation is very extensive, water is abundant, and fruit trees grow in profusion. There is plenty of open ground for encamping, and both forage and firewood can be obtained in abundance. At Drósh there is a narrow wooden bridge across the river, but, as it only consists of two beams not tied together, it is not practicable for horses ; it might be easily improved. Just above the bridge and below the fort, which stands on a precipitous cliff overlooking the river, is a pool, from which some good fish may be pulled out. The fort is the residence of Sháh-i-Mulk, governor of the district.

*Injgám.*—The fifth administrative district of Chitrál is Injgám, which was ruled in 1885–86 by Murid Dastgír, one of the sons of the Mehtar. It is the most westerly district of Chitrál, and comprises the valley of the Lutkú river and its tributaries west of Andarti. The Injgám district is of great political and military importance, as through it lies the route from Chitrál to the Dúráh. The principal place in it and the residence of the governor, is Drushp, on the left bank of the river. The residency is an insignificant but picturesque fort, with one tower on the west face. Here the river is crossed by a frail bridge, with wicker superstructure, on which wooden doors and window shutters, taken from the village, were laid for the Mission to pass over with a greater feeling of security. The only other forts in the district are Parabek and Gabar, both rather imposing structures. The upper part of the district, that between Barzín and the Dúráh Kotal, is barren, rocky and desolate, and, in fact, almost uninhabited. It is known as Zágistán. Below this comes the Parabek plain, with its fort and villages. Below Parabek the valley is narrow, but villages and cultivation are met with at every mile or two till Drushp is reached. Between Drushp and Andarti the only villages are Rúji, Múgh, and Múghán. Of the tributary valleys, the only two which are inhabited are Mardún and Bagusht Gol. The total population of Injgám



KÁFIR SHRINE—SHÁH SALÍM.

may be estimated at 3,000 souls. The inhabitants are mostly Manjánis, speaking the Yidgáh language, and belonging to the Maulai or Ráfizi sect. Fruit trees are common in the lower part of Injgám, and are found as far up as Barzín. Barley and millet are the principal grains.

About a mile above Drushp, on the same bank of the river, a little distance up the hill side, are some celebrated hotsprings; the water is led down in little canals to a small stone building containing several rooms, only one of which is at present in use for bathing purposes; this is about eight feet square, the bath in the middle being about four feet square and three feet deep. The water is led in by a pipe at the upper end, and flows out through a channel at the bottom of the lower end, a continual flow of water being kept up. The temperature of the water where it issues from the ground is 130° Fahr., and in the bath 120°. Opposite these hot springs is the entrance to the Bagusht Gol leading up to the Shui Pass.

In the Lut Kú valley also, about 7 miles east of the Dúráh Pass, are the Sháh Salím hot springs. These issue below some large rocks which give shelter to the bathing pool. There are here no sheds, only a roughly excavated tank through which the water flows. The temperature of the hottest spring at its exit from the rock is 140°, in the channel to the pool it is 114°, and the average temperature of the bath itself is 108°.

The sixth and seventh administrative divisions are comparatively insignificant, consisting of the Arkári valley, including Andarti, under Bahrám; and Aián and Késu under Ghulám (an illegitimate son of the Mehtar).

*Arkári.*—The Arkári valley rises to the west of Tirich Mír, and running nearly due south joins the Lutku at Andarti, which is the residence of Bahrám, an unwholesome-looking lad. The principal places in the valley are Andarti, Momi, Sháli, Arkári, Rubát, and Owír, of which Momi and Arkári are the largest. The valley of the Arkári river is, generally speaking, a narrow defile between towering cliffs, except around the village of Arkári where it opens out considerably, being about a mile broad. The river is rapid, with a rocky bed, and at its mouth about 20 yards broad. There are several bridges, but all are bad except at Andarti. The river is not fordable in summer. There is a hot spring on the left bank a mile below Sháli. The roads are not practicable for laden animals.

*Aián and Késu.*—Aián and Késu are two large villages below Chitrál. Aián is situated at the mouth of the Kalásh valley, down which the road from the Sháwal Pass runs, and is noted as the southern limit of the

Chinese invasion. There are remains here of two large entrenched camps of those times.

The view of Aián from the pine-clad hills above it, coming in from the Sháwal Pass is an exceedingly pretty one—the hills run steeply down to a large level plateau, above which is a small elevated ridge with the remains of the camps overlooking the neat grey houses and masjids of the village with its unfinished fort, its groves of fruit trees, well-turfed orchards and bright fields running to the edge of the little cliff, beneath which flows in several channels the Chitrál river—on the other side, above the tower of Spálasht fort, the bare hills rise abruptly to a great height.

It will be noticed that all the administrative districts of Chitrál, except that of the capital which is under the Mehtar's personal rule, are governed by sons of the Mehtar, the most important districts, *viz.*, Yásín and Mastúj being under the two principal sons, the heir apparent Nizám-ul-Mulk and his brother Afzal-ul-Mulk.

In many parts, especially in Yásín and Mastúj, the graves are conspicuous objects by reason of the curious walls which surround each grave, or pair of graves. The enclosure is square and these mud walls are about six feet high, but are so deeply dentated that they may be easily stepped over. Nevertheless in one of the triangular portions there is always a door, usually kept shut as if it was only possible to obtain entrance thereby.

## HUNZA.

Hunza, or Kanjút, is an independent Dárd state lying north of the Rákapúshi mountain. It is bounded on the north and east by the Hindú-Kush and Kárakorum mountains, which separate it from the Tághdumbásh Pamír, on the west by the mountains which separate it from the Karumbar valley, and on the south by the Hunza river, which separates it from Nagar.

The mountains which surround Hunza are of the most rugged, lofty, and desolate nature. Probably nowhere in the world is a country so absolutely buried in the recesses of a gigantic mountain system. The mountains which surround it north and east and west reach, generally speaking, about 20,000 feet but there are numerous peaks rising above this altitude. There is one main tream which drains the Hunza basin; it is generally known as the Hunza river. It has two main sources, one rising near the Irshád Pass, the other near the Khúnjuráb. The latter is fed by the stream from the Kilik Pass. Both these branches unite about a mile above Sast in Little Gúhjál. The two chief tributaries of this river are the Shimshál and Nagar. The chief



GRAVES AT YÁSIN.



FROM CHALT

feature in the system of Hunza is the rises to which the river is subject in spring and summer; this of course is due to the melting of the snows and the action of numerous glaciers. In winter the river is everywhere fordable, in summer it is nowhere so.

Politically Hunza may be divided into two portions, (1) Little Guhjál, which extends from the northern passes to about three miles below Gulmit; (2) Kanjút, which comprises the southern half of the country. Guhjál is inhabited by people who emigrated many years ago from Wakhán and still speak the Wakhí dialect. Kanjút is inhabited by Dárds of the Búrish stock, who are usually spoken of as Kanjútis. They are really the same race as the people of Nagar.

The population is almost entirely confined to the narrow valley of the Hunza river and one or two of its tributaries.

The communications in Hunza are desperately bad, except in the winter when the bed of the river can be used. In summer they are quite unfit for laden animals owing to the floods. The following so-called roads traverse Hunza:—

I. The road from Chalt (Gilgit frontier) to Hunza.

II. That from Hunza to Wakhán or Sar-i-Kul by the Kilik pass.

III. The route from Gircha to Langar in Wakhán *viâ* the Irshád pass.

IV. Gircha to Sar-i-Kul by the Khúnjuráb pass.

V. A route to the Ishkúman valley from Upper Guhjál *viâ* the Chilling pass.

III. and V. are never practicable for ponies.

There is no doubt that communication between Sarikul and Guhjál is perfectly easy in summer, but this, from a strategical point of view, is of no importance, as there is no practicable military road between Hunza and the Gilgit or Indus valleys; nor between Hunza and Guhjál when the river is in flood. Mr. Dalgleish certainly insists very strongly on the strategic value of Hunza and the ease with which the passes into it from the north can be traversed, but he can hardly be aware of the great difficulties of the road between Hunza and Gilgit. Biddulph thus describes it:—

"The distance from Hunza to Gilgit is 52 miles, and the road lies along the right bank of the Kanjút river the whole way, through the villages of Nomal, Chalt, Budlas, Maiún and Hini. Between these places it winds over the face, or at the foot, of bare and precipitous rocks. In many places narrow stone staircases have been built up, allowing of the passage of ponies with difficulty. But between Nomal and Chalt the path has been purposely left in its natural state. For nearly half a mile we had to scramble over rocky ledges, sometimes

letting ourselves down to the water's edge, then ascending several hundred feet, holding on by corners of rocks, working along rocky shelves 3 or 4 inches wide, and round projecting knots and corners where no four-footed animal can find a path. In winter, when the stream is low, the road can be traversed by horses, as the bad parts can be avoided by crossing and recrossing the river."

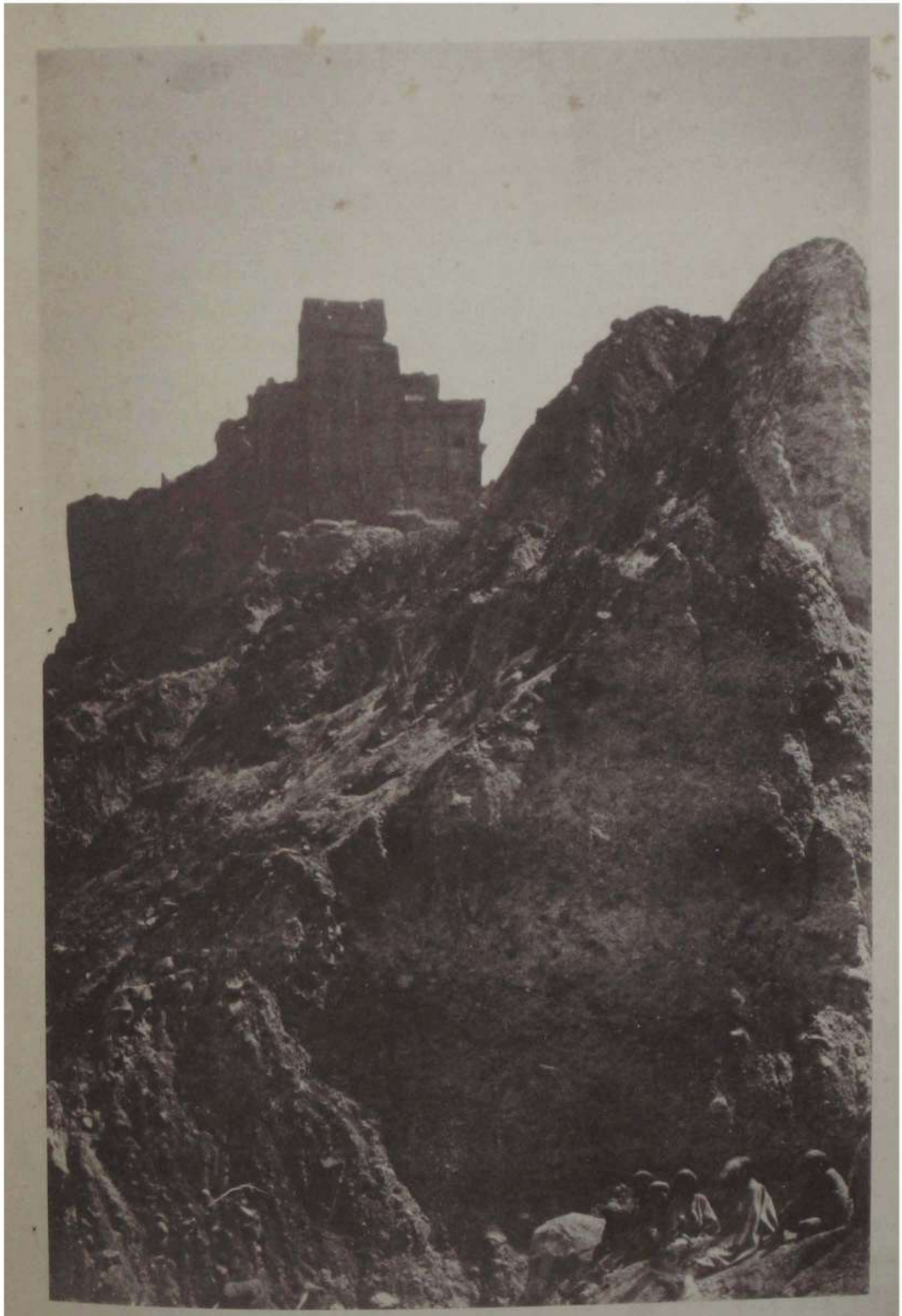
The above description, which the experience of the Mission fully confirms, not to mention the difficulties of the road north of Hunza, clearly shows the impracticability of this route from a military point of view.

The only other routes leading out of Kanjút into Kashmír territory are that *viâ* Nagar and the Hispar pass to Skárdú and that up the Shimshál valley, and over the Mustágh pass. Both of these are only open for a few months, and even then are quite impracticable from a military point of view; while the Hunza river route, although open for animals in winter, is such that it could be easily closed by a small number of men.

There are no towns nor bazars in the whole of Hunza. Hunza proper is a shelving alluvial plateau extending from Hasanábád on the west to Altit on the east. Its cultivated area is about 5 by 1½ miles; this area is occupied by a series of terraced spurs and fans with here and there a rocky knoll crowned by a fort. The ground is thickly wooded, the whole eastern end being covered with orchards. The forts are all alike; *kutcha* (*i.e.*, unbaked) brick walls, with wooden struts, and ties, 15 feet high, with square towers at intervals of 20 yards.

The total population is probably between five and six thousand. The residence of the Mír is a fort perched on a hill like the fortress at Leh, dominating the whole valley, at an elevation above the sea of 8,000 feet. It is surrounded by a mass of houses, and is inaccessible on two sides. There is, in fact, only one road up to it, that from the polo-ground, which is on the south-west face. The fort is within artillery range of the Nagar bank (3,500 yards).

The following is a description of the scenery round Hunza as seen from Altit, looking westward in the evening, and standing on the polo-ground there. In the foreground, a broad flat piece of turf, bounded on either side by rows of poplars and weeping willows which cast their long level shadows across the sward. At the end of this avenue rises, in deep shadow, a rugged rocky spur on an eminence of which stands the fort of Hunza, looking imposing from its position. Above, rising abruptly, are steep rocky slopes, ending against the sky in sharp pinnacles, and rocks which take the



HUNZA FORT.



HUNZA

(FROM THE POLO GROUND, ALTIT).



RÁKAPÚSHI

(FROM HUNZA).

form of quaint figures of men and birds. From the deep gloomy ravines behind the fort, roll down every now and then, with thunderous roar, vast fragments of stone, detached by the melting snow; they fall harmlessly into the bed of some rivulet long before reaching any habitations. To the left of the scene is the fort of Altit with smiling orchards and bright fields basking in the warm evening light. Beyond the river, which is flowing deep down between its precipitous banks through the alluvial valley, and rising above the villages and orchards of Nagar, mighty Rákapúshi rears his head, at a distance of 13 miles as the crow flies. His spurs come down to the valley, clothed for 13,000 feet of height with fields of unbroken snow, brilliant in the rays of the setting sun; a wonderfully beautiful scene, never to be forgotten.

The other important villages are, in Kanjút, Hini and Maiún below Hunza, and in Guhjál, Gulmit, and Gircha.

The climate of Hunza generally is excellent, as may be inferred from the elevation (6,600 feet at Maiún to 10,200 feet at Misgár). The water supply also is excellent both in quantity and purity.

The cultivable space in Hunza is small, and the population is in excess of the productive capacity of the soil. Fruit, especially apricots, grows in great profusion, and forms the only food of the people for part of the year, there being often a scarcity of grain. In fact, during the fruit season, no bread is allowed to be consumed. Ponies and cattle are somewhat scarce, but goats and sheep are kept in great numbers. In Guhjál Yáks are met with, but they are all the property of the *Tham* (ruler).

Nearly due north of Húnza is the small mountain state of Sar-i-Kul. The rulers of the two states have ever maintained a close friendship, in spite of the mountains which separate them.

## NAGAR.

This is a small state lying to the south of the Hunza river. Though smaller than Hunza it has a larger population, owing to the greater amount of cultivable ground, being situated so as to get the full benefit of the summer sun, and being fertilised by the numerous streams from the great Rákapúshi mountain. The country is famous for its apricots, which are exported in large quantities to the Panjab. Its streams are said to be rich in gold. Nearly opposite Hunza, the Maiatsil stream joins the main river from the south-east. The fort of Nagar and the *Tham's* house are on the left bank of this stream about three miles from the junction, at an elevation of about 8,000 feet above the sea. This valley forms the eastern boundary of Nagar, that part of Nagar which faces Hunza is divided into four districts,

each with its forts, viz., Shaiar, Askúrdás, Chatorkún, Swaiar. The river flows between Hunza and Nagar between perpendicular cliffs, which can only be scaled in a few places, and are carefully guarded. There is a twig bridge opposite the fort of Haidarábád. At the head of the Maiatsil valley is the difficult and dangerous route over into the Shigar valley. When Kashmír authority was temporarily expelled from Gilgit, between 1852 and 1860, communication with Nagar was maintained by this route. Between Hunza and Nagar a great rivalry has always existed, but they are generally ready to combine against an external foe. Since 1868 Nagar has been tributary to Kashmír, to which it makes an annual payment of 21 *tolas* of gold, and two baskets of apricots.

## KÁFIRISTÁN.

Káfiristán lies generally between latitudes 34° 45′, and 36°, and longitude 70°, and 71° 30′. To the north is Badakhshán, to the east Chitrál, and to the west and south Afghánistán. The boundaries are somewhat undefined, as the Káfirs extend to the northern slopes of the Hindú Kush; but they may be said to be, the Hindú Kush on the north; on the west, the ranges above the Panjshir and Nijrao valleys; on the east, the mountain range separating the Arnawai valley from Chitrál; and on the south, the high range to the north of the Kunar river, extending as far west perhaps as Tagao. Its map area is roughly about 5,000 square miles.

The Mission only succeeded in penetrating as far as the Arnawai valley; and consequently our knowledge of the geography of Káfiristán has not been very much advanced. It would, however, appear that the general idea of the old maps is correct, and that there are three main valleys draining from the Hindú Kush into the Kábal and Chitrál rivers, viz., the Kao or Alingár, on the west, the Péch in the centre, and the Arnawai or Bashgal Gol on the east. Besides these, the upper portions of the Alishang, Tagao, and Nijrao valleys appear to be practically independent of the Amír, but whether the inhabitants are in part Káfir is not very clear. What is here called the Péch, is the river which joins the Kunar just below Chighar Sarai. Both Bellew and Lumsden refer to this river as the Kamah, but it is probable that the Kamah is what we know as the Arnawai, or Bashgal Gol. The tribes along its banks are known as the Kamóz (Lower Kam), Kamtóz (Upper Kam), and Kamdésh. It is therefore reasonable to suppose that the Kam, or Kamah, is the valley inhabited by these tribes, but this is one of those facts which it is so difficult to ascertain in a country where the habit of giving one general name to a river is quite unrecognised.

The lower portions of the Alingár, Alishang, Tagao, and Nijrao cannot be considered to belong to Káfiristán, as the inhabitants are chiefly Nímcha Muhammadans (converted Káfirs) or else pure Patháns. These rivers, during the summer, become swollen to violent torrents, and are, at times, impassable for days together. The mountains are extremely steep and rugged, forming a most intricate network of spurs. The higher mountains are covered with perpetual snow, whilst glaciers fill the hollows between them. The higher ranges are bare of trees, while the low spurs abutting on the Chitrál River are covered with *kao* (wild olive), juniper, &c.; at all events for many miles below Mirkani. Between the higher and lower ranges, that is to say, between 10,000 feet, and 6,000 feet above sea-level, the mountain sides are well clothed with deodár and other pine trees. The valleys, though as a rule very narrow, are particularly fertile, and blessed with an abundance of fruit trees.

The following description of the Arnawai Valley would probably be found to apply generally to the rest of Káfiristan. The Arnawai rises in the Mandál Pass, and the hills on either side are at first high, precipitous, bare, and rocky, but as they stretch away south the slopes become more gentle and wooded. The highest peaks are clothed in perpetual snow, and glaciers lie in the ravines. At Ahmad Díwána the Mission camp was pitched on a grassy plateau, which had evidently long ago been a glacier; its lateral and terminal moraines still exist, and, climbing up them from the river, it is almost a surprise to find grass and trees above instead of ice. The way thence down the Arnawai Valley lies along the banks of the river through a beautiful fertile country, tall deodárs and other pine trees shading the road and clothing the hill sides.

Many small temporary residences, low stone houses, are scattered about among thefields between the main villages, and are occupied only during the cultivating season. The river runs past, with here a rapid, there a rush, with much noise and bustle, among boulders; then flowing on in an unbroken sweep of silent water through level stretches of meadowland. The hills rise up on either side against the bright sky, the view to the north being closed by the yellow brown crags of the Zidig pass, and to the south by the snow-capped peaks of Dír. On either side of the valley, through deep ravines and narrow gorges, white streams come tumbling down to join the main river, paying a little toll on the way by turning the small turbines of the numerous corn mills.

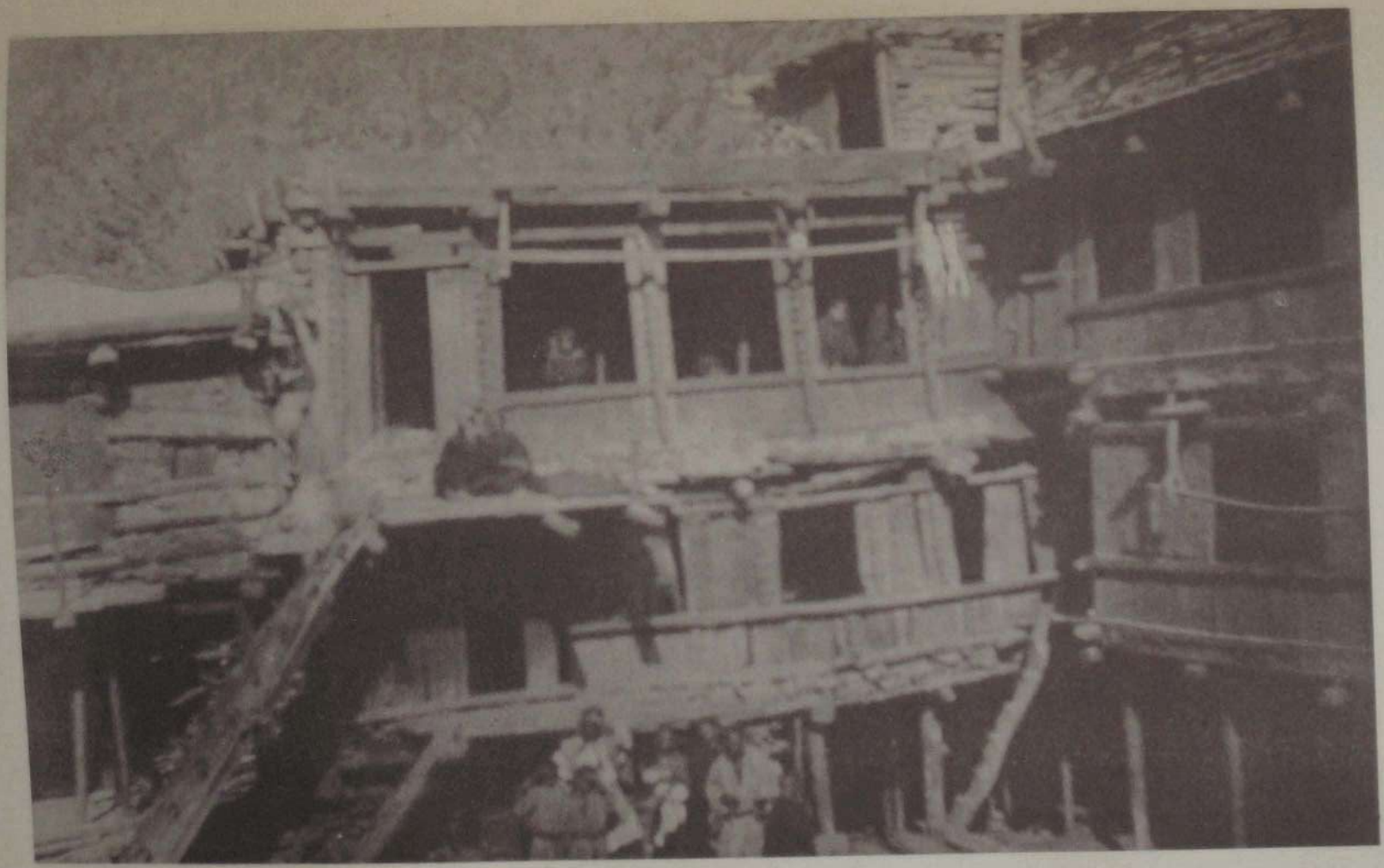
Although some towers and traces of former cultivation, for which the soil would seem well suited, exist at Ahmad Díwána, the valley is but little inhabited till we approach Pshur, the Chitrál name for which is Shui. Above this village the Luluk valley, up which lies a route to Virran, falls

into the Arnawai. Above Shui, birch and willow are the commonest trees, but below and from Apsai downwards, pine trees, walnut, apricot, mulberry and other fruit trees abound. Delicious grapes are also plentiful. From Apsai, cultivation is almost continuous to Lutdih, below which the Mission did not travel; but judging from a bird's-eye view obtained from a lofty point above Lutdih, the valley seems to close in somewhat, fields occurring at intervals. Landslips seem to be common, and one had lately caused much damage to a large cultivated fan above Lutdih, a flow of mud having completely ruined the fields, which were covered to a great depth.

The pathways in the Arnawai are neither better nor worse than elsewhere in that part of the world; they are narrow, steep, and stony in places, and there are a few bad bits here and there. The river is crossed by small bridges on the usual principle, strongly constructed of deodár timbers; with neat substantial superstructure. There are no rope bridges above Lutdih, whatever there may be lower down, or in other valleys.

The villages Shui, Apsai, and Shidgol resemble forts rather than villages. Their plan is an irregular four-sided figure, the houses being built contiguously round a central court, the only entrance to which is through a large door capable of being strongly closed and secured from the inside in the event of attack. The houses consist of a basement and one, or two, stories above; the outside walls presenting only flat faces of mud and stone, with framework and ties of timber, broken up in the upper rooms by numerous very small windows; inside, overlooking the courtyard, are picturesque wooden verandahs, the rooms opening on to them. The houses are two rooms deep; the rooms facing outwards are very dark, receiving their light only from the little loop-holes, mentioned above, or through the doorway communicating with the other room, which is lighted from the balcony. The walls of the rooms are often wainscotted; the panels being carved in various patterns, imitations of basket work, &c. The rooms are dirty and smoky, and are provided with a central fireplace; the burning logs being kept in their place by stone dogs, which are also used as rests for cooking-pots. The Káfirs cannot sit down, as Orientals generally do, quite comfortably on their heels; each room, therefore, contains a few wooden benches, stools made of wood with laced hide seats, or of wicker work. Their beds are either entirely of wood, or wooden frames laced across with strips of hide.

There is a good deal of carving about the verandahs and balconies, which look very well from the court below, and remind one somewhat of the courtyards of the old inns immortalised by Dickens. In the upper stories the woodwork rather preponderates, and the plentifulness and ready accessibility of the material enable the Káfirs to be much more lavish in



CENTRAL COURT, APSAI.



PORTION OF LUTDIH VILLAGE, ON THE RIGHT BANK OF THE RIVER.

its employment than the Chitrálís are. The verandahs are reached from the courtyard by means of posts or small trunks of trees, deeply notched to afford foothold. The upper stories are similarly reached from the lower ones. Occasionally ladders are used, formed of broad rungs fitted into two side timbers, the space between being planked up.

In the centre of the courtyard is a large square raised stage of planking. Generally this is surrounded by low seats, and in one corner stands a sacrificial post. On this platform dancing takes place, and here also the village senate meets to discuss the affairs of the community.

Outside the village are several detached buildings; one of these is generally a high and strong tower for defensive purposes; the others are small huts. Among the Káfirs, as with the Jews, the women are considered unclean both during childbirth and during the continuance of the menstrual period; and accordingly, these small huts, isolated, but near enough to the village for easy protection, are erected, and into these the women are sent at such times. When occupied, a sheep's skin is attached to a high pole in the midst of the huts, in order to warn passers from the chance of contamination.

At Apsai the Mission was encamped just under the walls of the village; and at night, the tall dark walls, with quaint broken skyline, the lights shining dimly from the diminutive casements, strange figures below passing to and fro, with flaming pinewood torches throwing transient lights and weird shadows on wall, and tent, and wooden images, all made up a picture strongly resembling those mediæval scenes with which Doré has made us familiar.

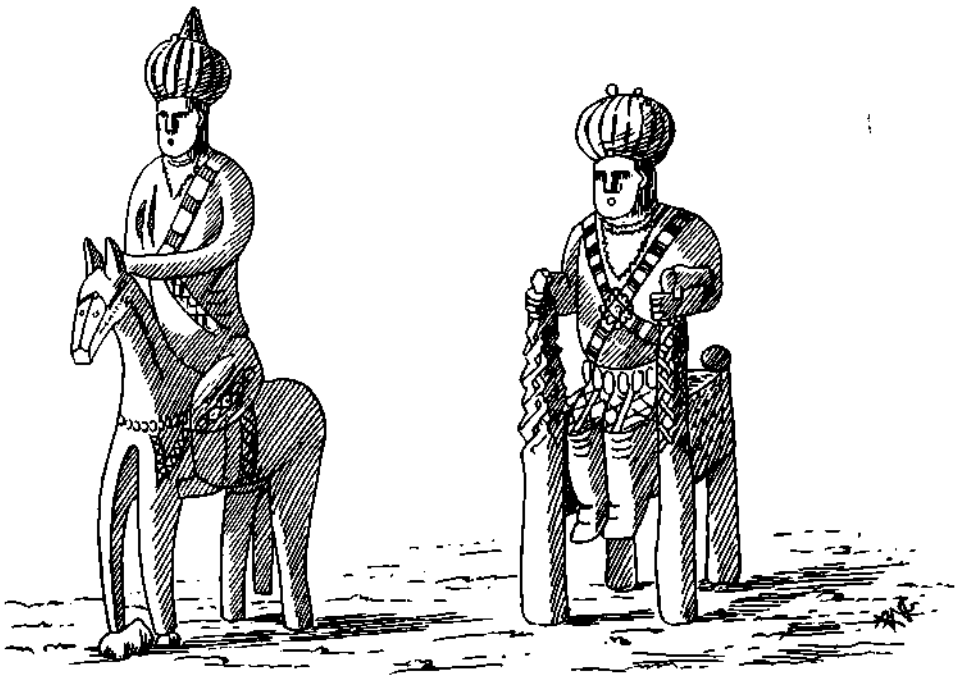
Lutdih differs in plan from the villages above described. There are two villages really, one on either side of the river, but in neither is the enclosed square adopted. The smaller village, on the right bank, indeed, follows the plan of the square somewhat, but the houses do not form a continuous wall; they stand in groups with gaps between. In the large village, on the left bank, three sides of the square are fairly well marked by single rows of houses, with gaps at the corners; but the fourth side is lost in a confused mass of scattered houses, and groups of houses. In the centre of the village is a circular space with the sacrificial post in the centre, and the usual platform On a small tongue of land jutting out into the river stands a strong tower of defence. A small and very neatly constructed cantilever bridge connects the two villages.

At Lutdih a favourable opportunity was afforded of examining the mode in which the Káfir dead are disposed of. The coffins are not buried, but placed above ground, and sometimes on raised platforms; a custom exceedingly similar to one prevailing among the Nága tribes in Assam

on our N.E. frontier. The coffins are rather elaborate pieces of joinery solidly constructed out of slabs of wood, the production of which must involve long continued labour with the axe. They are of ingenious plan, the pieces being joined together by tenon and mortise, the former being made long enough to project some distance through the latter, and perforated so that the joint can be made tight by driving a wedge-shaped pin through the perforation in the mortise. The two end pieces of the coffin are made considerably longer than its depth, so as to form a pair of feet, on which it is elevated above the ground. A special piece of ground is set apart for the dead, the coffins being arranged along one side, in two or three rows. At Lutdh, in front of the coffins, which rested beneath some fine trees on a gentle slope, were placed a number of monumental life-size wooden figures, each hewn out of a solid block of deodár. The male figures are represented as seated in chairs or mounted on ponies, although they have very few ponies in their country. They all wear a head-dress apparently representing a turban bound round a conical cap. This also is curious, as the Káfirs always go bareheaded. The female figures are represented as wearing the horned headdress, and are further distinguished by the mammæ, which are treated in a conventional way. Female figures are never shown on horseback, though they are sometimes seated in chairs. All these figures and accessories are carved very elaborately in their way, and with considerable attention to detail; no attempt, however, is made at portraiture, all the faces being carved on one conventional pattern. At Apsai these figures were ranged in a semicircle just outside the village, a low wall keeping them from falling into the river, while under a special canopy were the effigies of the last chief of Apsai and his wife. In the fields, occasionally, one came across small wooden effigies on high carved posts let into stone pedestals: these were the monuments of famous braves. There is little doubt that these monumental figures have given rise to the idea that Káfirs are gross idolators.

The chief vegetable productions in Káfiristán consist of wheat (which is cultivated in greater proportion than any other grain), barley, and millet, together with small quantities of rice in the low grounds in the southern parts of the country. A few varieties of vegetables and greens are grown wherever the land is suitable. The Káfirs use the spring water for drinking purposes, having no wells, and the fields are entirely dependent on rain or are irrigated artificially from the many small streams intersecting the country wherever the situation of the ground enables them to distribute the water by means of small cuts or channels. It is said that in Káfiristán generally the quantity of land conveniently situated for this purpose is by no means great, and it is necessary to cultivate all the smallest available spots on the sides of mountains and often on the terrace-like ridges. Many

# KAFIR EFFIGIES.



*Male*



*Female*



KÁFIR EFFIGIES.

of the latter are artificial, and formed after the employment of great labour, time, and perseverance; indeed no favourable bit [of land, be it ever so small, is neglected. This somewhat unfavourable situation of the tillable land, and the often barren nature of the soil in many parts of the country, compels the people to depend, in a greater measure, on the produce of their herds and flocks, and on their orchards and fruit-gardens for subsistence.*

The slopes and ravines of the Hindú Kush, as well as many of the lower ranges of hills, are generally covered with primeval forests, containing trees of immense size, the growth of ages, especially the different kinds of pine and fir, such as the *deodár*, "*chilghózá*," and five or six other sorts; the oak, hazel, elder, wild olive, plane, horse chesnut, *sísúkarkara* (a species of fir), mulberry, walnut, jujube tree, together with several others.

The dense forests of pine and other trees supply the people of these alpine regions with an inexhaustible stock of fuel, as well as wood for building purposes. Pine slips are generally used instead of lamps and torches.

The fruits are produced in great quantities, and of fine flavour, and consist of grapes of several kinds, pears, apples, apricots, plums of two or three species, peaches, nectarines, figs, quinces, pomegranates, and mulberries; walnut trees are also found, and, it may be presumed, peach, almond, and pistachio trees, which abound in the hills of their neighbours. The whole of these are chiefly grown in the sheltered valleys to the south. There are a few others growing wild, such as the "*amlúk*" (a species of diospyros), "*pista*" (pistacia lentiscus), the seed of the "*chilyóza*" (species of pine), &c.

Numerous wild flowers, indigenous to these regions, grow in the hills and in the valleys; the *gul-i-nargis*, or narcissus, is to be found in infinite numbers.

Masson mentions that the river Kaó, when swollen, brings down to Laghmán branches of an odoriferous wood, supposed to be cedar, but which is most likely to be the juniper cedar. The unfitness of the country for the purposes of tillage is so evident that the principal attention of the inhabitants is directed to their orchards, which yield them amazing quantities of fruit, which are found also, in the wild state, in the greatest profusion over their hills.

Biddulph tells us that the Síáhpósh breeds of hounds, cattle, sheep, and fowls are celebrated for their fine quality, and are much sought after by their neighbours. The cattle, which in appearance and size compare

* This hardly applies to the Arnawai Valley, where, as before mentioned, large areas of land are under cultivation.

favourably with English breeds, are parti-coloured, with large humps. Those in the neighbouring valleys are small and humpless.

Bellew tells us that "they possess great numbers of cows and sheep, which "are mostly kept in the lower valleys, while higher up are found the "domestic yák and vast flocks of goats."

With reference to the above, cattle and goats are certainly numerous, and the cattle are considered superior to those in Chitrál. It is doubtful, if there are any yáks, and there are certainly no fowls, as the Káfirs abominate poultry.

Rain falls in copious showers, but never for any lengthened period. It occurs chiefly during the spring months, and towards the end of August and September, although occasional showers fall, as in other temperate climates, throughout the year. In the winter violent snow-storms are of frequent occurrence which block up the passes between the hills, and cut off all communication between the different valleys, often for weeks together.

Bellew says:—

"In the lower valleys the winter, though severe, is hardly rigorous, and by no means longer than ordinary; whilst the spring and autumn are delightful seasons, with an intervening summer, which is sometimes complained of as oppressive. In the higher regions, the spring and autumn are very short, while summer and winter each last about five months. The winter, naturally, from the elevation, is extremely rigorous."

The experience of the mission was limited to a week at the end of September. Of this week, the first day was fine, the next three days were fine as to the morning, the afternoons being dull and very cloudy; the last three, dull cheerless days, with a little rain in the afternoon occasionally. Káfiristán has the advantage of coming within the rainy zone. It is, therefore, less bare and sterile than Chitrál.

Girdlestone, on the authority of Colonel Gardiner, mentions no less than seven routes into Káfiristán, but they are very unreliable. First of all he gives a route from Farajghán over the Khawák Pass. Considering the Khawák Pass is over the Hindú Kush and Farajghán on the south-west side of Káfiristan, there appears to be some discrepancy in this description, which renders it unnecessary to quote the account given by him. Taimúr-lang is said to have invaded the country by this route (*i.e.*, the Khawák) with 30,000 men, and to have lost the greater part of his troops in striving to force his way through the opposing Káfirs. Chengiz Khán is reported to have reconnoitred the route, and to have pronounced it impracticable. The second route is by Chighar Sarai; the passage of the Kunar being made, as a rule, over inflated hides. The third route is

by the Káfir pass,* which lies a few miles to the south-east of the Dúráh.

The fourth pass lies over the Hindú Kush, between the Khawák and Dúráh, in the Khilti country. This also appears to be only practicable for hardy mountaineers. Between the last route and the Khawak, but nearer to the latter, is a pass locally known as the Nímcha Dúz, on which there are the remains of some old temples and a number of caves. Here is said to be treasured a large slab, on which is engraved Taimúrlang's legendary warning to his successors regarding the hopelessness of invading Káfiristán.

Besides these there are the following routes of which something is known :—

(1.) The Mandál, leading from the Hauz-i-Dúráh to Ahmad Díwána.
(2.) The Zidig, from Gabar in the Lutkú valley to Ahmad Díwána.
(3.) The Shúi route, from Izh at the mouth of the Bagusht Gól (Injgám) to Shúi in the Arnawai valley. This route is considered practicable for horses.
(4.) The Gangalwat, and
(5.) Sháwal, leading from Kaláshgum to Lutdih.
(6.) The route from Arando in the Chitrál-Kunar valley up the Arnawai or Bashgal valley.

There must certainly be other routes leading from Panjshír and up the valley of the Alingár river. McNair, indeed, distinctly says there are routes practicable for baggage animals up both the Tagao and Panjshír valleys. But according to him the route most used is that from Chitrál *viâ* the Sháwal, not because of any superiority in the route itself, but because of the comparatively friendly relations subsisting between the Káfirs and Chitrálís.

Kaláshgum is the name of a valley in Chitrál territory, leading down from the Sháwal pass to Aián. It is inhabited by Kalásh Káfirs, a clan formerly slaves of the Bashgalís, but now subject to Chitrál. Kaláshgum consists of five valleys, viz.: Bumboret, Rumbúr, Barír, Urtzan, Shtúrgutz. There are two roads through Kaláshgum into Káfiristán, viz., by the Sháwal from Bumboret, and the Gangalwat from Rumbúr. Both are over 14,000 feet, but are not practicable for horses. There is also said to be a path called the Zúmúr. Kaláshgum is well wooded, and the villages are well stocked with vines and fruit trees. Walnuts are particularly plentiful, and pears grow here to a great size but have little flavour.

The villages of the Kalásh Káfirs differ from those of the Bashgalís The houses are built separately and without any order or regularity. They

* By the Káfir Pass is probably meant the Zidig, or Mandál Pass.

stand among the trees on the hillsides, on steep or gentle slopes, and vary somewhat in pattern. They are generally two storeys high, and may be built entirely of stone, or the lower storey only is of stone, the upper being of wood. The lower storey is about 12 feet high, and is used only for storing wood, and the ordure of cattle, which is used as fuel. The doorway is a few feet above the ground, entrance being gained by means of a notched post. When both storeys are of stone, a wooden verandah is often built out from the upper room, supported from the ground by tall stout posts. Sometimes there is a third storey half the width of the lower ones, leaving a space in front to walk about. The third storey is of wood entirely. The woodwork in doors and windows is roughly carved. The rooms are dark and furnished with low wooden chairs and stools.

The following is the description of an arrangement for husking grain in use in these parts. A small mud and stone house stands on the edge of a little stream. Let into the ground is a deep piece of wood in which are two spaces hollowed out to receive the grain to be husked; this operation is performed by means of two long levers working on a fulcrum, and having heavy cylindrical stones wedged into their upper ends; the lower ends reach to within a few inches of the axis of a waterwheel. In this axis, corresponding to the ends of the levers, are two pieces of wood. The waterwheel is an undershot one, and is worked outside the house by means of a shoot of water, and, in revolving, the two strikers act on the ends of the levers, depressing them for a space and setting them free again as they pass on. This, of course, causes the upper ends to rise and fall; and the stones thus become pounders and husk the grain. The axis of the waterwheel is pivoted in wood at either end, and a pool of water through which the strikers pass keeps them cool.

## CHAPTER IV.

### Wakhán and Badakhshán.

The Mission saw only one portion of Wakhán, the valley of the Áb-i-Panja, and even less of Badakhshán. The description of these districts will therefore be confined to the portions travelled through by members of the Mission.

The Áb-i-Wakhán is the name given to the southern branch of the Oxus as far as Kala Panja, below which place it is known as the Áb-i-Panja. It rises in the Hindú Kush to the south-west of the Wákhujrúi pass. For about 30 miles it flows in a westerly and south-westerly direction till it reaches Bozai Gumbaz where it is joined by the stream from the little Pamír. From its source to Bozai Gumbaz the Áb-i-Wakhán flows through the Pamír-i-Wakhán in a shallow shingly bed, which, for the last few miles, is nearly a mile broad, and is fordable at all times. The fall of the valley is very gradual. The banks of the river, and the islands in its bed, are dotted with dwarf willow, and there is excellent forage on the undulating slopes and plains of the Pamír, which are between two and three miles wide at the junction of the streams at Bozai Gumbaz. This place, "the tomb of Bozai," is so called from the fact of an old Kirghiz chief having been buried here. His tomb is still standing. The view from this point up the valley of the little Pamír is very curious. It presents the appearance of a flat open plain, bounded on either side by peaks which rise to no great height; these peaks lessen in perspective and the plain ends against the sky in a straight line. The ascent to the horizon is so gradual as hardly to be perceptible, and it is difficult to realise that that horizon is actually a watershed, and that only a few yards from the sources of the stream flowing past the tomb, lies the lake of Oikul which sends down to the east the Aksu, which shall make a great loop cast to the east and north, before finally turning westwards, and shall travel many miles before meeting the waters of the little Pamír, then mingled with the Áb-i-Panja, at Kala Wámar.

Below Bozai Gumbaz the Pamír ceases, the hills close in and assume a rugged, forbidding aspect, and the river flows in a deep channel through narrow gorges, and between steep hill sides, which, below Langar, begin to be dotted with juniper; the ravines and river beds being well stocked

with birch, dwarf willow, &c. Two fine elevated plains occur on the right bank of the river between Bozai Gumbaz and Sarhad. The first, Dasht-i-Mirza Murád, about seven miles from Bozai Gumbaz, and the Dasht-i-Langar which is separated from the Dasht-i-Mirza Murád by a large stream. The former plain is five miles long, and one, to one and a half, mile wide. The latter, two miles long by one mile wide. They are about 500 feet above the river, and have a general elevation above the sea of 12,500 feet. At Sarhad the river issues out from the mountain gorges, and enters a level valley about three miles broad, spreading out over a shingly bed into numerous channels. In summer the whole of this shingly bed is covered; but at Sarhad the river is always fordable, though not so lower down. The flat grassy land below the fort of Sarhad is intersected by many small channels, and at the lower end of the valley there is a large swampy lake, the home of many kinds of wild fowl, geese, ducks, &c. which were found to be somewhat shy. On the right bank, on the road to Rachao, about half way from Sarhad, is a curious chalybeate spring, bubbling up out of a cone-shaped mass of very fine hardened deposit, about three feet in height, the ground around being stained red, orange, and brown. The valley closes in below Sarhad at Rakot and again at Bábátangí, but it is fairly open generally.

At Kala Panja the valley again opens out to a great width on the left bank, and continues fairly open, on this bank, right away down to Badakhshán; the higher peaks on either side are snow-clad, and glaciers are seen at the heads of some of the ravines, though none now reach the valley itself as they did formerly. The ground around Kala Panja is, for the greater part, cultivated, and is well irrigated from the ravine to the south, which is occupied by a large glacier. Red and white willows, and a curious thorny shrub grow in profusion around Kala Panja and give shelter to a large number of hares, and yield a plentiful supply of firewood; forage is also abundant.

Since Alí Mardán Sháh fled to Yásín, the province has been ruled by an Afghán *hákim*, who is under the orders of the governor of Badakhshán. In 1886 the *hákim* was Ghafar Khán. Wakhán is divided into four *sads*,* each under an *áksakál*, namely:—

(1.) Sad-i-Sarhad.
(2.) Sad-i-Sipanj.
(3.) Sad-i-Khandút.
(4.) Sad-Ishtrágh.

The last named was once an independent principality. The *áksakál* is the hereditary Naib of Wakhán.

* "sad" = "hundred."



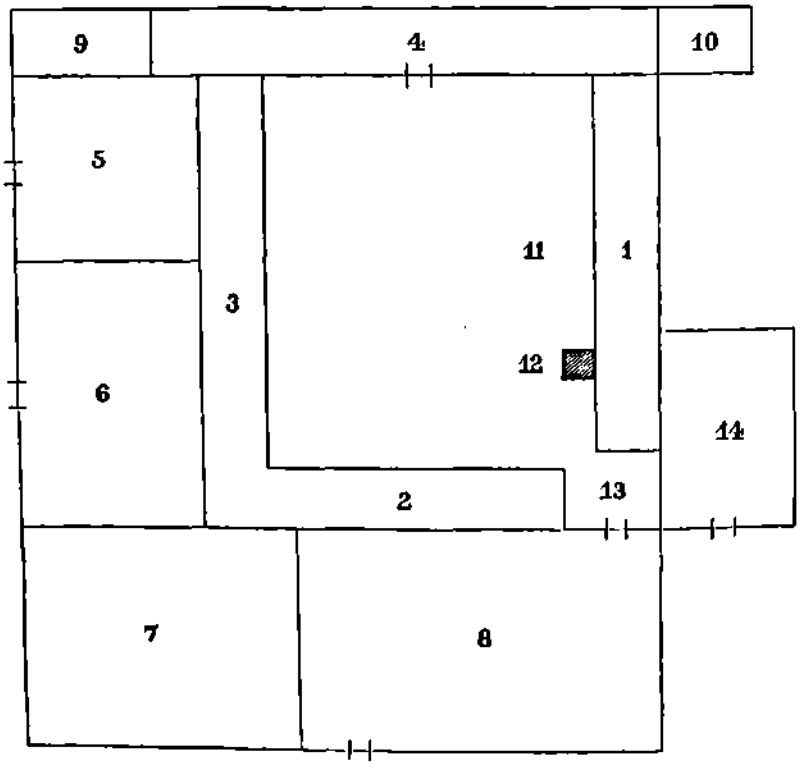
KALA PANJA.

The population before Alí Mardán fled was about 6,000, *i.e.*, 300 houses A house in Wakhán means a family hamlet, and may consist of from 12 to 50 people; but 20 may be taken as a fair average. The population now is probably about 4,500.

The fort and village are built on five hillocks, the fort being on the highest of these. It is rather an imposing looking building of irregular outline with a tall tower. The materials used are mud and stone. The reception room is a raised verandah in one of the walls. The wooden pillars are carved after Chitrál patterns. Curious granaries crown the summits of the huge boulders which crop up around the fort; they are constructed of mud, are four feet square, and four feet high, open at the top. The Governor with his retainers, and an Afghán garrison of one Bahrak (100 irregulars), reside within the fort. A smaller fort stands on another hillock, and the other three are crowned by ruins, graves, and a few houses. There are many ruined villages scattered about, and to the east of the fort are some fine turf flats — on which Alí Mardán and his men used to play polo, a game unknown to the present Governor. Just above Kala Panja, the river of the Great Pamír, from the Victoria lake, flows into the Áb-i-Panja at a place called Zang, where are the remains of an old fort on the hill above, known as Zang-i-bar. The following is a description of a visit paid to Zang-i-bar one morning in the end of May. Leaving Kala Panja at 7 a.m., two branches of the river were crossed; the first quite shallow, the second about 30 yards wide, and between three and four feet deep. On landing the party crossed a beautiful stretch of turf, and passing a little village, climbed steeply up hill to the fort, a ruined building on a small prominence about 800 feet above the river, a little stream brawling under it in a narrow ravine filled with bright shrubs and ferns. The walls of the fort do not seem to be very old. The fort is divided up into a number of small rooms, some of which are still roofed over (perhaps restored by herdsmen, of whose recent occupation there were signs) and the curious fireplaces and raised stone benches are still in fair preservation. The cooking range here, as in most houses in Wakhán, is a low stone and mud wall, with a series of spherical hollows left in it; these have a double circular opening above, and another opening at the side, to provide a supply of air to the oven, and the cooking pots stand above. From the fort could be seen the hot spring a mile to the north, and below on a little hill the remains of another old fort, Asór or Hissár, mentioned by Wood as his camping place when passing through Panja upwards. The view from Zang-i-bar was very fine looking down hill, in a S.E. direction, long reaches of smoothly flowing blue water forming islands of sand and

pebble covered with many coloured thorn bushes, and red and orange stemmed willows. On the turfy banks clumps of tall grasses and purple flowers added beauty to the scene, and beyond and above all the bright brown hills capped with everlasting snow. Zang is now very much depopulated, like most of this part of the country, since Alí Mardán's departure.

The climate is very severe, snow lies for half the year, and the fierce wind, well known to travellers as the "Bád-i Wakhán," blows with cruel bitterness through the valley for a certain time each day. Tents cannot stand against it, and the Mission had to pitch their tents in ruined villages, the walls of which broke the force of the wind. The following extract and plan from a native report give a very fair idea of the general plan of the house in which the officers pitched their camp.




"The ovens of this country and of Zebák, and the houses also, are the same. The oven is not like those of Hindústán, one side is left open, which forms the stand for the pot, like a *chula* in Hindústán; they put the pot upon it and cook their food.

"The houses of these people, notwithstanding the great cold, are so warm that there is no necessity for putting on many clothes, for it makes one perspire.

"In the rooms marked 1, 2, and 3, blankets are spread, and they form the sleeping apartments.

"In No. 4 are placed articles for food and drink, and it is near the oven: leaven, &c., is kept here. No. 5 is the cowhouse and sheep-pen. No. 6 is for the horses. No. 7 is the storeroom for grass and fodder given to the cattle in the winter. No. 8 is the entrance hall. No. 9 is a small room like the bigger ones; when many guests come the children of the house go into this small room, called in Wakhán "kunj." No. 10 is a small room for storing grain, dried meat, *krut* (curds), ghee, &c. No. 11 is the courtyard, large and roofed in. No. 12 is a place like a small 'minár,' in which torches of a certain wood are burnt to light the house. This wood is regularly planted and grown; when fit to cut, it is cut down and stored, after being rubbed over with the pounded seeds of linseed, called 'ulsi' in Hindi, and at night they set fire to it. No. 13 is the door out of the main house. No. 14 is the Khushkhána,' *i.e.* guest room. From Kala-i-Panja to Pútar, *i.e.*, throughout all Sad Ishtrágh, this is made, but from Kala-i-Panja to the frontier it is not the custom to have it, or else they do not build it owing to scarcity of wood, because wood has to be brought from Chakrokúch, which is a long way off. The men of Sad Ishtrágh having no other wood for building, use willow and poplar timber for their houses."

The houses resemble those in Badakhshán, except that, instead of the central fireplace, they have large stoves after the Russian fashion. These occupy an entire side of the house, and throw out so genial a warmth that a Wakhí's humble roof is most comfortable quarters. The smoke is somewhat annoying. It is not uncommon for six families to live together, not in separate apartments, as in Badakhshán, but in one or at most two rooms. As night draws on, the Wakhí pulls down a dry branch of the willow tree out of the many bundles suspended beneath his rafters, and, putting one end of the branch to his breast, while the other is held by his wife's foot, takes his knife from his girdle, and with both hands shaves from off the rod as many lengths as he conjectures will last through the evening. These resinous slips are then deposited above the lintel of the inner door, and they answer all the purposes of an oil lamp or candle.

The following interesting account of a Wakhí interior is given by Muhammad Sháh:—

The Wakhís do not use oil, but they parch the oil-seeds in a pan, and then grind them between stones into a kind of paste, which is plastered round twigs of trees. These, when dried, are stuck in the walls of houses and take the place of candles. Their houses are almost square in form. The walls are of stone, cemented with mud; they are roofed over with beams,

rafters, branches of trees, and mud. A raised platform runs round the walls with posts at the four corners as supports to the roof. This platform, on three sides, is carpeted with coarse *namads* for the family to sit and sleep on, while the fourth is occupied by provisions and cooking utensils, &c. The hearth is also on this side, in the wall of the platform. The roof is flat, and has an opening in the centre to give light and to emit smoke. There is only one door in the middle of one wall, on both sides of which are raised platforms covered by an extension of the roof supported on stout posts. These platforms are also carpeted with coarse *namads* for visitors and guests.

"The dress of the people consists of loose pyjamas (pantaloons) and a *chakman* tied round the waist with a woollen cord, for men as well as for women, the only difference being that the women wear a kind of jacket under the *chakman*. The men wear a hat* with a lungi tied round it sometimes, while the women have only a bit of cloth tied round their heads."

Kala Panja is 9,050 feet above the sea, and is situated in latitude 37° 0′ 28″ and longitude 72° 38′ 20″. This longitude differs from that obtained by Captain Trotter by about 7 miles, his longitude being 72° 45′ 29″. Captain Trotter obtained his longitude by chronometer observations and traverses, and the results were wonderfully accordant. Colonel Woodthorpe's longitudes were obtained by observations to known peaks, fixed by Colonel Tanner on the high ranges lying to the north of the valley of the Áb-i-Panja. A good check was obtained at Sarhad, where the Wakhán work was connected with the Yárkhun valley work at Baróghil; and observations to Lunkho fixed peak S.W. of Kala Panja gave a longitude for that place. It is possible that the peaks are not quite correct, as they were fixed from great distances on small bases; but a careful subtense traverse from Kala Panja (with longitude 72° 38′ 20″) taken by Zebák to the Dúráh Pass, brought the position of that pass closely coincident with the position previously assigned to it by a traverse from Chitrál. It is fair, therefore, to assume, with all these checks, that this value for the longitude of Kala Panja is at least as likely to be correct as Captain Trotter's value.

The Afgháns talked of moving the seat of Government from Kala Panja to Khandút, a village 16 miles down the river. It would be a pleasanter place to live in; there is a good deal of cultivation about it, and plenty of firewood in the shape of willow. The grazing grounds are magnificent, and meadows extend for miles. On the steep, rocky hillside opposite

* The ordinary Afghan *kulah*.

Khandút is the Káfir fort of Zamr-i-Átash Parast, a large and apparently elaborate work with advanced walls and lines of towers and bastions occupying a strong position on the slopes of a spur protected on one flank by a deep rocky ravine. The Mission could only examine it from a distance through glasses. The north bank of the river below Kala Panja seems more fertile than the south, or left bank, and villages are more numerous. The ravines in the northern ranges present a curious feature. Forming apparently wide and open valleys in the higher portions, they cut through the outer slopes in very deep and narrow gorges, and the alluvial fans formed at their exit are much flatter than the steep ones from the southern ravines, which have a more uniform gradient.

The principal crops in Wakhán are peas, beans, and barley. Wheat is likewise grown, but only to a very limited extent.* In April the seed is put into the ground, and in July the harvest is reaped. The land requires to be irrigated, and, to yield even a moderate crop, must be richly manured. The strong wind that blows with little intermission throughout the winter and spring down the valley of the Oxus is unfavourable to vegetation.

Fruit trees do not grow in Wakhán, except at Ishtrágh. Above Kala Panja the only trees are willow and birch, while, above Sarhad, juniper is the most common tree. From Khandút downwards, thick groves of poplars are common in the villages.

Yáks, cattle, ponies, goats, and sheep are largely reared; in fact, thanks to the excellent pastures of Wakhán, the chief wealth of the people lies in their flocks and herds. A considerable amount of wool is exported. Traders from Yárkand bring cotton and silk, and take back ponies, sheep, and warm *choghas*. Rice, salt, and cotton cloth are imported from Badakhshán. Dried mulberries from Wardúj are used in place of sugar. There are no bázárs, nor any approach to a town. Near Patúr there is said to be an abandoned silver mine.

The Wakhán dogs differ much from those of India, and bear a strong resemblance to the Scotch colly. They have long ears, a bushy tail, and a frame somewhat slender and more calculated for swiftness than strength. They are very fierce, make excellent watchers, and will fight dogs twice their own weight. Their prevailing colours are black or a reddish-brown, the latter often mottled. So highly are their game qualities valued that the Sind Amírs used to have their packs improved by importations from this country.

The western boundary of Wakhán is; on the right bank of the Panja at Namadgút, which now belongs to Ishkasham, and on the left bank the broad

* Wheat is only grown below Kala Panja.

spur between Patúr and Ishkasham. The best military position, however, for defending Wakhán is the long low spur (an old glacier bed) between Kázideh and Patúr.

The routes from Wakhán are: southwards, the Ashkúman, Baróghil, Kháu Kón, or Yúr, Rich, Úchil, and Sad Ishtrágh, all leading to Chitrál territory; the Irshád and Killik routes to Kanjút, and the Shitkár route to Shignán. There are two routes to Yárkand; the one by the Great Pamír is used in summer when the Sarhad route is rendered impracticable by water; that by Sarhad, and the Little Pamír, in winter, it being the most direct.

## Badakhshán.

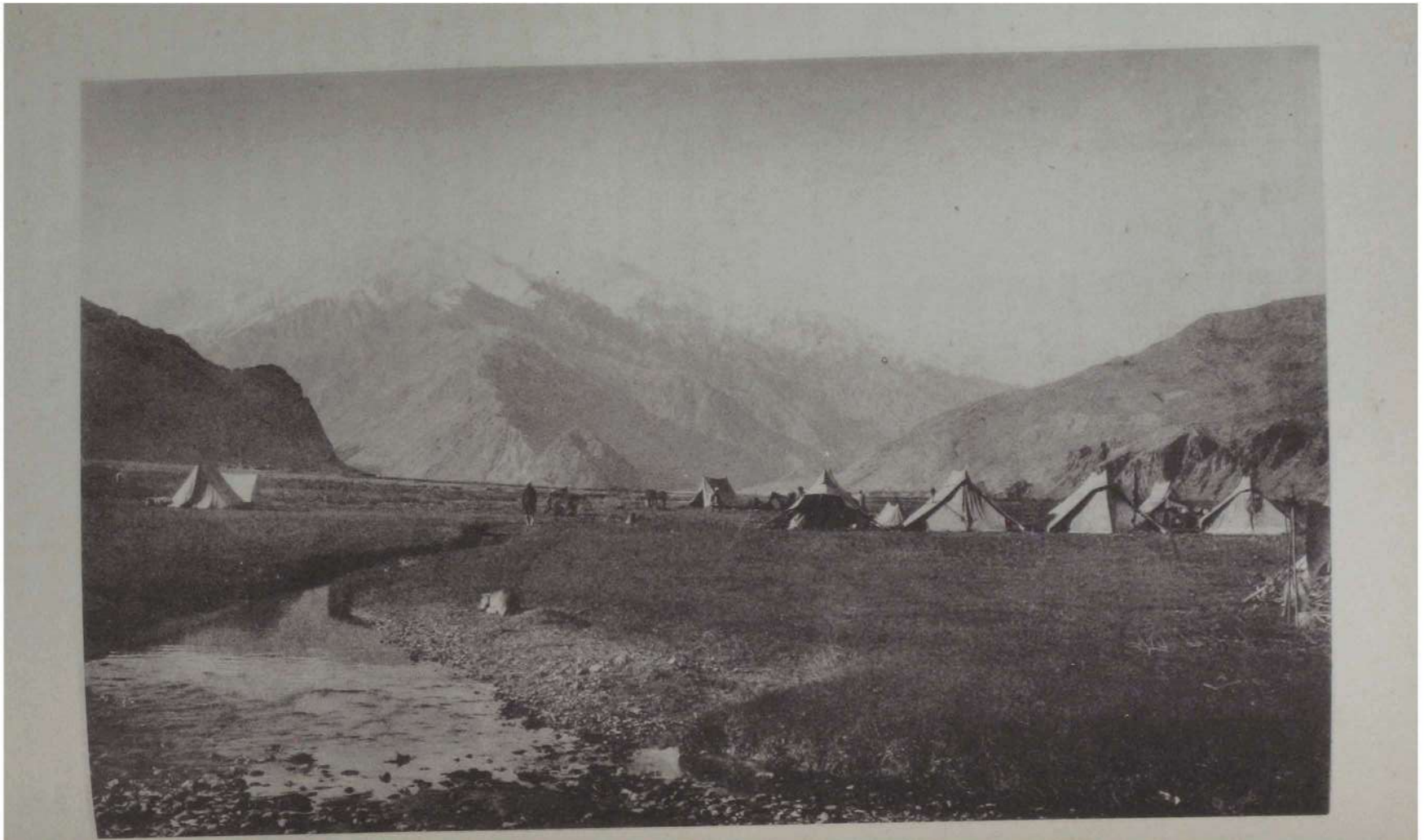
### *Ishaksham and Zebák.*

The districts of Ishkasham and Zebák were the only portions of Badakhshán visited by the Mission.

Ishkasham is a small Tájik state, formerly tributary to the Mír of Badakhshán. Its territories extend for about 16 miles to the north of the village of the same name, and are situated on both sides of the river (which at this point is frozen from December to March), and at six miles beyond Sar-i-Shákh, border on the territory of Ghárán, in which are the ruby mines for which Badakhshán is famous.

Ishkasham, together with Zebák, was formerly under Sháh Abdul Ráhím, but in 1886 it was an Afghán district under the direct rule of the *naib* or *hákim* of Zebák, and, therefore, indirectly under the governor of Badakhshán. The fertile portion of Ishkasham consists of a sloping valley about three miles long and two broad, formed by streams from the watershed between it and Zebák. This valley is backed up by lofty hills, and ends towards the Oxus in an elevated plateau which falls abruptly for about 500 feet to that river; it is also, in its lower portion, very deeply cut through by a large stream from the Nushao peaks of Tirich Mír. The valley is a fertile one and contains about 20 villages, one of which is Ishkasham *par excellence*, where there is a wretched mud fort, having an elevation above the sea of 8,600 feet. As a matter of fact, the whole valley may be regarded as one large scattered village, as the cultivation is continuous. The population of the whole valley is probably about 1,200 souls.

Wheat and barley grow well; and, although there is only one harvest, there is abundance of grain. Poplars and a few *chinárs* grow here, but there is very little firewood. There are no fruit trees. The climate, though cold, is certainly much milder than that of Wakhán. The inhabitants are Tájiks, speaking a dialect of their own. They nearly all, however, understand Persian. Like all the people in these regions, they belong to the Maulái sect.



CAMP ZEBÁK

They seem a quiet, peaceable people, and are well disposed to travellers. Cloth, salt, and cooking pots they obtain from Faizábád. They have no other material wants.

The position of Ishkasham is strategically important, as it commands the only winter route between Badakhshán, Shignán, and Wakhán.

Ishkasham is connected with Zebák, and hence, Badakhshán with Wakhán, by a remarkable pass, called the Ishkasham or Sardáb Kotal. It has an elevation of about 9,500 feet. The ascent from Ishkasham is very easy and gradual, being about 900 feet in four miles, or nearly one in 25. The gap in the mountains which forms the pass is about half a mile broad, and is more or less cultivated nearly to the crest, which is so level that it is difficult to say where the watershed may be. The descent is equally easy. The pass, though under snow from November till April, is nearly always traversable. It is very similar in character to the Baróghil. A cart road might easily be taken over it, and wheeled artillery could use it even now.

Zebák is situated at the south-east corner of the province of Badakhshán. It consists of two main valleys uniting near the village of Zebák. These valleys, with their tributaries, form the sources of the Wardúj. The general elevation of the district is from 8,000 to 12,000 feet. The climate is severe, and from August to January the strong winds which prevail during those months are particularly trying. There is only one harvest, and barley, beans and millet are the principal crops. Willow, birch, tamarisk and poplar are almost the only trees which grow in the district, and there is no fruit. The cultivation is insufficient for the inhabitants, and the deficiency has to be supplied from Jurm and the Wardúj valley. Zebák is a great grazing district; its meadows afford splendid pasturage, and consequently large flocks and herds are maintained. Ponies and donkeys also are numerous. The width of the two main valleys varies from a few hundred yards to over a mile. The villages belonging to Zebák are:—In the valley leading from the Dúráh pass—Sanglích, Iskatól, Parch, Flakh-Marikh, Tirábád, Kedah, Zebák, Karkhán and Gaokhána. In the valley leading from the Nuksán pass—Deh Gul. In what may be called the Zarkhwán branch—Naichún, Khushpák, Bázgirán, Surkh Dara, Zarkhwán, Kala-i-Dan, Shadgak, Naubád. None of these villages are large, and there are no forts. The total population is probably about 1,500 souls, or less, chiefly Persian speaking Tájiks. At Iskatól and Sanglích, however, the Ishkasham dialect is spoken. The inhabitants therefore probably emigrated from Ishkasham at some remote period, or else Zebák, Ishkasham and Sanglich were all once inhabited by the same race, who, by a later inroad from Badakhshán, were displaced from Zebák, and forced back south and east. They all belong to the Maulái sect, and Sháh Abdul Rahím, now a refugee in Chitrál, is their Pír, or spiritual chief.

Sháh Abdul Rahím has great influence throughout the Maulái countries, and it was probably on account of this that the Amír of Kábal expelled him and his family. Formerly his family held the hereditary chiefship of Zebák, paying taxes and owing allegiance to the Mírs of Badakhshán. Although the nominal chief, all real power used to be in the hands of his younger brother, Sadík Sháh of Zarkhwán, an able, intriguing man, who was ousted by Amír Abdul Rahmán at the same time as his brother, and sent as a prisoner to Kábal.

Parts of the Zebák district are very marshy, especially between Bázgirán and Kala-i-Dan. The position of Zebák is very important, as it commands all the routes leading from Chitrál to Badakhshán, viz., the Dúráh, the Nuksán, the Agram and Khatinza, as well as the easy route from Badakhshán to Wakhán *viâ* Ishkasham. The key of the position is the village of Gaokhána, which closes the Wardúj valley.

The road from Zebák to the Dúráh pass lies up a rapidly rising valley in which are situated the villages of Iskatól and Sanglích, and goes over the usual stony fans and plains, or along the sides of steep slopes. There is a good bridge at Iskatól, which is a large compact village prettily situated on a high fan well cultivated. Here there is a beautiful waterfall. A turbulent mass of water comes down over a large smooth rocky slide, emerging from a chasm only 5 or 6 feet wide, and 30 to 50 feet deep, in the hills above, and tumbling at length just above the village into another deep cleft with a fall of 40 feet, whence it flows noisily down over boulders to meet the main river. Many wild flowers, roses, columbine, anemone, &c., clothe the grassy slopes by the fall, and carpet a curious little plain above. A huge chasm, formed by a landslip in the hill-side to the north of the fall, is only separated at its head from this stream by a narrow wall of rock 30 feet wide.

Sanglích is a curious little village. It is the highest inhabited place in the valley. The houses are built on rough, rocky terraces and are furnished with small round towers, which give a peculiar appearance to the village. They are intended as a defence against Káfirs. The houses of the Badakhshís are generally placed on the slope of a hill with a rivulet usually not many paces from the door. Its course is here and there impeded by large boulders, glassy smooth from the constant action of running water, while its banks are shaded by a few gnarled walnut trees, and the lawn adjoining is planted in regular lines with the mulberry. Down in the bottom of the valley, where the rivulet falls into the larger stream, lie the scanty cornfields of the little community. The mountains rise immediately behind the village, and their distant summits retain their snowy coverings throughout the greater part of the year. An enclosure is formed by a dry stone wall round a space



GROUP OF BADAKSHIS, SANGLICH.

proportioned to the wealth of the family. The space thus enclosed is divided into compartments, the best of which form the dwelling houses, whilst the other hold the stock. These latter compartments are usually sunk 2 feet under ground, while the floors of the rooms for the family are elevated a foot or more above it; flat roofs extend over the whole. In the dwelling-house the smoke escapes by a hole in the middle of the roof, to which is fitted a wooden frame to stop the aperture when the snow is falling. The rafters are lathed above and then covered with a thick coat of mud; if the room be large, its roof is supported by four stout pillars forming a square in the middle of the apartment, within which the floor is considerably lower than in the other parts, and the benches thus formed are either strewed with straw or carpeted with felts, and form the seats and bed places of the family.* The walls of the house are of considerable thickness, they are smoothly plastered inside with mud, and have a similar, though rougher, coating without. Where the slope of the hill is considerable, the enclosing wall is omitted, and the upper row of houses is then entered over the roofs of the lower. Niches are left in the sides of the walls, and on these are placed many of the household utensils. All the members of the same family are accommodated within the same enclosure. The domestic arrangements of these people are as simple as with other mountaineers; a few wooden bowls, some knives, a frying-pan, a wooden pitcher and a stone lamp completing the whole paraphernalia necessary for housekeeping. Their vessels for holding water are made from the fir tree, and those for containing flour from the red willow; the latter are circular and hooped. Earthenware is scarce, though, in some families, very pretty China bowls are to be met with. The bread is baked on a stone girdle; the lamp is of the same material, its shape being nearly that of a shoe. Their bullet-moulds are also of stone. Besides the lamp, a very convenient light is obtained from a reed called "luz" about an inch in circumference. It is pasted round with bruised hemp in bunches, and, thus prepared, is to be found in every house suspended generally from the rafters over the head.

From Sanglích Colonel Woodthorpe explored the valley leading up to the Munján pass on the 19th June. The following is his description of it:—

"Leaving the main valley to the left I rode up the valley running from the 'Munján Kotal.' At about 1½ mile I was stopped by a deep narrow ravine, through the snow bed in which a little stream had cut its way very deeply, and I could not possibly get my pony across it. I therefore left my pony with the syce and went on alone. The path is very good, but a mile further on descends 200 feet to a big valley with a glacial torrent running

* This is the same construction as is found in the guest chambers in houses of the better classes in Chitral.

through it. I crossed by means of a narrow snow bridge, which had a gap in the middle, a few stepping stones enabling me just to reach the other side, then uphill steeply for 700 feet, and thence along over rolling downs and plateaux, broken by numerous rivulets running into the main stream, which flowed clear and bright in a flat stony bed, some 500 feet below the alluvial plateaux overhanging it with sheer cliffs. At about 3 miles I could see the Kotal, but it was so low, and ran across the valley so like a spur only, that, as its junction with the other hills was hidden by a spur from that side, I could not settle, in my own mind, as to whether that really was the pass, even by climbing 1,000 feet up the hillside to the left of the path to get a better view of it; and so I went on over stony fans and patches of snow, sometimes sinking 3 feet deep, though, as a rule, it was pretty hard. Another 3 miles brought me to the Kotal just under the big hill of Tírgarán. The descent from the Kotal westwards seems steeper than the ascent, and lies apparently down a deep valley. Returning, I found that my snow bridge at the torrent had been carried away, and I was horrified at the idea of having to attempt to stem the turbid violent stream; a little casting about up the stream discovered another frail and very shaky snow bridge, and by going over it lightly and quickly I reached the other side safely. Arriving in camp I found my Shinwárí servant somewhat alarmed at my late appearance. He had been picturing to himself my capture by a band of Káfirs from Munján."



DORAH PASS

(FROM THE TOP OF THE SPUR ABOVE LAKE DUFFERIN).



FROM THE DÚRÁH PASS

(LOOKING EAST).

## CHAPTER V.

### Passes and Routes.

We need hardly concern ourselves with all the passes across the various ranges in the interior of the country south of the Hindú Kush. They are all to be found minutely described in the Gazetteer of the Eastern Hindú Kush. For the purposes of this report it will be sufficient to consider only those lying across the Hindú Kush from Badakhshán and Wakhán. These are, in order proceeding from west to east, (1) the Dúráh; (2) three passes lying close together, viz.: Ágram, Nuksán, and Khatinza; (3) the Sad Ishtrágh; (4) Kachin; (5) Ochil or Uchli; (6) Rich or Janáli; (7) the Khán Kón; (8) the Baróghil, with which must also be considered the Darkót pass; (9) the Irshád; and (10) Wákhujrúi and Kilik passes.

(1.) The Dúráh (14,800 ft.) ("Two Roads," so called from the two roads which diverge from it, one to Zebák, the other to the Bashgal Gol). This is really the most important and the only one by which an army could attempt, with any chance of success, to penetrate into Chitrál and Gilgit. It is open for laden animals for four or five months, June to October, and for men on foot for two or three months longer. A detailed description of the road from Zebák to Chitrál will be found in the routes appended. No great difficulties would be experienced in reaching Lake Dufferin from Zebák, and the existing road could easily be improved for the passage of troops. From Lake Dufferin the ascent is very steep for the first 900 feet, after which the gradients are rather better; the whole ascent is over exceedingly stony ground, which, however, would not present any great difficulties to the road engineer. The descent from the crest to Sháh Salím is over tolerably easy ground and, with the exception of a few places, nowhere very steep. The path at present is rough, but capable of speedy improvement. In fact the path itself presents no obstacles to the passage of a small force which could not easily and quickly be overcome: even now it is perfectly practicable for laden animals. It is lower down in the Lutkú valley that the real difficulties of the route for an invading army are to be met with, and, although a force, unopposed and possessing the goodwill of the inhabitants, might in a short time engineer a good road down to Chitral, yet there are several places, notably the *pari* between Andarti

and Shoghót where at present a few determined men might easily prevent the advance of any force on Chitrál.

In connection with the Dúráh, we may glance at the adjacent passes, viz.: the Mandál and Zidig to the south, and to the north the Unai, Mach, and the group Ágram, Nuksán, and Khatinza.

The Mandál (about 14,000 ft.) is probably only fit for men on foot, as the Badakhshí travellers travelling with donkeys prefer the Dúráh and Zidig routes. It would, therefore, require a good deal of making for the passage of troops, and the same remark applies to the Zidig (14,900 ft.) the descent from which, for about 2,000 feet, is exceedingly steep and difficult. The Mandál turns the Dúráh, but by the Zidig route a force would have to cross the Dúráh first, striking south from the Lutkú valley at Gabar. Both routes join at Ahmad Diwána (which is also the name given on the old maps to the Mandál pass) and thence a force by either pass, or a divided force by both passes effecting a junction here, would proceed down the Arnawai valley, turning off by the Sháwal pass to Aián and Chitrál, or continuing down the Arnawai, would strike the Chitrál valley at Birkót. It should, however, be impossible for an invading force to concentrate at Zebák without the Government of India being thoroughly cognisant of it, and if the idea suggested in Chapter X. is carried out, there need be no fear of any adversary ever crossing into Káfiristán by the Mandál or Zidig passes.

We have now to consider the Unai, Mach, and the group above mentioned, and the same remarks apply to them. Of the Unai and Mach, which are probably about 14,000 feet, either or both might be used to relieve the pressure on the Dúráh route, the columns reassembling in the Lutkú valley at Gabar. The difficulties of these routes are similar probably to those on the Dúráh, and could be turned to good account by an energetic defender. Of the three passes Ágram (16,100 ft.), Nuksán (16,500 ft.), and Khatinza (17,500 ft.), the Ágram is by far the easiest, and unladen horses can be taken by it. It is, however, closed by snow for four months in the year; the other two passes, from their greater steepness, being open for two months longer. Of these the Nuksán is the easiest, but it is very bad and really only practicable for men on foot, the descent on the Chitrál side being 5,000 feet in the first two miles. The Khatinza is merely an alternative route to the Nuksán, than which it is higher, steeper, and more difficult and never practicable for animals. These then may therefore be dismissed as unlikely to be used by an invader; for, even if successfully crossed, he would not avoid the dangers and difficulties awaiting him at Andarti and Shoghót, and it would only be to avoid these last that it would be worth his while to attempt such difficult and dangerous passes.



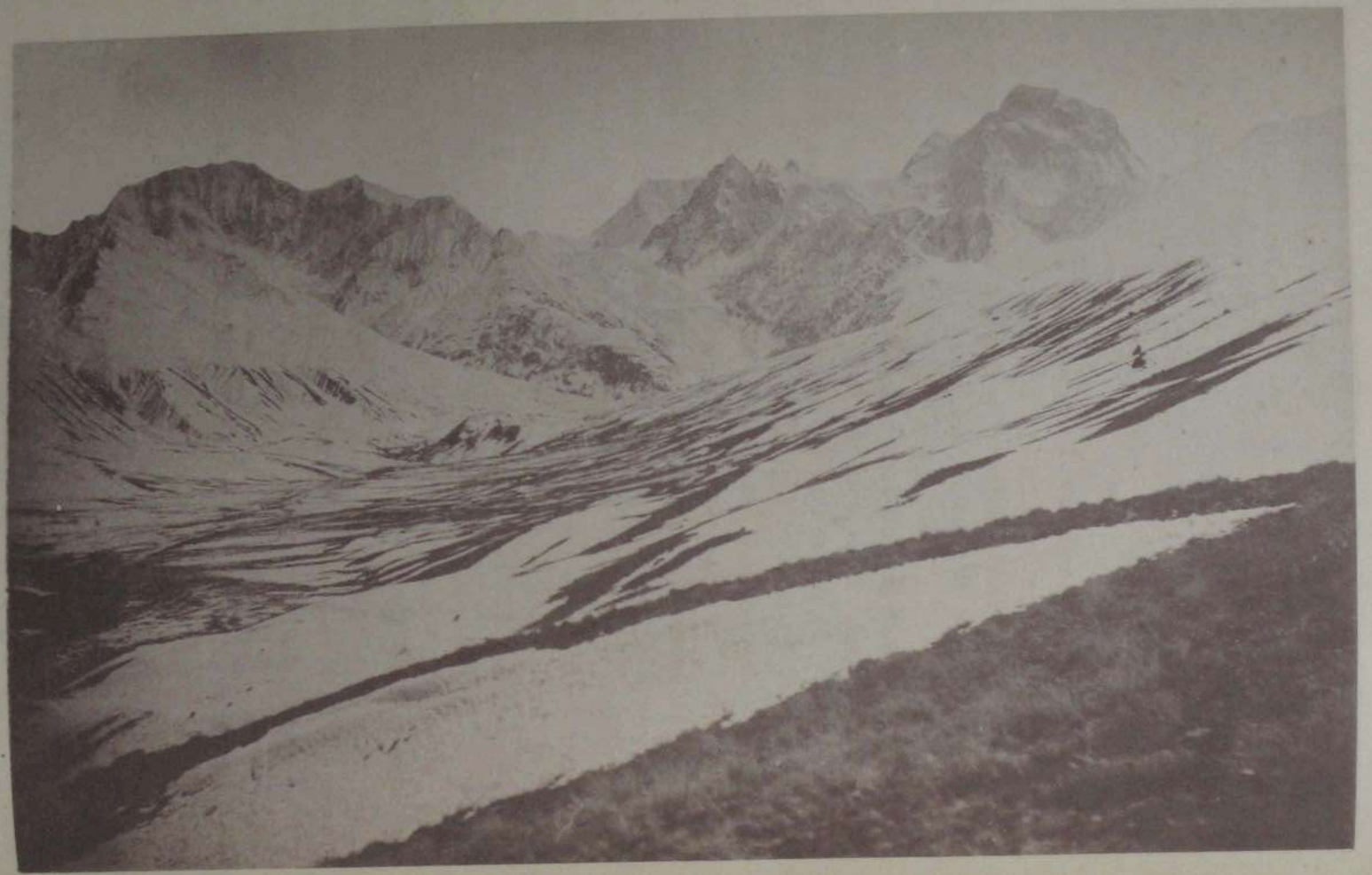
SHOGHÓT FORT.

(LOOKING TOWARDS THE DÚRÁH PASS.)



MANDÁL PASS

(FROM LAKE DUFFERIN).



BANGHAL PASS

(LOOKING SOUTH).

A careful consideration of the whole of these passes leads to the conclusion that they can best be guarded, not by defensive works at any fixed point along the ridge which they cross, but by the employment of an active and intelligent body of scouts, who should be able to give the earliest information of the movements of an enemy; and a lightly equipped, well trained, guerilla force should be able easily and speedily to assemble at any threatened point and successfully dispute the passage of any of these passes.

The Sad Ishtrágh and the Kachin passes have both been rendered impassable by reason of glaciers and are never used now.

The Ochil or Uchli (18,600 feet) is always covered with snow, and is only open for three months in the year. It is, moreover, only fit for men on foot.

The Rich or Janáli (16,960 feet) leads from Kala Yust in Wakhán into Turíkho of Chitrál. It is open for four months to men on foot, but animals can only be taken over for about one month; and it is not likely to be attempted by an invading force.

The Khán Kón pass leads from Yúr in Wakhán to the Yárkhún valley—it is also called the Yúr pass. It is a good deal used in summer, and is important as being the only pass over the Hindú Kush between the Turíkho group of passes and the Baróghil. The road is considered a good one, and is fit for laden animals except just at the *kotal*, where loads have to be taken off and carried by men. It is probably about 14,000 or 15,000 feet high, and is said to be practicable for men on foot by the end of May, and for horses a month later. A party proceeding by this pass would avoid the difficulties of the Yárkhún route which occur immediately below the Baróghil bridge, but would still have to negotiate the Darband.

The next pass, and one which, by reason of its low elevation and exceedingly easy approaches, has acquired great notoriety, is the Baróghil (12,460 feet). Certainly nothing could be easier than the pass itself, the approaches to it from Sarhad-i-Wakhán, and the gentle descent to the Yárkhún river, which is very little lower than the pass. On both sides of the river the undulating pasture lands forming almost a plain are known by the name of the Dasht-i-Baróghil ("plain of Baróghil"), the portion to the south of the river being sometimes called the Chatiboi plain. From Wakhán there would be no difficulty, even for a large army, in reaching the Yárkhún river which, at this point, could most easily be bridged, as here the stream, pouring over a fall of a horseshoe shape, passes with a rapid rush through a gorge only 20 feet wide. Arrived at this point the army would have the choice of two routes,

either across the Darkót pass to Yásín or down the Yárkhún to Mastúj. The Darkót pass (15,000 feet) is open for seven or eight months for men on foot, and for five or six for animals. Few animals, however, not bred in the country and accustomed to these passes, could carry their loads over the stony moraines and long glacier to the crest, and down the very steep rocky descent on the south. As it is, there is very little traffic by this route, which may be dismissed as quite impracticable for any force however small.

The route down the Yárkhún river is still more impracticable in summer for any force, by reason of the mighty glaciers which come down from the ravines on the south to the very edge of the river, impassable for animals, which have to be swum backwards and forwards across the river. The difficulties of both these routes are described in the narrative, Part I., Chapter XI. of the trip made by Colonel Woodthorpe and Captain Barrow from Janjrot to Mastúj; and even supposing that a force did succeed in overcoming these obstacles either by the Darkót or Yárkhún routes, there is a Darband to be encountered on each, and the battle of Yárkhún given in the appendix shows how easily a further advance might be there opposed. The danger of an invasion by either route need not therefore be seriously considered, though it must be remembered that much would be possible to a small force suitably equipped, having the people of the country with it, and enabled to work its way unopposed; bent, not on conquest, but on stirring up mischief.*

We have now finally to consider the Wákhujrúi (16,150 feet) and Kilik (15,600 feet) passes. The route from Wakhán to Hunza lies over both these passes; that from Yarkand to Hunza *viâ* the Tághdumbásh Pamír would cross the Kilik only. The former is fully described in the routes, and it will be seen that as far as the passes themselves are concerned they are perfectly easy for laden animals for the months of July, August, and September; but, as with the Baróghil, the difficulties begin after the passes have been surmounted, and these difficulties of the routes have also been described in a previous chapter, the main point being that when these passes *into* Hunza are *not* closed by snow, the road *out* of Hunza to Gilgit *is* closed by reason of the swollen torrents, and a force entering Hunza in the summer would have to wait in this inhospitable country till such time as the road below was open, unless a high level road were engineered round the crags and precipices, where

* Mr. G. Curzon, M.P., who has just returned from a trip to Central Asia, says that the Russians still entertain the idea of despatching a column, should necessity arise, by the Baróghil: the column would divide on reaching the Yárkhún valley, one half proceeding to Mastúj and Chitrál, the other to Yásín and Gilgit viâ the Darkot Pass.

there at present exists a summer route. This, though not impossible, would require time and an absence of opposition which should not be allowed to an invader.

A few words may be devoted to a pass lying to the south of Victoria Lake, marked on the maps as the Benderski pass, which is said to have been discovered and visited by the Topographer Benderski during the Russian Pamír Expedition. It appears from the map of the wanderings of this Expedition that Benderski only visited it from the north, and did not explore it to the south. Colonel Lockhart's mission made inquiries in Wakhán and were assured that there was no pass in that direction; it might be possible to find a way up the Waram valley from Langar to the crest, said the Wakhís, but there was nothing like a regular path or pass.

## Routes.—Part I.

The following are the principal routes taken by the Mission during the period described in the first part of the narrative, Chapter XI.

### Route No. 1.

### Gilgit to Mastúj.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. Hinzal (5,150 ft.) - | 7¾ | — | On leaving Gilgit, pass for a couple of miles through orchards and cultivation by a good lane. At 2 miles pass Naupúr, a small village on a spur above the road. At 2½ miles cross the Kargáh *nala* by a frail wooden bridge. Pass Basín Bálá and Páín, two small villages on either side of the Kargah *nala*. The rest of the way the road lies close to the river, the hills closing in and forming a defile. Though stony, the road is, on the whole, fairly good. At Hinzal the camping ground is hot and treeless, but the water from streams is excellent. The village is a small one of eight or ten houses. |
| 2. Sharót (6,080 ft.) - | 9¼ | 17 | Immediately on leaving camp there is a steep narrow ascent, which is very trying to laden animals. In fact for the first 5 miles it is bad throughout, being a succession of steep and rocky ascents and descents. At 5½ miles the road enters the bed of the river, of which several channels have to be forded, the water nearly 3 feet deep, with a swift current. In winter there is very little difficulty on this account.<br>On quitting this, the most difficult portion of the road commences, namely, the *pari*, or cliff, opposite Bargú. The road now becomes as bad as it can be. At 7 miles it bifurcates; the lower part is fit only for footmen, and even for them is bad, as several cornices have to be passed and ledges of rock clambered over as best one can. The upper road involves a terrible climb, but it is passable by baggage animals. The last mile into Sharót is easy, through cultivation; shade and water ample and good, the latter from the Sharót *nala*. Sharót is a prosperous village of 40 houses. |

ROUTE No. I.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 3. DALNATI (5,800 ft.) | 6½ | 23½ | Cross the Sharót *nala*, and at ½ a mile pass the village fort of Shikaiót, and at ¾ mile cord the Shikaiót *nala*. Then over a sloping plain for a mile or so. At 2½ miles the village of Gúlpúr. The road again crosses a level strip of cultivated ground, and at 4 miles commences to wind along the cliffs opposite Cher Kala, the chief place in Puniál. Except in one or two places, this *pari* is an easy one. At 5¼ miles pass the large fort and village of Cher Kala, which is reached by a rope bridge. Here there is a Kashmír garrison of 100 sepoys. The last half mile to camp is easy. Dalnati is a large open plain on the banks of the Dalnati stream. Water excellent. Forage and firewood plentiful. |
| 4. SINGAL (6,200 ft.) - | 8½ | 32 | Pass the two or three houses which form the hamlet of Dalnati, and at ¾ mile cross the rapid Dalnati stream by a bridge 30 feet long by 4 feet broad. Opposite the mouth of this stream is the small village of Hamchil. The road now crosses a stony plain for a mile or so; it then ascends a spur and winds along the hill sides. At 4 miles pass Japók on the opposite bank, a hamlet of a dozen houses. At 5 miles the road again descends to low ground, and passes through the fields surrounding Gich (10 houses). On leaving Gich there are two paths—the one by the river a very difficult footpath, which only men with good nerves should attempt; the other practicable for laden animals, but very rocky, and involving an ascent of a thousand feet. At 6½ miles descend into the valley. The remainder of the march is quite easy. Singal, a village with fort, surrounded by gardens. Water and shade excellent. Forage procurable. |
| 5. GÁKÚCH (7,200 ft.) - | 8 | 40 | Cross the Singal torrent by a bridge 3 feet wide. Road quite easy over level ground as far as Gúlmati, a hamlet of 20 houses, 3 miles from Singal, opposite which is Búbar (25 houses). After passing through Gúlmati, the road continues fairly easy for a couple of miles, the ground on the opposite bank being cultivated almost continuously. At 5 miles pass Gúrjar (20 houses). Shortly after this the road ascends several hundred feet to the plateau on which Gákúch is situated. The last 2 miles are level and easy, partly through cultivation. Gákúch, a large village with fort, containing about 800 inhabitants. Water plentiful; supplies procurable. The surrounding hills are quite bare, but the immediate neighbourhood of Gákúch is cultivated. |
| 6. HUPAR - - - | 9 | 49 | On leaving Gakúch, the road goes over stony, undulating slopes; at 1½ miles it crosses a deep ravine, and at 2 miles passes the hamlet of Aish. At 2¾ miles another deep ravine is crossed. Up to the 6th mile the road lies along a broad shelf or plateau, about 1,200 feet above the river, which is here broad and lake-like, and dotted with islands. At 6 miles there is a very steep and difficult descent of 1,200 feet to the river bank. Road now level. At 7½ miles cross a narrow torrent by a bridge; at 7¾ miles the road bifurcates; the lower path is only fit for men on foot, and is in places very dangerous. Clefts in the face of the rock have to be clambered up by means of notched posts. The path winds along the cliff at varying heights from the level of the river to 500 feet above, and is in places very bad, especially at one spot, where the traveller has to clamber up the notched trunks of trees. |

The other path is just practicable for laden ponies, but is very steep and rocky. It rises a good thousand feet above the river, and thus avoids the cliffs. This place is known as the Hupar *pari*. Reach camp at 9 miles. The camping ground is a level dusty strip along the river bank. The heat in summer is intense here owing to the bare rocky mountains which hem it in. There is, however, a splendid stream of ice-cold water from the south-west.

ROUTE No. I.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 7. ROSHAN (7,060 ft.) - | 12 | 61 | The road is fairly level throughout, running close alongside the river the whole way, and nowhere are there very high or steep ascents and descents; but the path is terribly rough and rocky, being over the debris of landslips for at least half the way. Between the 5th and 7th miles there is a low, but very difficult, *pari*. This, in winter, may be avoided by crossing over to the left bank, passing through the fields of Sumá for a couple of miles, and then recrossing. At 7½ miles pass village of Sumá on opposite bank; at 10 miles the hills on the right recede, and the road crosses a sloping stony plain. At 11 miles cross a rapid stream in a deep ravine. The road then passes along a cliff, about 60 feet above the river, which it crosses by a rope-bridge. At 12 miles Roshan. The village is surrounded by cultivation and fruit trees. The fort is a picturesque pile of stones and boulders, built on a rock overhanging the river. A splendid supply of pure water from a stream just beyond the village. |
| 8. JANDRÓT, or JINJARÓT (7,640 ft.). | 9 | 70 | Road fairly good throughout; the hills recede somewhat, and the road goes for the most part over gently sloping undulations. On leaving camp, cross stream by a ricketty bridge; this stream may, however, be forded, as it is only about 3 feet deep. At 5 miles Gupis, a village of 10 or 12 houses, surrounded by cultivation and fruit trees. The rest of the way the road, though easy, is very stony. At 7 miles pass the junction of the Yásin and Ghizar rivers, where there is a considerable widening of the river and many small islands. At 8½ miles the road ascends a spur, on which is the small village of Jandrot (8 houses). |
| 9. JULJÁS (*opposite Dahimal*). | 11 | 81 | Starting from the camp, situated about 300 feet above the river level, the road crosses the Jinjarot stream at about ½ mile, and for the next 2 miles rises gradually to about 1,200 feet above the river, regaining its bank by a descent of moderate difficulty. Thence passing over several low spurs, it fords the Gahoga or Khogah stream at about the 5th mile, and for a short distance beyond keeps close to the river bank. At about the 7th mile the real difficulties of the stage commence. For quite a mile the path is carried up and down ledges of rock, in some places excessively steep. Some of the steps of the rocky stairs that here form the road are fully 3 feet deep, so that it is absolutely necessary that baggage animals should be unloaded and their burdens carried across by coolies. The last 2 miles of the road are, though severe, less difficult. Descending again to the river bank, the road follows it for a short distance, and then ascends to a plateau, which is divided into two parts by the gorge of the Baltiret, or Battigah river,* a stream of considerable size (not fordable), which is crossed by a very ricketty bridge, the approaches to which are of considerable difficulty. Finally leaving the plateau, the road descends by a very steep zigzag path to camp, which is situated in a meadow beside the river.<br><br>There is no village at Juljás. Dahimal, on the opposite bank, is perched on a high rocky mound. Forage plentiful at Juljás. |
| 10. PRINGAL, or PINGAL. | 8 | 89 | The road, after following the river bank for a few hundred yards, crosses a rocky spur, the descent from which is of some difficulty.<br>Returning to the river bank, it follows this for some distance, and then again leaving it ascends to a level plateau, across which it runs for more than half a mile. A short, but steep, descent leads from this plateau to the Kachuri, a stream of some size, which is forded at about 3 miles from camp. The road then ascends about a thousand feet, and crosses a neck, the descent from which, and the next half mile of road, being very rough and severe. After crossing a small plain, much cut up by dry *nalas*, |

* Up the Battigah *nala* there is a good road to Tangir open all the year round.—*Biddulph.*

ROUTE No. I.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |

the path, at about the 5th mile, is carried over a very steep and difficult spur, and then returns to the river bank, which it follows for the remainder of the stage, the ground being fairly easy. At about a mile from the stage the Sosat, a stream of considerable size, is crossed by a foot-bridge. Baggage animals have to ford.

| | | | |
|---|---|---|---|
| 11. CHASHI - - | 11 | 100 | This, in comparison with the preceding stages, is easy. After leaving camp, the road crosses the cultivated ground of the village, and then rises by a short steep ascent to gain a ledge on |

the cliff overhanging the river. This place, though somewhat dangerous, is not difficult, and the descent from it only moderately rough. The path then crosses a plain of some extent, covered with low brushwood, and is afterwards carried along the lower slopes of the valley at a small elevation above the river. About 2 miles from Pringal are some steep short ups and downs where mules have to be unladen; but as the soil here is easily excavated, a very little labour would suffice to remove this obstacle.

A little beyond the third mile the valley narrows considerably, and at this point, named Darband, a tower and a low rubble wall have been erected so as to completely close the pass. Beyond this point the valley gradually opens out, till at last its bottom forms a plain of considerable extent.

At about the 7th mile the river divides into the Chashi, which turns to the south towards Tangir and the Ab-i-Hauz, a short branch which forms the outlet of the Pandar lake. At the same point a third considerable stream, the Bahúshta, runs in from the northward. A little beyond this junction the road crosses the first-named branch by a *kadal* bridge, and is then carried along its left bank to the village.

The camping ground is situated some distance beyond this, just below the Pandar lake. Camp marshy; a better one on fields 400 yards short of it; large scattered village; much cultivation.

| | | | |
|---|---|---|---|
| 12. GHIZAR - - | 13 | 113 | The road for the first 6 miles follows the shore of the Pandar lake, and afterwards the right bank of the Ghizar river as far as 9½ miles, when it crosses the river by a *kadal* bridge, and |

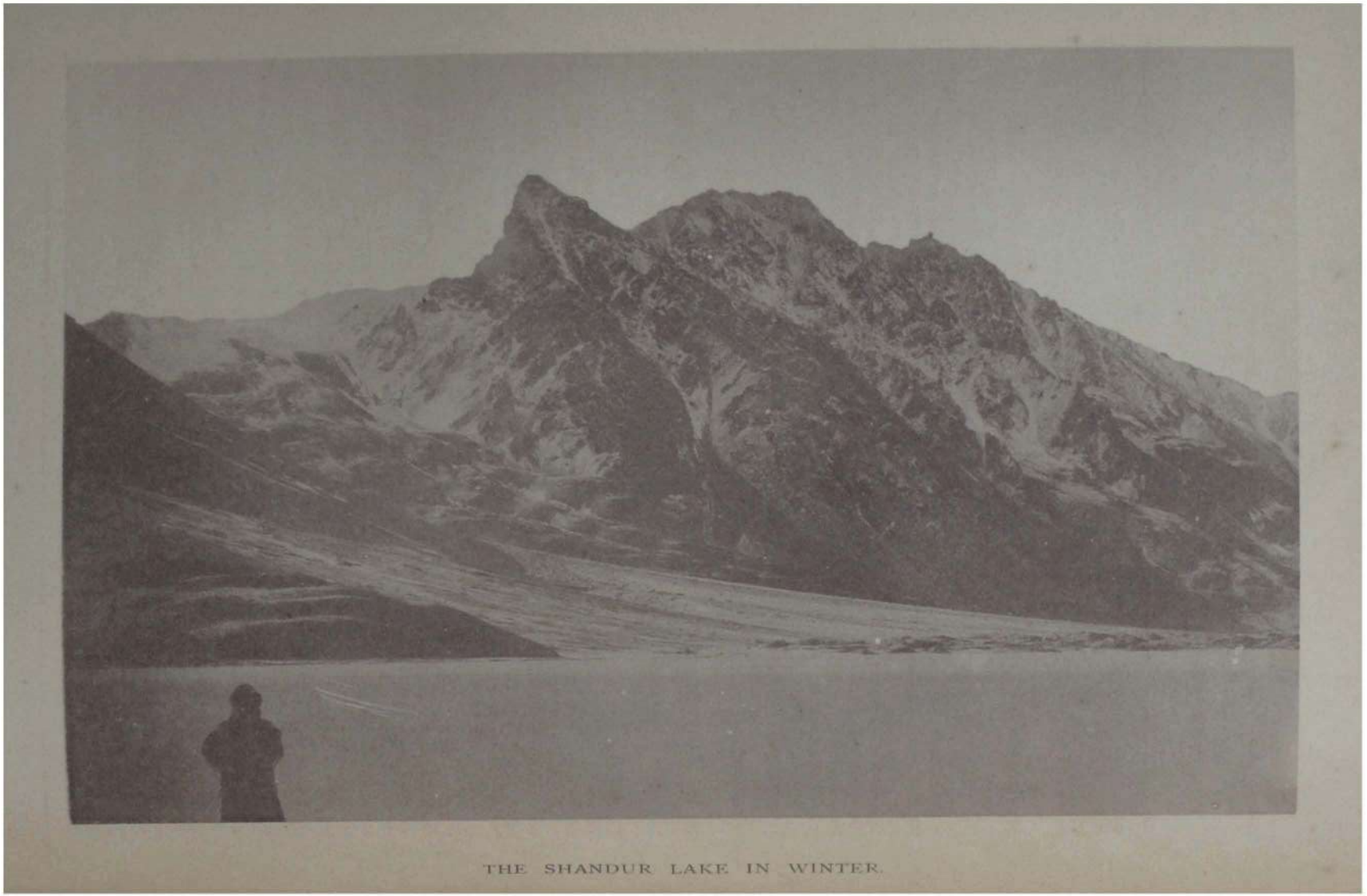
follows the left bank for the remainder of the stage. Throughout the road is easy, rising gradually, without particularly severe gradients. About a mile from the camp the road forks, one branch keeping well up on the slopes of the valley, while the other follows closely the shores of the lake. The upper is the better path, but even the lower can be traversed throughout by laden animals without difficulty.

A considerable stream, the Barkúti, is crossed at about the 6th mile.

Camp in stony bed of river. Small village surrounded by cultivation, also a small fort on an eminence.

| | | | |
|---|---|---|---|
| 13. SHANDÚR (12,250 ft.) | 20 | 133 | Immediately after leaving camp, the road climbs a steep ascent of some 500 or 600 feet. This and the following half mile of road are somewhat rough, but quite traversible by laden |

animals. From this to the 15th mile the road is quite easy, for the most part across the level plains that here form the bottoms of the valleys, interrupted only by some easy slopes of moderate gradient. At about the 3rd mile a stream and village named Terú are passed, and 1½ miles further on a considerable stream, the Chukalwat, is crossed by a good bridge. In the course of the 9th mile the Chamarkand *nala* opens out on the right hand, the stream, a large one, being fairly bridged. Shortly before coming to the bridge, the alternative route to Mastúj is seen branching off up the Chamarkand *nala*. On looking up the *nala*, which is a wide and open one, it is seen shortly to bifurcate, the Chamarkand pass being gained through the right-hand branch, while that to the left, the Harchin *nala*, merely leads to certain summer grazing grounds. At about the 15th mile the path, deserting the Ghizar valley, turns abruptly to the right up a steep, but not difficult, ascent of 1,000 feet to gain the Shandúr valley, which it follows across a rolling plain as far as the shores of the Shandúr lake, beside



THE SHANDUR LAKE IN WINTER.

ROUTE No. I.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |

which the camping ground is situated. Beyond Terú no villages of any size are met with, but a suitable intermediate camping ground might be made in the plain about 1½ miles beyond the Chamarkand bridge, where water, wood, and grass are all plentiful. No village, only a summer pasture ground with a few shanties. Camping ground on bank of lake.

| | | | |
|---|---|---|---|
| 14. HARCHÍN - - | 11 | 144 | The road, after following the northern shore of the lake for about 1 mile, crosses the level head of the valley for another ½ mile. Then, entering the Woghtúr *nala*, for the next 3½ miles |

it descends rapidly, the gradient in places being very steep, but still practicable throughout for laden animals. At the end of this descent the Woghtúr terminates in the Sar Laspúr valley, the village of that name being situated at the junction. A *kadal* bridge here crosses the Sar Laspúr river. The road, however, does not cross this, but turns to the right along the right bank of the river, keeping along the bank for about a mile, after which it crosses a long flat-topped spur, from which it descends to the village of Brok. For the remaining 3 miles the path is carried across a level plain.

Opposite the camping ground at Harchín, on the other side of the river, is the village of Rahmán, and through the valley behind it runs a short path leading to Chitrál. This, however, is practicable only for men on foot. Harchín, a small village; good, but small camping ground in an orchard.

| | | | |
|---|---|---|---|
| 15. MASTÚJ (7,760 ft.) | 14½ | 158½ | The road first follows the river across the level ground of the Harchin valley for half a mile. Here the river is crossed by a *kadal* bridge, baggage animals having to be unladen. |

For the next 6½ miles it keeps high up on the slopes of the valley, which is here very broad. At the 4th mile the Shindal *nala* is crossed, the zigzag descent into it being very steep, but not rough. The stream itself is small. A little further on a branch of the Ghashta *nala* is crossed, the main stream being forded about 1½ miles further on. Just on the other side of the second is the village of that name. At the 7th mile a second *kadal* bridge takes the road again across the river, baggage animals having to be once more unloaded. Half a mile beyond this second bridge, the Shaidás, a considerable stream, is forded.

From this point the valley narrows rapidly, till at 9 miles the steep hill sides extend right down to the river. Here is situated a *darband*, or easily defensible defile. After this the valley again opens out, and at the 12th mile the village of Gramuli, watered by a small stream, the Kambád, is passed. Beyond this the road descends a long slope for another mile to the fort of Mastúj, which is situated at the junction of the Sar Laspur and Yárkhun rivers, though at some little distance from their banks. The camping ground is about 1¼ miles beyond the fort.

The stages given above from Janjrót to Mastúj are those made by the Chitrál Mission on its outward journey to Chitrál in August 1885. Better stages would be the following, which are those made by the Mission on its return journey to Gilgit in November 1885:—

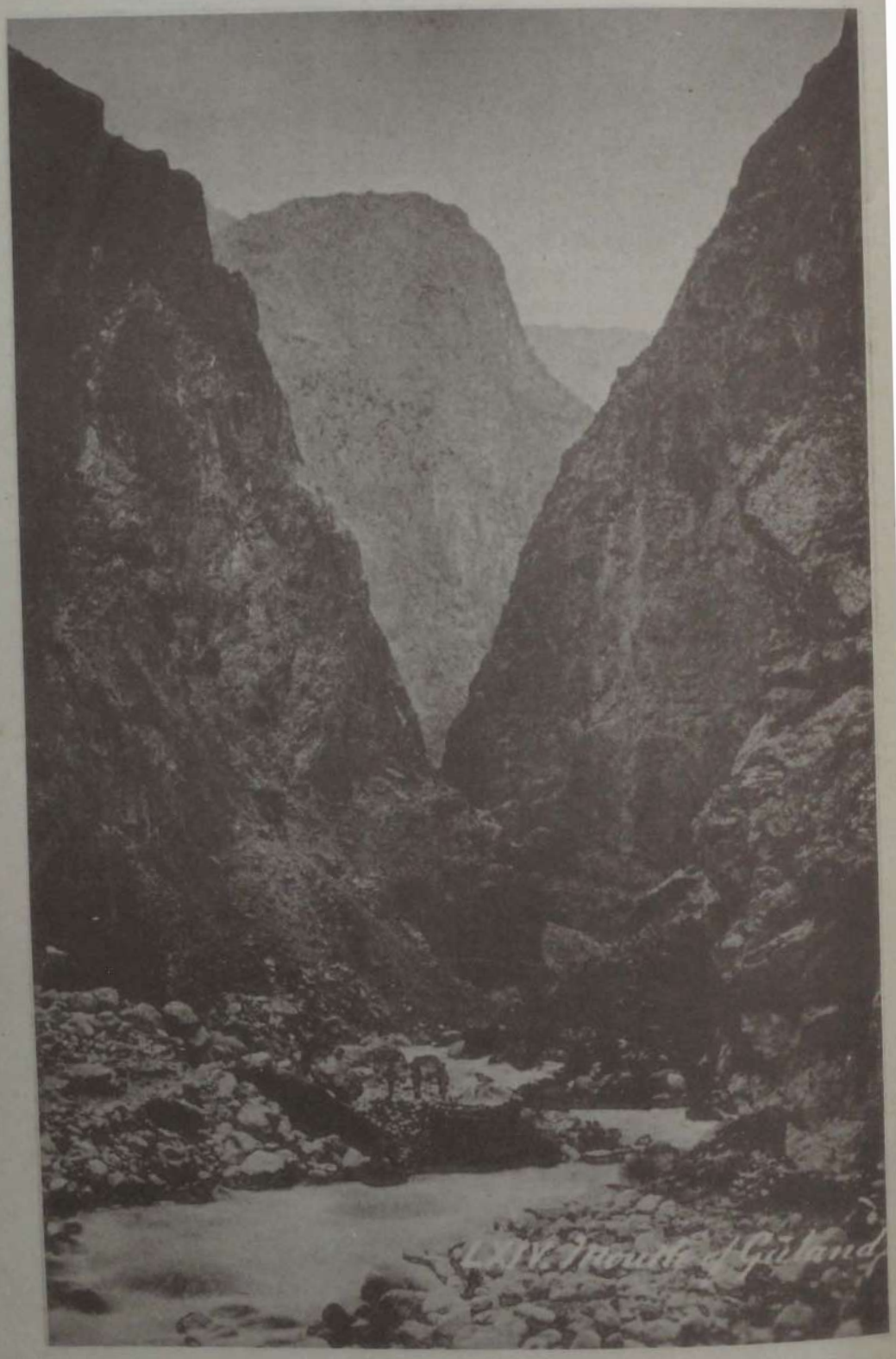
1. Hupar.
2. Roshan.
3. Janjrót.
4. Dahimal.
5. Pingal.
6. Chashi.
7. Ghizar.
8. Langar.
9. Sar Laspúr.
10. Rahmán.
11. Mastúj.

The above route should be compared with Route No. XI., Mastúj to Gákúch. There is also the route *viâ* Yasín and the Túi pass, which is, however, infinitely more difficult (*vide* Route No. V., Part II.).

## Route No. II.

### Mastúj to Chitrál, *viâ* Chitrál River (left bank).

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. Sanoghar (7,651 ft.) | 9 | — | At 600 yards cross the river to the right bank by a ricketty single span pole bridge about 90 feet long. Baggage animals must be unladen. Then along the cliffs by a fairly made road, a good many ups and downs with severe gradients; but still the road is 3 feet or 4 feet wide, and cleared of rocks and boulders. At 3 miles pass the junction of the Laspúr or Bashkár river. At 4 miles pass Largpúr (8 houses). At 5 miles Naisur (15 houses). About the 5th mile enter the river bed, and a short distance beyond ascend to the Parabek plain, a sloping *maidan* nearly a mile in width. |
| | | | At 6½ miles cross a deep chasm, 100 yards wide, by descending to the level of the stream and again ascending to the Parabek plain. At 7¼ miles descend to the river, and half a mile further on cross over to left bank by a single span pole bridge, about 160 feet long, at which baggage animals must be unladen. After crossing, the road tracks back for about half a mile along the river, and then, ascending a precipitous cliff, enters the village of Sanoghar. Camp in an orchard on the far side of the village. Sanoghar is a large village with at least a hundred houses embosomed in trees and charmingly situated. Supplies obtainable. |
| 2. Buní (6,862 ft.) - | 9 | 18 | Easy march; road very fair after leaving the fields of Sanoghar, along the face of a cliff overhanging the river. At 3 miles pretty village of Míragrám (150 houses); cultivation from here almost continuous. At 6 miles Avi (50 houses); at 7 miles Kuchnali (40 houses), and at 8 miles large village of Buní (300 houses). Camp on the far side. Supplies obtainable. |
| 3. Réshun (6,480 ft.) - | 12½ | 30½ | At 3 miles pass village of Janalkot (20 houses) on opposite bank. Road then scrapes along the side of a bad cliff. At 4½ miles Awira (20 houses). At 6 miles Koragh (20 houses), and the confluence of the Mulkho. Opposite Koragh is Kusht (50 houses). At 7 miles the road and river both enter a gorge, which continues for the next three miles or so. At 10¼ miles Jait (25 houses); at 11 miles Shugram on opposite bank (40 houses). Just before reaching Réshun, a swift torrent has to be crossed by a bridge about 10 feet long. This torrent is otherwise unfordable. Réshun is a large village of 150 houses. Supplies obtainable. |
| 4. Baranas (6,100 ft.) | 7 | 37½ | On leaving Réshun, cross a deep *nala*. Then ascend a steep spur, the road rising to about 600 feet above Réshun. Steep descent of 700 feet to an alluvial flat along the river bank. At 2½ miles pass Parpish (30 houses) on opposite bank. The road then becomes bad, for the most part along cliffs about 60 feet or 70 feet above the river. At 5 miles pass Madasil (15 houses), and at 6 miles Ramkari (20 houses). The road then descends and goes along the foot of the cliffs, finally ascending to the fertile plateau on which Baranas (60 houses) is situated. |
| 5. Koghazi (5,450 ft.) | 13 | 15½ | Through Baranas and across a deep ravine which divides that village in two. Over a stony plateau, and at 1½ miles descend to river bed. At 2 miles past Prét, a large village on the opposite bank. The road now becomes bad for a couple of miles, baggage animals having to be unladen. At 4 miles Beni (10 houses), and at 5 miles Maroi, a large village of 100 houses, where there is a bridge across the Mastuj river. At 7 miles the road becomes very bad, going along the face of rocky cliffs, sometimes ascending 200 or 300 feet, and passing over cornices, |



MOUTH OF THE GULEN GOL.

ROUTE No. II.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |

where animals should certainly be unladen. At 7½ miles the road reaches a stony undulating plateau, which continues for 1½ miles. At 8½ miles pass the bridge, 60 feet long, which leads to the large village of Mori, on the opposite bank. At 9 miles cliffs again impinge on the river, and for the next two or three miles the road either runs along the face of the cliffs or at their feet, being impassable in many places for laden animals. At 11¾ miles cross the rapid Gulen or Shalich *nala* by a bridge 60 feet long and 2½ feet wide; animals crossing it must first be unladen. The rest of the road is easy. At 13 miles Koghazi, a village of 50 houses. Supplies obtainable.

| | | | |
|---|---|---|---|
| 6. CHITRÁL (4,980 ft.)- | 12½ | 63 | Through the fields of Koghazi. At 2 miles the road becomes very bad. River hereabouts crossed by a rope bridge. At 2½ miles pass Kujú on opposite bank, a village of 30 houses, |

At 4 miles Rágh (50 houses), and half a mile short of this village there is a very bad cliff to be turned, where animals must be unladen. At 6¼ miles Kári (60 houses). At 7 miles the road becomes very bad indeed for a couple of miles, being a path about 2 feet wide between cliffs and precipice, with bad ascents and descents; even unladen animals must be taken along it with great care. At 9 miles pass the confluence of the Arkári river. At 9½ miles one may be said to enter the Chitrál valley, a succession of undulating fans between hills nowhere more than a mile apart. The hills here are somewhat less precipitous and more wooded. At 10 miles pass Sangúr (20 houses) on opposite bank. For the next mile the road runs along a sandy strip of ground. At 11½ miles pass Daníl (50 houses), and at 12 miles cross the river by a fairly good bridge 123 feet long and 4 feet wide. Camp just beyond the fort; supplies plentiful.

There is also the road *viâ* Drásan; but, on the whole, the above route by the left bank is preferable, except for laden animals. These in summer would find the Drásan Owír route the best.

## ROUTE No. III.

### CHITRÁL TO DRÁSAN, *viâ* SÍN AND OWÍR.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |

The route given below is that usually followed by merchants going from Chitrál to Turikho for orpiment, as, in spite of its numerous ascents and descents, it is a far better mule road than that by the river.

| | | | |
|---|---|---|---|
| 1. SARÚM - - | 9 | — | Starting from the *sarai* up the Chitrál valley, through the barren ground on the right bank of the river, at 3 miles pass Sangúr (120 houses), and at about 4 miles pass the junction of the |

Mastúj and Lútkú rivers. At 7½ miles Sháli, where cross to Sín on the left bank by a bridge practicable for unladen animals. From Sín there is a steep ascent of several hundred feet, ending in a bad rock staircase at 1 mile from Sín: here animals must be unladen; ½ a mile further on is the hamlet of Sarúm (altitude 6,000 feet). The camping ground is cramped, but water and firewood are plentiful. Traders usually stop at Sín for convenience in getting supplies; but this is a better stage for troops, as the next march is a very trying one.

ROUTE No. III.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 2. PARSÁN (8,800 ft.) - | 9½ | 18½ | Over a spur, and then up a steep shaly ravine. At 1 mile turn off to left, and ascend a very steep hill side, most trying for laden animals. At 1½ miles reach the top (7,900 feet). Road now goes up and down the hill side for 1½ miles, when it reaches the watershed, along the edge of which the road goes. At the highest point it is about 9,200 feet. The top is broad and undulating, with no rock or hard ground, altogether affording a capital road. At 6½ miles there is a small *chaman* with splendid grazing and good water in abundance. Road again winds along hill slopes. At 7¾ miles cross a narrow spur, which is the highest point reached on the march (9,810 feet). From here steep descent to camp at Parsán (30 houses), around which there is considerable cultivation. From Parsán there is a road to Shoghót; also a footpath down the Parsán stream to the Lutkú valley below Shoghót. |
| 3. PASTI (11,100 ft.) - | 8½ | 27 | Through fields and broken ground for about 1½ miles; then steep ascent to a knoll about 3½ miles from camp (altitude 10,500 feet). From here to *kotal*, 2½ miles, comparatively easy going. This *kotal* (altitude 11,800 feet) is the watershed between the Chitrál and Lutkú rivers. The road now runs along the slopes of a bay in the mountains for 1 mile; then, the spur between the Mori and Prét ravines, descends for 1½ miles to camp. Pasti is a small village. Forage is obtainable, but firewood is scarce. |
| 4. OWÍR (7,930 ft.) - | 9 | 36 | Cross the Prét stream at ½ mile; then steady gradual ascent to the *kotal* between Prét and Owír, which reach at 3 miles. This *kotal* is broad and flat (altitude 12,900 feet) with an indescribably magnificent view of Tirich Mír and the Owír valley. From the *kotal* there is a very steep descent for 2 miles to Bálgári (10 houses), the first hamlet of Owír. Descend through the fields and hamlets of Kol for a couple of miles; then over barren rocky slopes to a swift torrent in a deep ravine (8½ miles), which cross by a bridge (21 feet × 2 feet) practicable for unladen animals. Cross a narrow razor-like promontory, 200 feet or so higher than the streams which it divides, and then cross the second stream by a similar bridge (50 feet by 2½ feet), camping on its left bank. Space very cramped, but supplies of all kinds procurable from this, the well-populated valley of Owir. |
| 5. GÚRKÍR (8,000 ft.) - | 8 | 44 | Stiff ascent of 2¾ miles to crest of spur between Owír and Lún (altitude 10,000 feet). Easy descent along hill slopes above Lún, a village of 80 houses. At 5¼ miles cross spur between Lún and Gúrkír; a steep descent to first hamlet, and then along the hill sides which skirt the Gúrkír ravines to camp. Supplies procurable. |
| 6. DRÁSAN - - | } *Vide* Route No. IV. | | |

## Route No. IV.

### Chitrál to Mastúj, *vid* Drasán.

| Stage or Halting Place. | Distance in Miles. Intermediate. | Total. | Description, &c. |
|---|---|---|---|
| 1. Koghazi (5,450 ft.) | 12½ | — | Road easy as far as the junction of the Lútkú and Chitrál rivers (3½ miles), after passing which there is an exceedingly bad *pari*, the path being often only 2 feet wide, and overhanging the river. At 6 miles reach Kári. From Kári the road is tolerable. At 8½ miles Rágh, just beyond which there is another narrow, but short, *pari*, the road being cut along the face of a wall-cliff of clay. This may be avoided by a detour over the hill. On the opposite bank, at 9½ miles, is Kujú, a village of two hamlets, ½ a mile apart. At 10 miles there is a final *pari*, not however very difficult. At 10½ miles pass a rope bridge, and at 11¾ miles reach the fields of Koghazi. Camp on polo ground. Supplies procurable. |
| 2. Prét (6,050 ft.) | 8½ | 21 | Along the river bank, the road fair. At 1 mile cross the Gulen Gol by a ricketty bridge, 60 feet long. At 3 miles the road turns a spur by a *pari*, which ascends for several hundred feet. This may be avoided by going over the neck of the spur. After passing this spur, the road becomes easy, lying as it does over a plain. At 4 miles pass the bridge leading to Mori. At 5½ miles there is a very bad *pari*, where animals must be unladen. At 6½ miles reach Mori, a large scattered village. At 7 miles the road turns down a deep ravine, and at 7½ miles reaches the bridge across the Chitrál river. This is a very shaky, dangerous bridge, about 25 yards long; horses must be taken over with great care. The rest of the road easy. Prét, a scattered village of 60 houses. |
| 3. Parpísh (6,250 ft.) | 8 | 29 | Through fields. At 1 mile cross a deep ravine. At 2½ miles the road descends by a narrow path along a steep shaly slope, the total descent being about 400 feet in half a mile. This part of the road is somewhat dangerous, being very subject to landslips. At 3 miles reach the river bank. The road is now fairly easy for about 3 miles, going along the foot of stony slopes. At 6 miles there is a bad *pari* round a rocky spur. At 7½ miles reach the Parpísh Gol, a deep ravine, with precipitous sides; cross this by a steep descent and ascent, and camp in the village, a small one of 20 houses. Supplies scarce. |
| 4. Kusht (7,850 ft.) | 10½ | 39½ | For 1½ miles along the river bank road fairly easy; then up the hill side to Lún, a large scattered village 2,000 feet above the river. Ground undulating; no trees. At 8,500 feet cross a broad down, and descend to Gúrkír, 5½ miles. After crossing the Gúrkír stream the road goes over a spur, then across a deep ravine, and up the hill side to 8,700 feet. There is then a long gradual descent of over 2 miles, past Shanjarand to Kusht, a large village with a considerable amount of cultivation about it. Supplies plentiful. This march is a very trying one, owing to its ups and downs, but there are no difficult places where animals have to be unladen. There is an alternative road along the river bank, through Shugrám, which is about 1½ miles shorter, but in wet weather it is very bad. |
| 5. Drásan (6,850 ft.) | 8 | 47½ | Down hill, through the fields and hamlets of Kusht. At 2 miles cross a deep ravine, fording its stream. At 9 miles the road enters the bed of the Turíkho river which it again leaves at 4 miles after turning a rocky spur, which here projects into the bed of the river. The road now becomes good, and remains so the rest of the way, which is mainly through fields, many small villages on the hill side above being passed *en route*. Drásan is a square mud fort of the usual type. It is the residence of the Governor of Murikho. Supplies plentiful. Good camping ground. |

ROUTE No. IV.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c, |
|---|---|---|---|
| | Intermediate. | Total. | |
| 6. SANOGHAR (7,650 ft.) | 12 | 59½ | Up the river bank for about 1 mile; then cross by a pole bridge. In winter the river may be forded. The road now climbs up some 1,200 feet to the top of the Kargáh Lasht, a sort of Hog's back, separating the Turíkho and Mastúj river. Over these undulating barren downs the road is very good for several miles. At 5 miles there is a steep descent to the Mastúj river, along the right bank of which the road now goes for about 3 miles. Opposite Miragrám (8½ miles) it climbs a steep spur, on the other side of which is the Parabek plain. Road level and good the rest of the way. Camp on a little plateau just beyond the Sanoghar bridge. Supplies from Sanoghar. |
| 7. MASTÚJ (7,780 ft.) - | 7½ | 67 | *Vide* Route No. II. |

There are two other routes—that *vid* Owír (*vide* Route No. III.), which is the summer mule road, and that *viâ* the left bank of the river (*vide* Route No. II.). By the latter the distance is 63 miles, and the number of stages 6.

## ROUTE No. V.

### CHITRÁL TO MÍRKANI, *viâ* LEFT BANK OF THE CHITRÁL RIVER.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. Bróz - - | 10 | — | Starting from the bridge at Chitrál, the road passes through the fields and lanes of Daníl, and then goes along the steep hill-side, about 200 feet above the river. At 2½ miles descend to the hamlet of Dosha Khél; thence through fields to Joghúr (3¼ miles), a village containing over a hundred houses, ford the Joghúr stream, and at four miles ascend the broad grassy undulating spur which closes the Chitrál valley on the south side. This spur was once cultivated. At 5 miles descend to the fields of Chumarkón, through that village, and then over a low rocky spur, to the river bed on the other side. Along this for over a mile, then through the fields and hamlets of Bróz for 2 or 3 miles. Bróz contains about 300 houses in all; supplies plentiful. |
| 2. GAIRAT - - | 7 | 17 | On leaving Bróz, continue through cultivation for a mile or two; the road then goes across a rocky spur by a path along the cliffs a hundred feet or so above the river. Descending to the river level, it passes through cultivation for a short distance, and then, opposite Aián, again makes its way along the cliffs above the river; here in places the path is very narrow and dangerous for laden animals. At 5 miles descend to Spálasht, a fort whose fields have lately been swept away by the encroachments of the river, the bed of which is here more than half a mile wide. Half a mile beyond Spálasht, a precipitous cliff abuts on the river bed; this is usually turned by going along the pebbly bed of the river, but in summer it is necessary to cross the spur by a steep path. After this the road is quite easy. Gairat is a small village situated on a plateau-like promontory, 100 feet or more above the river. Opposite it is the mouth of the Barír valley of Kuláshgum. |

ROUTE No. V.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 3. KALA DROSH (DARÚSH) (4,320 ft.) | 9½ | 26½ | On leaving Gairat there is a difficult rocky descent for 100 yards or so, after which the road is fairly easy all the way to Késú (4½ miles), a fair-sized village, where there is a foot-bridge across the river. Below Késú the character of the country changes, the hills becoming well clad with forest. At 5½ miles a rocky spur projects into the river, the path over which is very difficult and narrow for laden animals. At the crest the road is closed by a stone tower known as the Tópkhána-i-Késú. At 7 miles cross the Shishi Kú, a rapid river, about 20 yards broad. In summer this stream is not fordable, but there are two bridges a little way up. A mile beyond there is a spur, which involves a stiff climb, except when the river is fordable; the rest of the road is easy, mostly through fields. Drosh consists of a fort and several villages. Supplies and firewood plentiful. |
| 4. MÍRKANI (4,100 ft.) | 9½ | 36 | The road as far as Kalkatak is fairly easy, being partly along the sandy bed of the river. At 3 miles ford the Beori Gol, a rapid stream about 20 feet wide. At 3½ miles Kalkatak, a semi-fortified rock knoll overlooking the river. From Kalkatak to Mírkani the road is on the whole fairly good. At 6½ miles, however, there is rather a bad *pari*. At 7½ miles pass Kala Naghar, a fort and village on the opposite bank; also Badugal, a hamlet of Saiads on a hill just above the road to the left. At 8½ miles the road becomes difficult for laden animals, and remains so the rest of the way. Mírkani is an open spur between the Lowarai stream and Chitrál river. There is space for a small camp, and firewood is abundant; but the place is much exposed to Káfir attacks. The hamlet of Mírkani (two or three houses) is ¼ of a mile further down the Chitrál river. From this point there are two roads—one running south-east up the Pésh Gol to the Lowarai pass and Dír; the other south along the left bank of the river to Asmár (*vide* Route No. V(*a*)). |

## ROUTE No. V(*a*).

### ASMÁR TO CHITRÁL.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |

There are two routes, one along each bank of the Chitrál river. That along the right bank is much the easier, and is even in its present state perhaps practicable for laden animals, but it is never used on account of Káfir raiders. The road along the left bank in its present state is fit for led horses, but not for laden ones. It might, however, be easily and quickly made so.

The stages might be either—

| | Miles. | | | Miles. |
|---|---|---|---|---|
| Sau - - - - | 12 | or | Sau - - - - | 12 |
| Harnoi - - - | 12 | | Camp, 3 miles south of Harnoi - | 9 |
| Moghaldam - - - | 12 | | Langarbat - - - | 6 |
| | | | Moghaldam - - - | 9 |

As the road would require making, the shorter stages would be the better, and are accordingly given below:—

| | | | |
|---|---|---|---|
| 1. SAU - - - | 12 | — | At 2½ miles pass Shangúr (60 houses), about a mile to right of road on hill slopes, and at 2¾ miles ford a stream, up which there is a road to Bar Barawal. At 4 miles Shalí (60 houses), |

ROUTE No. V. (*a*)—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| the lastAsmár village; opposite it is a rope bridge leading to Dubkala (40 houses), on opposite bank of river. Just about Shalí there is another road to Bar Barawal. At 8 miles pass Bargám (40 houses) on opposite bank, the first village in Chitrál. At 10 miles there is a bad *pari* about 500 yards long. At 10½ miles pass Sanúk, a small hamlet on opposite bank. Sau contains about 100 houses. From here a road to Bar Barawal. | | | |
| 2. CAMP (3 *miles south of Harnoi or Arnawai.*) | 9 | 21 | On leaving Sau, cross stream, up which is the aforementioned road. At 6 miles cross a *nala* by a footbridge. Up this there is a good road to Bar Barawal, which is fit for laden horses, and is never closed by snow. At 7 miles Nára or Narsat (50 houses), just above which to the right is the deserted fort of Shálí Kót. Two miles further on there is a fine level grassy *maidan*, which makes a splendid place for a camp. |
| 3. LANGARBAT - - | 6 | 27 | On leaving camp, for 2 miles there is a bad *pari*, where horses must be led. At 2 miles pass Pashangar (10 houses) and Birkót (20 houses) on opposite bank. At 3 miles cross stream to Harnoi (Randú), 180 houses, opposite which there is a footbridge across the main river. From Harnoi there is a road to Panarkót. At 4 miles pass the mouth of the Bashgal Gol. Langarbat contains 30 houses. |
| 4. MOGHALDAM - - | 9 | 36 | At 1 mile there is a very bad bit, where horses must be led. At 4½ miles ford a *nala*, up which there is a road to Dír by which horses can be taken, but which is closed by snow in winter. On the north bank of this *nala* is Gid (60 houses) (the Chitrális call it Dahimal). Half a mile beyond Gid the road becomes a succession of small *paris*, very difficult for horses. At 7½ miles ford the Chashtangad *nala*. Beyond this the hills recede a little, and from here to the Lowari stream the valley on the left bank is known as Moghaldam. Half way between the two streams there is a good spot for encamping; forage and firewood obtainable. The Lowari stream is 1½ miles further on; it is crossed by a footbridge at Mirkani. |
| 5. KALA DRÓSH - | 11 | 47 | |
| 6. GAIRAT - - - | 9½ | 56½ | At 1½ miles cross the Pésh Gól (the stream from the Lowarai pass) by a footbridge at Mirkani. The road from this point is described in route No. V., Chitrál to Mirkani. |
| 7. BRÓZ - - - | 7 | 63½ | |
| 8. CHITRÁL - - | 10 | 73½ | |

## ROUTE No. VI.

### CHITRÁL TO ZÉBÁK, *viâ* THE DÚRÁH PASS.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. SHOGHÓT (6,200 ft.) | 12¾ | — | Up the Chitrál valley through the barren ground on the right bank of the river. At about 3 miles from Chitrál pass Singar (120 houses), and at about 4 miles pass the junction |

ROUTE No. VI.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| of the Mastúj and Lutkú rivers, just beyond which is a spur which offers a very strong defensive position with reference to an advance by either river. At 7½ miles Sháli (12 houses). Between 8 and 10 miles pass the hamlets of Bartoli, Randúl, Parcheli. At 11 miles the road avoids a bad cliff by crossing and recrossing a branch of the river by two short bridges. At 12 miles cross the Lutkú by a ricketty pole bridge, and at 12½ the Újáh Gól. Shoghót is a small village of 40 houses, opposite which, on the right bank of the Lutkú, is Awi (20 houses). At Shoghót there is a fort, about 40 yards square, with towers at the angles. The position is an excellent one for checking an advance from the Dúráh. The road is in places very bad; animals have to be unladen on account of the narrowness of the path where cliffs abut on the river. The Lutkú river is fordable, except in summer. There is a bridge practicable for animals between Sháli and Sín, and a footbridge at Parcheli. From Sín there is a mule road over the spurs of Tirich Mir to Owir and Drásan (*vide* Route No. III.). The road throughout lies in a narrow defile bounded by precipitous mountains. At Shoghót ample room to encamp. Water good; supplies and firewood procurable. | | | |
| 2. DRÚSHP (7,000 ft.) - | 10¾ | 23½ | The road goes alongside the river bed for 400 yards, then mounts the cliff on the right for several hundred feet by a very steep and difficult path. The descent is worse, being carried down the face of a smooth cliff by a narrow cornice or pathway supported by short struts. Unladen horses can, however, be taken by it. It then passes along a steep shaly hill side. At 1¼ miles reach the Arkári river, about 15 yards wide, and go up its left bank for ¼ mile. Cross over by a bridge 60 feet long. Up the Arkári valley is the road to the Nuksán, Ágram, and Khatinza passes. At 1¾ miles small hamlet of Andarthi, the head-quarters of the Arkári district. At 2 miles ford the Lutkú river or cross by a bad footbridge. In summer, horses must be swum across. The road now follows the right bank, and in places is very bad indeed. At 2½ miles pass Ruji. Between the 3rd and 4th miles there is a very difficult *pari* close to the edge of the river, and at 6 miles there is a high and very bad *pari*. At 6½ miles Múgh; at 8½ miles Mújgán. These villages each contain 10 or 12 houses; all three are on the left bank. Just before reaching Drúshp the road crosses the river by a ricketty bridge, about 60 feet long and 3 feet broad. Drúshp contains about 60 houses and an insignificant fort, which is the residence of the Governor of Injgám. Ample space for encamping. Water supply good; supplies and firewood procurable. |
| 3. BARZÍN (8,000 ft.)* - | 7 | 30½ | A little more than a mile beyond Drúshp are some hot springs, a few hundred yards to the right of the road, just beyond which is the village of Izh (30 houses), on both sides of the river. Izh, on the opposite bank, stands at the mouth of a fine valley, up which there is a route, practicable for horses, over the Shúi pass into Káfiristán. Between 2 and 3 miles pass through Barmanú and Jhita; then ford the river (there is a bridge for foot passengers). In summer the river cannot be forded, and men and animals must cross by the bridge 2 miles from Parabek. At 4 miles there is a bad ascent and descent, where a rocky spur abuts on the river opposite Rui (40 houses). At this point the road can be very effectually defended against an enemy coming from the Dúráh. The road now enters the Parabek plain, which is about ½ of a mile broad, and 2 or 3 long. At 5½ miles pass the fort of Parabek, with Gistanu on the opposite bank. Through fields, passing through Gufti (15 houses) at 6 miles. Barzín is a small village at the end of the Parabek plain. |
| 4. SHÁH SALÍM (10,800 ft.) | 10 | 40½ | Ford the river, and go up the right bank for 1¾ mile. In summer the ford is difficult, but there is a footbridge which may be used. Ford the river again. In summer keep to the left bank, past Ughoté, to within ½ a mile of Darband. Road bad. Cross to river bank by a bridge. At 2¼ miles Darband, a worthless line of fortifications, in an excessively bad position. |

* The Chitrál mission encamped close to Parabek Fort; but Barzín divides the distance better.

ROUTE No. VI.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| At 4 miles recross to left bank. There is a footbridge at this point. Pass through Emírdil, a hamlet on a hill, and at 6 miles reach Gabar, a fort lately erected, in which about 30 families reside. Opposite this fort is a narrow valley, up which is a route to Káfiristán by the Zidig Kotal. Below Emírdil the valley is very stony and destitute of herbage or trees. Above Gabar, for 1½ miles the road is fairly level, and passes through or alongside a jungle of willow and birch trees. Either bank of the river may be followed. At 8½ miles pass through Digiri, a Káfir settlement, and at 10 miles cross to left bank by fording, and ascend to the camping ground of Sháh Salím, famous for its hot springs. Forage and firewood plentiful. Supplies must be brought. In summer the left bank is followed the whole way from Gabar. | | | |
| 5. LAKE DUFFERIN, or Camp 1 mile below Hauz-i-Dúráh. | 12½ | 53 | Just beyond camp ford the Unai stream, up which there is said to be a path turning the Dúráh. The ascent now commences in earnest. It is not very steep, except here and there, and through the path is a rough one, it is perfectly practicable for laden animals. At 1 mile pass the camping ground of Karonez, beyond which firewood is very scarce. At 1¼ and 3¼ miles respectively pass the mouths of the Artzú and Ústich valleys on the opposite side of the river. Up these two valleys there are two foot-paths to Ahmad Díwána in Káfiristán. At 7 miles reach the kotal (14,800 feet), the last 2 miles being very stony. In summer the pass is free from snow. The descent is very stony and troublesome, but the ground is open and the gradients not too steep for laden animals. At 1½ miles below the *kotal* cross a shallow torrent, which flows down to the Hauz-i-Dúráh. Half a mile beyond there is a very steep descent of 900 feet to the lake, which is about 1¾ miles long and nearly ½ a mile broad. The lake receives its principal feeder from the south. Up this feeder there is a route to the Mandál pass (7 miles distant), by which Káfir raids are frequently made. The path along the water's edge is very stony and difficult for animals; the rocky hill sides come right down to the lake, so there is no means of avoiding this. The road now enters the narrow ravine by which the water makes its exit from the lake, and for 1½ miles goes down the right bank of the stream. Path stony and difficult for horses; gradient easy. At the camping ground there is no firewood, but there is a certain amount of forage. On account of the want of fuel, *kafilas* generally halt 4 miles further on at Gazíkistán. |
| 6. SANGLICH - - | 11½ | 64½ | This part of the road is described in detail in Route No. IV., Part II., Zébák to Chitrál *viâ* the Dúráh. It is practicable for laden mules, and might be easily made an excellent road. The river has to be crossed once near Sanglich and twice just below Iskatól, again near Zébák. There are bridges, but the river is generally fordable. |
| 7. ISKATÓL - - | 9½ | 74 | |
| 8. ZÉBÁK - - | 10 | 84 | |

The Dúráh, generally speaking, may, allowing for its elevation, be considered an easy route. For laden animals there are no difficulties to speak of *west* of Parabek, and between Chitrál and Parabek the difficulties might easily be remedied with a little labour. The road throughout, to within a mile or two of the pass, may be defined as a defile between high bare rocky mountains.

The Dúráh is certainly the best known route across the Hindú Kush, as the value of the Baróghil is discounted by the difficulties of the Darkót. The pass is practicable for laden animals for about four months, July to October, while for men on foot it is generally passable from May to November.



THE DÚRÀH PASS

(FROM LAKE DUFFERIN).

## Route No. VII.

### Chitrál to Zébák, *viâ* the Nuksán or Khatinza.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. Shoghór - - | 12¾ | — | *Vide* Route No. VI. |
| 2. Sháli - - - | 11½ | 24¼ | At 1¼ miles reach the Arkári river (*vide* route above mentioned), up which the road runs. At 2¾ miles Momi, a large village of 90 houses, with groves of fruit trees on both sides of the river. At Momi the road crosses by a bridge, practicable for animals, to the right bank of the Arkári. A mile beyond Momi the road becomes too bad for laden animals, and continues so as far as the hot spring mentioned below. At 7½ miles pass Oles (6 houses) on the opposite bank; a foot-bridge leads to it. At 9 miles Mojigrám (6 houses); at 11½ Sháli (8 houses). There are no trees here. About a mile short of Sháli, on the opposite bank, is a hot spring. |
| 3. Rubát (9,021 ft.) - | 7½ | 31¾ | At 1 mile Gulandi on the opposite bank (4 houses); at 1½ Shol (5 houses). At 4¾ Arkári, a village on both banks, which, with Parpuni, contains about 80 houses. At Arkári the road crosses to the left bank by a bridge 30 feet long, fit for unladen animals. At 6 miles reach the first of the Rubát hamlets, and at 7½ the last. There are three hamlets of the name, which together contain about 20 houses. Fruit trees plentiful. The road is fairly good throughout this march; horses can be ridden. |
| 4. Wanakach - | 10¾ | 42½ | At 1 mile pass some *sangas* and walls. The place is called Darband, but the position does not seem to warrant the name. At 3½ miles cross to right bank by fording; there is also a foot-bridge. At 4½ miles cross the Nawasín (7 feet broad) by a bridge fit for animals. Up the Nawasín is the route to the Agram pass. Immediately on crossing this stream enter Owír (15 houses); here there are no fruit trees. On the other side of the village recross to the left bank of the Arkári by a bridge; animals must be unladen. The river is here about 12 feet broad. About 4 miles beyond is the Wanakach jungle: camp at the upper end. Firewood plentiful; forage scarce. The road on this march is fairly good throughout; horses can be ridden. |
| 5. Khána Má-ábád - | 9¾ | 52¼ | Up the valley. At 2 miles cross the Gazíkistán *nala*, 20 feet broad, but shallow. At 3 miles enter a snowfield; the road now becomes steep and difficult. At 4 miles reach the junction of the Nuksán and Khatinza passes. The elevation at this point is 11,640 feet. The next 2 miles are very steep and difficult, the road ascending nearly 5,000 feet, the *kotal* being 16,560 feet. |

The road descends by the southern edge of a glacier for over a mile. The next mile and a half are very steep, rocky, and difficult. At 9 miles the Khatinza route rejoins the Nuksán, and the road becomes somewhat better. Khána Má-ábád is a camping ground marked by a small stone hut. Space very cramped, but water and fuel are obtainable

The Khatinza pass lies only 1½ miles to the north of the Nuksán. As described above, it is only an alternative path for 4 or 5 miles. It is very steep, and the elevation is about 17,500 feet. It is therefore never used while the Nuksán is open. But in winter it is sometimes used by messengers, or travellers without loads, as being so steep, the snow does not lie on it, and the road thus remains practicable, except for about two months, when it is closed lower down.

ROUTE No. VII.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 6. DEHGÚL - - | 8½ | 60¾ | *Vide* Route No. III., Part II, Zébák to the Arkári valley. |
| 7. ZÉBÁK - - | 9½ | 70¼ | |

The Nuksán pass is usually open for five or six months. It is an extremely difficult route, and is really only practicable for men on foot, though unladen ponies are occasionally taken by it.

## ROUTE No. VIII.

### JANDRÓT or JANJARÓT to MASTÚJ *viâ* THE DARKÓT PASS and YÁRKHÚN VALLEY.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. GENDAI - - | 10 | 10 | Descend by a fair path for 1½ miles to the Ghizar river, which cross by a rope-bridge. Horses are swum across. On the opposite bank is Khalta, a village of about 40 houses, amidst cultivation and fruit trees. From Khalta there is a steep and rocky ascent of about 1,100 feet very difficult, but practicable for ponies. The path then becomes fairly level for a mile or so, and then there is a stiff descent of a thousand feet to the Yasín river, which is crossed at 5½ miles, by a ricketty bridge 22 yards long. The last 4½ miles into Gendai is fairly easy and level, but stony; two or three small streams of good water crossed *en route*. Gendai is a village of 11 houses, with a good deal of cultivation and fruit about it. Camp in the fields. |
| 2. YÁSÍN (7,800 ft.) - | 6 | 16 | For 2½ miles over the rocky débris of successive landslips, passing at 1½ miles the hamlet of Nú on the opposite (right) bank of the river. At 2½ miles cross the Yasín river by a bridge about 20 yards long and 4 feet wide. The road now enters cultivation, and for the rest of the way is a path winding through the fields. At 3½ miles pass through Dúmán, a village containing about 50 houses, and at 6 miles reach Yásín fort. The valley from the bridge to Yásín is about 1½ miles in width, and is level and fertile. All the cultivation is on the right bank. Fruit trees are abundant, particularly apricot, apple, and walnut. Yásín fort is a square, of about 100 yards side, in a very dilapidated condition. |
| 3. HANDÚR - - | 13 | 29 | At ¼ mile ford Nashúr river (there is a bridge about ½ a mile up the river), ascend cliff on opposite bank, and over a barrren desert plain (the Dasht-i-Taos), about 1 mile wide, for 2 or 3 miles. At 2½ miles pass ruins of an ancient fort. Traces of irrigation exist, and the plain was evidently once cultivated. On the opposite side of the valley is the village of Guhjálti. Descend to river, and at 3¼ miles cross by bridge 20 yards long. At 4½ miles village of Sandi. Opposite Sandi the river bed widens to a 1,000 yards. For 1 mile by narrow lanes through village of Sandi and surrounding fields. At 5½ miles cross a stream (fordable), up which there is a road practicable for horses to Chatúrkand in the Ashkúman |

ROUTE No. VIII.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| valley. On the opposite bank of this stream is Mandúri. Along river bank for a mile; then across a landslip opposite the mouth of the Túi valley (distance 7¾ miles). Over sloping barren ground for 1½ miles. At 9¼ miles cross to the right bank of Yásín river by a bridge 4 feet wide by 50 feet long. Barkúlti fort forms a *tête-de-pont* to the bridge, the road actually passing through an outwork. The fort is a rectangular building, 40 yards by 25, with six towers, the whole in very good order. Half a mile further on is Barkúlti village, the residence of Ali Mardan Sháh, the ex-Mír of Wakhán. A mile beyond the river passes through a gorge 20 feet wide; here there is a bridge; the rest of the way to Handúr is more or less through cultivation. Handur is a fertile place with abundance of fruit. The Barkúlti fort is also known as Kala Mír Wali. | | | |
| 4. DARKÓT (9,160 ft.) - | 10½ | 39½ | By a lane through fields. At 600 yards pass hamlet of Bábrikot (3 houses), on opposite bank; at ¾ mile cross river by a bridge of 25 paces span: over rough débris of landslips. At 3¼ miles Amulchat, cultivation and fruit trees. Cross stream from right. At 6¾ miles enter the Marang jungle, which is a low, swampy tract of dense undergrowth, with willows and birch, the path winding through it for about 3 miles. At 9½ miles ford Dadang Balsi stream from east, or cross by a bridge ¼ of a mile up stream. At 10 miles pass through the fields of Darkót. At 10½ miles camp on north-west side of village. The valley from Handúr upwards is from 300 to 400 yards wide, hemmed in by bare rocky precipitous mountains, thousands of feet high. At Darkót the Yásin valley may be said to commence, as it stands in an amphitheatre of mountains, watered by three main streams, which together form the Yásín. The village contains about 40 houses, with a good deal of cultivation and a profusion of willow trees. From Darkót, beside the Darkót pass to Baróghil, there is a route practicable for horses up Dadang Balsi and over the mountains into the Ashkúman valley. |
| 5. CAMP (1½ *miles south of Darkót Kotal*) (13,600 ft.) | 7 | 46½ | Up the stony bed of the Darkót ravine, in which there is much low jungle. Between the first and second mile cross two channels of this river, each about 20 yards broad and 2 feet or 3 feet deep, difficult to ford on account of the current. At 2½ miles ascend for about 300 feet to the crest of a spur which here closes the valley, the river being confined to a narrow impassable gorge between precipitous cliffs. This spur was once fortified, and is known as Darband. Descend a 100 feet or so, and pass through a cultivated strip of land, with three or four houses, known as Garkushi, a *bánda* of Darkót. At 3¾ miles cross the Darkót stream, which is here only about 20 feet wide and not 2 feet deep. The ascent to the Darkót pass may be now said to begin; about the fourth mile are several clumps of birch and larch trees; and as forage too is plentiful, this spot is often used as a stage preparatory to crossing the pass. The path up is at first a very fair one, though steep; and as the hill side here is covered with earth, no doubt a good road could be made. At 5½ miles bare rock takes the place of earth, and the road becomes very steep and bad. At 6 miles pass Garm Chashma, a hot spring ¼ mile to the left of the road. The road gets worse and worse as one ascends; and though laden animals do use it, it can scarcely be called a mule-road. Camp on a ledge of rock and boulders at the edge of a glacier. As the ledge is only about 30 feet wide and encumbered with rocks, there is only room for a very small body of men. To bivouac is a necessity, as nowhere can space for a tent be found. |
| 6. DASHT-I-BAROGHIL, or CHATBOI (11,960 ft.). | 9* | 55½ | Cross a glacier; then along natural embankment of rocks and boulders; then over a snowfield to the crest of the pass, which is 15,000 feet above the sea and 1½ miles from camp. From near the crest a road goes off to the right, which leads by a circuitous path to Sarhad-i-Wakhán. This is locally known as the Sowár Shúi, and for the last few years this route has been used in preference to the Baróghil on account of the broken bridge across the Yárkhún river. From the crest the road to Baróghil presents the appearance of a smooth snowfield, |

* This 9-mile march takes at least six hours, and is very difficult for laden animals.

ROUTE No. VIII.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |

about a mile wide, with an average gradient of 4°, and hemmed in by rocky mountains from three to seven thousand feet above it. After two or three miles of this snowfield, a glacier takes the place of the smooth snow, fissures appear, and then deep crevasses, which at length compel the traveller to leave the glacier and follow an extremely rough, rocky path along the glacier embankment on the right, or over the stony slopes at the foot of the mountains. At 8 miles the path enters the grassy slopes of the tongue of land between the Chatiboi stream and Yárkhún river. This tongue is known as the Dasht-i-Baróghil, though the real Baroghil plain commences on the north side of the Yárkhún river; water, firewood, and forage all good and abundant. The Dasht is a great grazing ground. From here to Sarhad it is about 13¼ miles; but the route is now never used except in winter.

The route down the Yárkhún, as far at all events as Topkhána Ziábeg, is only practicable in the winter, when the river bed itself can be used. In summer it is *never* used, and even in winter it is of little value, as the Chatiboi glacier must be traversed, which, from its nature, is quite impracticable for laden animals. The ordinary route from Chitrál to Wakhán, or *vice versâ*, is by the Khán Kón pass to Yúr in Wakhán, and not by the Baróghil. A good summer road might be made up the right bank from Topkhána to the mouth of the Khán Kón pass. The route given below was traversed by Colonel Woodthorpe and Captain Barrow towards the end of August. Not a single person was met with *en route;* riding horses accompanied them, but they were only brought along by swimming them down the river whenever the road, or want of road, presented insurmountable obstacles. Practically speaking, there is no road in summer.

| | | | |
|---|---|---|---|
| 7. DOTZ - - | 3½ | 59 | Down the hill side to the Chatiboi stream, which is about 20 yards wide, and fordable with difficulty. At 1 mile reach the lateral moraine or embankment of a great rough glacier. This glacier is a wild sea of giant billows, seamed with crevasses, and even for men on foot is difficult to cross. Horses can, however, be taken over by using ropes and such like precautions. At 2 miles descent into the valley, which is here covered with low jungle, chiefly juniper, willow, and birch. At 3½ miles encamp. Traces of former cultivation. Forage and firewood obtainable. |
| 8. SKRÚINJ - - | 8½ | 67½ | For 1 mile down the stony bed of the river; then along a steep slope, 100 feet or more above it, for ½ a mile; then for the next 2 miles, either in the bed of the river, or over the rough ground at the foot of the hills. At 4 miles ascend a lateral moraine for about 1½ miles, the ascent being about 2,000 feet, and the whole way a steep scramble over big boulders and fine débris slipping away under the lightest footfall. Then across a great glacier, which is, if possible, worse than the Chatiboi. After crossing this, ascend to the Kotal Kash, just beyond which is a lake about ¼ mile long, the Hauz-i-Kotal Kash. Another half mile brings one to the farthest crest, from which there is a frightfully steep descent. Camp in jungle at a spot called Skrúinj. Firewood plentiful; forage scarce. |
| 9. CAMP - - | 10 | 77½ | For 2 miles alongside the river, either through low jungle, or in the stony bed of the river, or along the foot of shaly landslips. Then up a long slope of shale to the crest of a projecting spur, about 800 feet above the river; then down to a mountain torrent in a very deep ravine, which can only be crossed by leaping from rock to rock. Up a very steep slope, and then along the hill side for a mile or so; down a long incline by an easy gradient to the river banks, which follow for a mile or so; then through the rough jumble of hillocks at the foot of an old glacier. Ford a considerable stream, and for the next two miles over pebbly beds of dry or worn-out water courses, and the rough débris of a stony fan. Up a hill side, over a low *kotal* to a little level plateau, where water, forage, and firewood are obtainable. |

Opposite the spur, crossed at 3 miles, is the entrance to the Khán Kón pass, which leads to Yúr in Wakhán. A mile or so below this, on the right bank of the river, is Chakarkúch. This, or Khán Kón Kúch (the jungle at the mouth of the Khán Kón), is in winter the usual intermediate stage between Baróghil and Topkhána Ziábeg, stages being Khán Kón Kúch 15 miles; Ziábeg 12; Jhopu 12¼.



JHOPÚ

(LOOKING UP THE GAZAN PARA TOWARDS THE TUI PASS).

ROUTE No. VIII.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 10. CAMP (*between Garm Chashma and Darband*). | 9 | 86½ | Descend to the valley; cross a stream over a shingly fan; then across a second stream and up a hill side, passing several ruined villages and traces of much former cultivation. The road now winds along hill sides, which have here fairly easy slopes, and are more or less grass grown. At 5 miles cross a stream, opposite the mouth of which is Topkhána Ziábeg, a ruined *burj*; ascend a hill, and pass along the edge of cliffs by a narrow dangerous path. At 6 miles descend again to the river bed. At 6½ miles Garm Chashma, a well-known hot spring. Then along the river bed, passing a rope bridge and the mouth of the Koksín *nala*, up which is a route to Rích in Turíkho. Again along the hill side, and then once more down to the river bed, which follow for about 1 mile. Camp near a wood. Forage and firewood procurable. |
| 11. JHOPÚ - - | 8½ | 95 | For three miles down the valley, either in the river bed or through jungle, or over rough stony fans. At 3¼ miles the valley narrows and becomes a gorge, about 80 yards wide, with cliffs towering above for several thousand feet; the river is here a roaring rapid, while the path is much encumbered by huge boulders and other obstructions. Lower down the valley opens a little, a pebbly fan is crossed, and at 6 miles Darband is reached. This is a line of towers and *sangas* carried across the valley and completely closing it, the flanks being protected by precipitous cliffs, which are utterly inaccessible. At 1½ miles beyond ford the rapid Gazan Dara, up which is the Tuí pass route to Yásín. Then for 1 mile over a stony fan to Jhopú, a little treeless village, which is the highest point in the Yárkhún valley, where regular cultivation is met with. Supplies scarce. |
| 12. MÍRAGRÁM - - | 8½ | 103½ | Across a great stony fan, wading its stream. At 1 mile pass the hamlet of Warsum. Enter the river bed, which follow for about 1¼ miles. Pass Donich, a hamlet on the cliff above. For the next 1½ miles over a rocky fan, with many ups and downs. Pass a rope bridge over the Yárkhún river. At 4 miles pass Pawar, a village on the opposite bank. Descend to river bed, which follow for 1½ miles. Through hamlets of Imit and Pádan; over another stony fan, and then, after fording several channels, through the extensive cultivation of the scattered village of Míragrám. Supplies procurable. On the opposite side is Bang, whence there is a route over the hills to Túrikho.<br>There is no difficulty on this stage, except the fording near Míragrám. |
| 13. BREP (8,290 ft.) - | 11 | 114½ | Through fields down to the river-bed; then along foot of hill slopes. At 1¾ miles Lásh; at 2¼ Shich; both small hamlets. At 4 miles Fásk, and at 4½ Yukúm. Turn a precipitous rocky promontory, partly by fording, partly along the cliffs. At 6 miles Dizg, a large village on the opposite bank. At 7 miles pass a rope-bridge leading to the Rah-i-Khút, a pass into Turíkho; then comes a steep ascent of a thousand feet up a rock staircase. There is a lower path, but it is absolutely dangerous. A steep descent to the river bed, more fording and skirting cliffs. At 10 miles reach a great cultivated fan, and at 11 the village of Brep. Supplies procurable. |
| 14. MASTÚJ (7,780 ft.) | 13 | 127½ | For the first five miles the road is pretty fair, though stony. Pass Khúsh on opposite bank. At 5½ miles there is a rocky cliff, which is impassable for horses. These must be swum round it, though the road, which lies about 10 or 20 feet above the water, is only difficult for a few yards. The rest of the way is easy, though stony. At 8 miles Chapri, at 9½ Handúr, at 10½ Chivinj, at 11½ Chinar, and at 13 Mastúj fort. The villages mentioned are all small ones. The last 2 or 3 miles into Mastúj are good. At Mastúj good and extensive camping ground. Supplies of all sorts procurable. |

## ROUTE No. IX.

### GABAR (LUTKÚ VALLEY) TO LUTDIH (KÁFIRISTÁN) *viâ* THE ZIDIG KOTAL.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. SAMANAK (11,820 ft.) | 5½ | — | Immediately on leaving Gabar Fort, cross the Lútkú stream by a foot-bridge about 15 yards long. Ascend the hill side on the left bank of the Zidig stream. The first mile is very steep; after that the ascent becomes easier, but the road in places is very stony. After a total ascent of about 2,600 feet, reach the grazing ground of Samanak. Excellent forage; firewood plentiful; water good from Zidig stream. |
| 2. AHMAD DIWÁNA (8,680 ft.) | 10 | 15½ | Up the right bank of the Zidig stream for 1½ miles; then cross. The first 2 miles are pretty easy, though stony in places. The next half mile is very steep. The road then goes over a snow-field, which at its upper end is steep and rough. At 3¾ miles reach the *kotal*, 14,850 ft. The *kotal* is a sharp rocky ridge. The first mile of the descent is excessively steep and shaly, the gradient being 1 in 2, or even steeper. The road now goes down the right bank of a stream; the gradient is on the whole fairly easy, though steep in places, but the road is very stony and troublesome. At the 10th mile ford the Bashgal river, a rapid stream about 20 yards wide and 3 feet deep. Camp in the Ahmad Diwána plain on the other side. Forage and firewood abundant. No houses and no cultivation. Up the Bashgal valley lies the route to the Mandál pass. The road on this march is impracticable for laden animals, but there is a circuitous path from Samanak to Ahmad Diwána, to the north of the Zidig, by which the Badakshi traders bring donkeys laden with salt. |
| 3. APSAI (7,290 ft.) - | 11¼ | 26¾ | Cross the Ahmad Diwána stream shortly after leaving camp. At 2 miles pass Púna, a tower with two or three houses and a little cultivation about it. At 3 miles cross the Bashgal stream by a foot-bridge. Just below this the Luluk valley comes in from the south-west. Up it is the road to Virran, one of the biggest villages in Káfiristán. For the next 2½ miles the road lies through a fine forest of birch and willow, the valley being about 500 yards wide. At 5¾ miles reach Shúi, the highest village in the valley. It is built in one fort-like block, and contains about 120 families. (From Shúi there is a path over the Shúi Kotal to Izh, near Drúshp, in the Lútkú valley. This route is practicable for horses.) Below Shúi the hills become clothed with deodar, while the valley assumes a more cultivated appearance. At 8¼ miles cross the Ushimgol stream. Apsai is a village fort similar to that at Shúi, and containing about 200 families. Cultivation considerable; firewood plentiful. |
| 4. LUTDIH (6,660 ft.) - | 6¾ | 33½ | Cross to the right bank by a good bridge, fit for cattle and 36 feet long, down the river side. At 2¾ miles pass the hamlet of Rangól, and at 1½ miles cross a stream and pass Shidgól, a village fort containing about 200 families. At 5½ miles pass Abrons, a hamlet on the opposite bank. At 6¾ miles Lutdih, a large village on both banks of the river, containing in all about 1,000 families. The two parts are connected by a good bridge (80 ft. by 3 ft.) The road throughout lies more or less through cultivation, but there are several very bad places where rocky spurs project towards the river. The two worst places are within a mile or so of Lutdih. At Lutdih supplies and firewood plentiful. The position is an important one, as it commands the Shâwal valley, up which is a route to Chitrál (*vide* Route No. X.). |

## Route No. X.

### Lutdih (Káfiristán) to Chitrál, *viâ* the Sháwal Pass.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. Camp (Shawal Pass) (10,280 ft.) | 7 | — | Cross the Sháwal stream by a foot-bridge, and for 2 miles up its left bank through cultivation, passing a few stray houses belonging to Lutdih. Cross by a foot-bridge to right bank. The fields soon come to an end, and the road enters deodar forest. At 3½ miles cross to left bank, and at 3¾ recross to right. At 5½ miles the road finally crosses to left bank, and, leaving what appears to be the main valley, ascends the hill side by a very steep path, quite impracticable for horses. A stiff ascent of over 2,000 feet in 1½ miles brings one to a Káfir grazing ground, where there are a few stone pens for the cattle. The first 5½ miles are very easy, with an average ascent of 300 feet a mile. At camp, fuel scarce; water from stream. |
| 2. Utarshish (10,622 ft.) | 9 | 16 | Up the valley over a very rocky path, with here and there patches of snow. The ascent lies over a series of plateaux, each with its marsh or lake, and a stiff climb between the plateaux. The first lake is reached at 3½ miles, the second at 4¼, the third at 4¾. From 4½ miles onwards to the crest the road lies over snow. At 5½ miles reach the crest (14,100 feet). The descent is not very difficult, the first mile or so down a shaly slope, and then over a good deal of rocky ground. At 7¾ miles the path becomes very steep, dropping down nearly 2,000 feet in the remaining mile and a quarter; the path here is fair, as earth covers the hill side. Utarshish is a grazing ground with a few cattle pens. Firewood plentiful; water from stream. |
| 3. Bumboret (6,650 ft.) | 9 | 25 | Down the valley. At first the path is very rocky and troublesome, lying either in the bed of the stream or over great landslips. At 2½ miles pass the mouth of a valley from the south, up which is a road to Kamdésh. The road now enters a deodar forest, and is on the whole fairly easy, though bad in places, especially between the 7th and 8th mile. At 8¼ miles cross a side stream, and enter the fields of Bumboret, a Kalásh Káfir settlement, consisting of 8 or 10 small hamlets. Supplies obtainable. Firewood plentiful. |
| 4. Aián (4,550 ft.) | 8 | 33 | Through the fields of Bumboret for 2½ miles; then across the river, and up the western slope of the Karál hill for 2 miles, ascending about 900 feet. This hill is of considerable extent, flat-topped, and covered with deodar, oak, &c. The descent on the northern face is very steep and in places difficult, the road quite impracticable for horses. Aián is a large village of nearly 500 houses in three or four blocks. Supplies procurable. It is about ½ a mile distant from the Chitrál river. |
| 5. Chitrál (4,980 ft.) | 10 | 43 | Cross the Bumboret stream by a narrow bridge, impracticable for animals (the stream is 20 yards broad and rapid, but fordable), through the fields and hamlets of Aián for 1½ miles; then through sterile hills. At 3 miles strike the river again. At 5 miles Argach (30 houses); on the opposite bank is Chimarkand. At 6 miles the road goes over some cliffs above the river, and at 8 miles enters the Chitrál valley; hamlets and fields the rest of the way. At Chitrál supplies are plentiful. The road is good for laden animals throughout this stage. |

## Route No. XI.

### Mastúj to Gákúch.

| Stage or Halting Place. | Distance in Miles. | | Description. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. Rahmán (9,300 ft.) - | 14 | — | At 1 mile ford the Kambád *nala* and pass the small hamlet of Gramuli. The road then goes for 5 miles over stony barren slopes, the valley being somewhat narrow. At 5½ miles ford the Shaidás *nala*, and at 6 miles cross the Laspúr river by a *kadal* bridge. A mile or so beyond the valley is closed by a low isolated hill, which forms a good defensive position. At 8 miles Gasht (50 houses). Half a mile further on is a small hamlet of Gasht. The rest of the way the road goes over stony slopes, the valley being about a mile wide. At 10 miles cross a deepish ravine (the Shindal *nala*) by a short steep zigzag. At 13 miles pass the bridge leading to Harchín, and at 14 enter the cultivated ground belonging to Rahmán, a large scattered village of many small hamlets. Supplies procurable. From Rahmán there is a short cut to Chitrál by the Gulen valley. Road difficult. |
| 2. Sar Laspúr (9,800 ft.) | 5½ | 19½ | At ½ a mile ford a deep rapid stream, and at 2½ miles cross the Laspúr river by a *kadal* bridge. The road now runs close to the river side for 2½ miles, being narrow and stony; an alternative road goes over the hill above, and is on the whole preferable. At 5 miles pass the bridge leading to Balím, a village on the opposite bank. The road now ascends to the plateau on which stands Laspúr, a scattered village of some extent, at the junction of the Woghtúr *nala* and Laspúr river. Supplies procurable. |
| 3. Langar (10,900 ft.) | 15 | 34½ | Up the narrow stony valley of the Woghtúr *nala*. Road good and gradient easy, except for the last few hundred yards. At 3 miles reach the *kotal* (12,200 feet). After gaining the *kotal*, one crosses an almost level plateau, about 1 mile broad and 1½ miles long, at the end of which is the Shandúr lake, along the low shelving bank of which (north side) the path runs for about a couple of miles. This Shandúr plateau is in summer a splendid pasture ground. On leaving the lake, the path follows the left bank of the Shandúr stream for 4 miles, and, except in the last mile, the descent is very gradual, never more than 1 in 20. At 10 miles the road strikes the Ghizar river, and follows its left bank for 5 miles; descent imperceptible. At 15 miles there is a suitable camping ground at the point where the river turns east. Fire wood plentiful, and in summer good forage. The banks of the Ghizar river are covered with a dense fringe of low brushwood, and this jungle throughout is known as Langar. |
| 4. Ghizar (10,000 ft.) - | 9½ | 44 | At ½ a mile cross the Chamarkand stream by a narrow bridge. Up this stream is a road to the Chamarkand *kotal*, which is a short cut to Mastúj. Beyond this bridge there is a steady, but almost imperceptible, descent for 3 miles. The road then dips down to the bank of the Ghizar river, and at 4 miles crosses the narrow Chakalwat stream by a good bridge. Between 5 and 6 miles pass the scattered village of Terú on the slopes to the left of the road, and at 6½ miles pass the stone tower and wall which form the Darband-i-Ghizar. The road is here rather difficult for a few hundred yards, and the descent becomes rapid. Between 7 and 8½ miles the road runs along the edge of a plateau overlooking the Ghizar valley; it then descends a couple of hundred feet to the fields of Ghizar, a scattered village and fort. At 9½ miles reach the fort, which is situated on a commanding mound. Supplies procurable. |

(1.) Gasht hamlet, 8½ miles. | (2.) Sar Laspúr, 11 miles.

ROUTE No. XI.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 5. CHASHI (9,800 ft.) - | 11 | 55 | Over a marshy plain. At 1½ miles cross the river; horses must ford, as the bridge is only practicable for men on foot. The road then winds along the river bank by marshy flats, or in the stony bed itself. This road is in summer impracticable, and one must then follow the longer and more difficult road along the hill side above. At 4½ miles ford the Barkúti stream. The road now lies along the south bank of the Pandar lake, leaving its margin at 5½ miles, and winding along the hill slopes above it for about 4 miles. At 10 miles it crosses the watershed between the Pandar lake and Chashi valley, and descends to the village below. |
| 6. PINGAL (9,670 ft.) - | 10 | 65 | Through the fields of Chashi. At 1¾ miles ford the Chashi river, or cross it by the bridge ¼ of a mile lower down. At 2 miles pass the junction of the three rivers, viz., Ghizar, Chashi, and Bahútar. At 6 miles reach Darband, a position where some low *sangas* close the road. As far as Darband the road is fairly easy, though stony; but here the valley narrows considerably, and the road becomes abominably rocky and troublesome, much of it lying in the bed of the river, the summer road being some hundred feet higher. Pingal is a small village, and part of it lies on the north bank, a rope bridge connecting the two. Camp in river bed. Supplies scarce. |
| 7. DAHÍMAL (8,200 ft.) | 10½ | 75½ | At 1 mile cross the Sosat *nala* by fording. About 2½ miles the road is carried over a rocky spur, and is very difficult; at 4½ miles there is another very difficult place, where the road has to cross a neck about 700 feet above the level of the river; ascent very steep and rocky. At 5½ cross the Kachúri *nala*. At 8 miles there is another rocky spur. At 9 miles pass Juljás, a level grassy strip of land, where troops might encamp. Forage and firewood obtainable. On leaving this, there is a steep zigzag to the plateau above, and an equally steep descent to the Battigáh *nala*, up to which there is a road to Tángír. The river can in winter be forded; in summer it can only be crossed by a ricketty bridge. After crossing, the road ascends to a plateau several hundred feet above the river, and then descends again to its margin opposite Dahimal, a fort-crowned rock on the left bank. Supplies very scarce; forage and firewood abundant. |
| 8. JANJRÓT (7,800 ft.) - | 9½ | 85 | This stage is almost as bad as the last, and there are two very bad rock staircases along it, where animals must be unladen. The first of these is about 2 miles from camp. Half-way ford the Gahoga. The last half of the road is carried along the hill side high above the river. At 9 miles cross the deep ravine of the Jandrót *nala*, and camp on the plateau beyond. Supplies scarce. |
| 9. ROSHAN - - | 9 | 94 | } *Vide* Route No. I. |
| 10. HUPAR - - - | 12 | 106 | |
| 11. GÁKÚCH - - | 9 | 115 | |

These last two stages are quite the worst along the whole route. In fact they are the only two in which laden animals meet with very serious difficulties.

## Routes.—Part II.

The following are the more important routes followed by the Mission during the period described in the second part of the narrative, Chapter XI.

### Route I.

### Gilgit to Sarhad-i-Wakhán *vid* Hunza, and the Kilik and Wákhujrúi Passes.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. Pilchí (5,000 ft.) - | 6½ | — | Cross the Gilgit river, opposite the fort, by a rope bridge. Horses can ford the river in winter. Along the left bank of the river for 2½ miles; then up the right bank of the Hunza river. On the opposite bank, at the junction, is Dainyúr, a fort village with 50 houses. Here there is a rope bridge across the Hunza river. The road to Pilchí is good throughout. Pilchí is a sandy waste near the river. Water and firewood only obtainable. |
| 2. Nomal (5,200 ft.) - | 8 | 14½ | In winter road fairly good throughout as it lies in the bed of the river, but in summer a path winding along the cliffs, which is not so good, has to be taken. At 6 miles pass Jítal (12 houses) on opposite bank. Nomal is a scattered village of about 90 houses, with a wretched mud fort garrisoned by a detachment of Kashmír troops. From Nomal a footpath leads to Bargú. Supplies procurable. |
| 3. Saféd Pani (5,500 ft.) | 8 | 22½ | At half a mile from camp, cross the river by a rope bridge; horses ford. From 1½ to 2½ miles pass through the deserted fields of Matún Dás, of which the fort is still standing. Cross a deep ravine. The rest of the road is easy. Saféd Páni is a barren open space opposite Gwech, which commands it. There is, however, a splendid supply of the best spring water and plenty of firewood. The road so far is quite practicable for laden animals, except at the fords. The summer road from Nomal is along the right bank to Gwech, and is very difficult. |
| 4. Chalt (6,120 ft.) - | 6 | 28½ | At ¼ mile cross to right bank by a rope bridge; horses ford. At 1½ miles a bad but short *pari*, very difficult for horses; men on foot can go along the base of the cliffs. At 2¼ miles there is another short *pari*, which is extremely difficult and quite impracticable for horses, which must be swum round. In summer this bit of the road is quite impassable, and men *on foot* have to take a path going high up the hill side; horses cannot go at all. The rest of the road is easy, except that in one place an avalanche of snow, which falls every year, has to be crossed. Chalt is a double fort, standing on the two banks of the Chaprót ravine and is garrisoned by a detachment of Kashmír troops, though otherwise Nagar territory. Supplies and firewood procurable; water plentiful. The place contains about 50 houses. |
| 5. Maión (6,650 ft.) - | 7½ | 36 | Cross the Chaprót ravine on leaving camp, and at 1¼ miles ford the Búdlas stream down its left bank for ½ a mile; then ford the Hunza river. At 3 miles cross again to right bank by fording. Just beyond this there is a bad *pari*; horses must be led over carefully. Road now in river bed for 1 mile, then over gently sloping but rock-strewn ground; then another *pari*, |

ROUTE No. I.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| and then the fields of Maiún. Cross a deep ravine and camp close to the fort (60 houses), which stands on a promontory 300 feet above the river. Opposite, on the Nagar side, is the fort of Nilt. Supplies procurable. In summer the first mile after the Búdlas ravine is almost impracticable, as the river is unfordable, and the only path is most dangerous even for experienced mountaineers. | | | |
| 6. HINÍ (7,000 ft.) - | 6¾ | 42¾ | The first 4 or 5 miles are a succession of difficult *paris*, the road often not a foot wide, and quite impracticable for laden animals, though horses may be brought by it with care. The next two miles are over a stony undulating plateau, and then the fields of Hiní, a large village (130 houses) with two forts. Water plentiful but muddy. Supplies obtainable. At ½ mile pass Tól, at 2½ Gúlmat, at 6 Pisan, all villages on the Nagar side. |
| 7. ALIÁBÁD (7,150 ft.) - | 7¾ | 50½ | After the first half mile, which lies through fields, the road runs along the face of a cliff for about 4 miles, being several hundred feet above the river, with many ups and downs, in places very narrow and difficult for ponies. The next mile is over a stony slope, but otherwise easy. At 5 miles Mortazábád, a poor looking place with a couple of forts; no trees to speak of. At 5½ miles the Hunza valley comes in view. Cross the deep broad Hunza ravine (in summer unfordable) by a bridge or by fording, and at 6½ miles reach the plateau of the Hasanábád, the first of the Hunza villages. There is only one path to it up the cliffs which bound Hunza, and this is guarded by a fortified post. Through fields the rest of the way. Aliábád is a large fort with about 100 houses. Excellent encamping ground, the best in the valley. |
| 8. HUNZA (8,000 ft.) - | 3½ | 54 | The Hunza fort is about 3½ miles further on, the road lying the whole way through terraced fields; supplies procurable. |
| 9. ATA-ÁBÁD (7,650 ft.) | 9 | 63 | Starting from Hunza fort, through fields and houses for ½ a mile; then down a steep hill side for several hundred feet; then through fields to Áltit (1½ miles), a fort village with about 30 houses. At 2½ miles road descends into a deep ravine by a steep path, difficult for laden animals; then along bed of river for nearly a mile, and then up the hill side again to Muhammadábád (4½ miles), a village and fort with 30 houses. At 5 miles very stiff descent to river bed, which follow for 1½ miles. From here a very steep ascent to the crest of a broad spur (7 miles); then for 1 mile comparatively easy going: then a steep descent to the broad sandy bed of the Hunza river; over this for about a mile. Camp in river bed at foot of hill, on which is the fort of Ata-ábád (30 houses); forage and firewood procurable; good water from spring. |
| 10. GÚLMIT (8,200 ft.) - | 9½ | 72½ | Road in river bed over sand for 2 miles; then a short, but difficult, *pari* for half a mile; then easy again. At 3½ miles road bifurcates; the path to left is for men on foot only; that to right for horses. The latter crosses the river by a difficult ford, and continues on left bank for 5½ miles, when it recrosses the river about a mile below camp. Road good throughout, but impracticable in summer on account of the depth of the river. The footpath along the right bank is very difficult, being a succession of rock staircases and *paris*; it is absolutely impassable for horses. The last 1½ miles is easy. Gúlmit is a scattered place with a couple of forts (one in excellent order) and about 150 houses. Supplies obtainable. |
| 11. PÁSU (8,200 ft. - | 8 | 80½ | This stage is practicable for laden animals. Down hill and across a stream. At 1 mile a path branches off to the left to Ghúlkin, distant 1 mile. At 2 miles cross a stream issuing from the base of a great glacier, a few hundred yards west of the road. At 4 miles Susaini (10 houses). Short ascent from village. Road now runs along an undulating plateau several hundred feet |

ROUTE No. I.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| above the river. At 6¾ miles steep descent to rocky bed of the stream which issues from the Pásu glacier. Cross this, and camp in plain beyond the village. Pásu contains about 40 houses. Supplies, &c., scarce, but procurable. | | | |
| 12. KHAIBAR (8,700 ft.) | 10¼ | 90¾ | At 3 miles a great glacier, at least 1¼ miles broad, has to be crossed. Impracticable for horses, which must ford the main river just above Pásu, as well as the Shimshál river 2 miles above it. The horse road then goes along the river bed for 3 or 4 miles, fording the stream several times. This is impracticable after the 1st May. The footpath, after crossing the glacier, goes along the foot of the hills for 5½ miles. It then turns up a narrow ravine for a few hundred yards, and then ascends to the Khaibar plateau. At 5 miles the horse road joins in. The road generally may be characterised as stony; gradients easy. Khaibar is a miserable hamlet; supplies scarce. |
| 13. GÍRCHAH (8,750 ft.) | 8¾ | 99½ | The footpath along the right bank is quite impracticable for horses, which have to ford the river at 2 miles, and go along the left bank, where the road is easy; the horse and footpaths rejoin at Múrkhún. As regards the latter, at ½ a mile cross a side stream by a good bridge over a level plateau for 1 mile, and then along the river bank. At 2 miles horses have to ford to left bank. At 3½ miles pass a rope-bridge, and at 6 miles ford the river to Múrkhún (15 houses). The horse road here joins in. The next two miles are easy and level. Here a cliff abuts on the river, and horses have to ford twice, as the path along the cliff is only practicable for men on foot. At Girchah there is a fort as well as about 40 houses. Supplies procurable. |
| 14. MISGÁR (10,200 ft.) | 12 | 111½ | Up left bank of river. At 2 miles Sast (20 houses); at 3 miles junction of Chapíran and Khúnjuráb *nalas*. Up the former is the road to the Irshád pass. The road to the Kilik goes up the latter for 4 miles, crossing and recrossing from side to side. Horses keep almost entirely to the river-bed, having to ford at least a dozen times. Footmen avoid half of these by taking a difficult path along the cliffs. This bit of road is a defile between high cliffs, usually quite impracticable for horses after the 1st May, and difficult even for men on foot on account of the swollen state of the river. At 7 miles the road leaves the Khúnjuráb, and turns north-west up a deep narrow valley for 3 miles. Horses have to cross the stream and go along the left side of the valley, 400 feet above it, recrossing the stream, and rejoining the footpath at the 10th mile. Here there is a short, steep ascent of 300 feet to the plateau opposite Misgár, over which for ½ a mile; then a deep drop into the same *nala*, and a final ascent to Misgár, camping on the side stream at the far end of the village, which consists of a fort and about 50 houses Firewood and forage plentiful; supplies scarce. |
| 15. MURKÚSH (12,000 ft.) | 12 | 123½ | First 4 miles north-west to the junction of two streams; then turn north, up the left bank of the stream from that direction. At 5 miles ford stream; at 8 miles a grazing ground with sheep pens, &c. At 10 miles a thick birch and willow wood, and at 12 Múrkúsh, a grazing ground close to a wood similar to the last. Firewood plentiful. The road, on the whole, is fairly good, with no steep gradients; but it is very stony in places. |
| 16. BÚN-I-KOTAL (14,600 ft.) | 8 | 131½ | At ½ mile cross stream from Kilik by a rickety bridge; horses must ford; then comes a short stiff ascent of ½ mile, after which the gradient is easy and gradual; but the road is very stony in places. The camping ground is bad; no firewood, and very little forage. |

The road generally from Hunza to the Kilik is fairly easy in winter, and even laden animals may be taken by it; but, as a rule, after the 1st May, or even earlier, it is quite impracticable for horses or other animals.

ROUTE No. I.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 17. GHIL (TÁGHDÚMBÁSH PÁMÍR (14,530 ft.) | 11 | 142½ | Gradual ascent up narrow valley. Deep snow till late in June. Horses must be taken over before sunrise. At 3 miles reach the Kilik Kotal (15,000 feet). Descent equally gradual and easy, but for snow. At 6 miles reach the Kirish stream, up which there is a path leading over a spur from the main range to Sarikúl. At 8 miles reach the Tághdúmbásh Pámir, down which is the best road to Yarkand. At Ghil (8 miles) there is a good camping ground; forage plentiful, but no firewood, except wormwood roots. It is better, however, to ford the river and go 3 miles further west to a spot where there is a good sheltered camping ground; this lightens the next day's march. Forage and firewood as above. Road from Ghil level and easy. |
| 18. DÚLDAL PÓT (ÁB-I-PANJA. | 11¾ | 154¼ | Very easy gradual ascent for 6 miles (over hard snow in May before sunrise); at 3½ miles a broad valley joins in from the north-west. At 6 miles there is a short, rather steep, ascent of 200 or 300 feet, and then for a couple of miles the road, though fairly level, is very difficult on account of deep snow, at all events till the end of June. Horses must be taken over this bit by night. At 8 miles reach the *kotal* (16,150 feet), the watershed being hardly perceptible. Descent gradual for a couple of miles and easy, but for snow; then somewhat steep and rough. Camp near the right bank of the main (left) branch of the Panja river. No firewood except roots. After the snow has melted, say from July to 30th September, these two passes —the Kilik and Wákhujrúi—would be perfectly easy, even for laden animals. |
| 19. CAMP IN LITTLE PÁMÍR (14,000 ft. (?). | 13 (?) | — | From the western foot of the Wákhujrúi Kotal to Bozai-Gumbaz, at the junction of the two branches of the Pamir, is 26 miles, or two stages. No definite spot is given as the intermediate stage, as any convenient place may be selected. Forage, firewood of sorts, and water will be found almost anywhere. The road is down the right bank of the Áb-i-Panja, and is very easy, except of course when under snow. It is practicable for laden animals. There is no difficulty in crossing the right branch of the Panja, as it is a shallow and narrow stream. Bozai Gumbaz is a Kirghiz tomb. Excellent site for camping ground. |
| 20. BOZAI-GÚMBAZ (13,400 ft.). | 13 (?) | 180¼ | |
| 21. LANGAR (12,800 ft.) | 14 | 194¼ | About a mile below Bozai-Gúmbaz the Little Pámir may be said to end, as the Panja valley here narrows to a defile, and the road becomes a series of ascents and descents, none however very severe. At 7 miles enter the Dasht-i-Mírzá Murád, a fine level plain 3 or 4 miles long, and over a mile in width; at 10½ miles leave the Dasht, and descend to the Waram valley. This stream is full of rocks and boulders, and therefore somewhat difficult for horses to cross; short steep ascent to the Dasht-i-Langar, a level plain, over 2 miles long, and nearly a mile in width. Camp in the valley at the far end. Forage and firewood abundant. Near Langar the Irshád route from Kanjut joins in. |
| 22. SHAOR (11,500 ft.) | 13¾ | 208 | Road along right bank. Several steep ascents and descents; one especially bad descent at 10¾ miles, where the path descends at least 1,000 feet to the river's edge. At 11½ miles ford a broad stream, and ascend a steep hill. On the other side descend to the Shaor ravine, up which the road turns. The camping ground is very confined, but firewood is abundant. |
| 23. CHAHILKAND (SARHAD I-WAKHÁN) (10,450 ft.) | 9½ | 217½ | Immediately on leaving camp, a very steep ascent of nearly a mile. In the next 1½ miles two spurs have to be crossed, the ascents and descents being steep and trying. At 2½ miles cross a stream at the bottom of a deep valley. The path now ascends for about 2,000 feet to the Daliz * Kotal (13,500 feet), which is reached at 3½ miles. Then comes a very steep |

* In Walker's map of 1885 this is shown as the Daraz Kotal.

ROUTE NO. I.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |

descent of about a mile, and then a short ascent to the *col*, where the road crosses the spur forming the watershed of the Sarhad valley. From this point the descent is gradual. At 6½ miles reach the deserted village of Sarhad-i-Wakhán. The remainder of the road is level, through fields and grazing grounds. At Chahil Kand a small village and fort. Excellent camping ground. Supplies procurable; splendid grazing. The valley is here nearly 3 miles wide. South-east of camp, on the opposite side of the valley, is the opening leading to the Baróghil; the river is fordable. This last march is, as far as ground goes, the worst on the whole road from Misgar to Sarhad, and is barely practicable for laden animals. There is another road along the river bank, but it is circuitous and almost as difficult, and, when the river is swollen, quite impracticable.

## ROUTE NO. II.

### SARHAD-I-WAKHÁN, *viâ* KALA PANJA TO ZÉBÁR.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. RACHAU (10,500 ft.) | 10¾ | — | Starting from Chahilkand, road along right bank level and easy. Horsemen usually ford the river twice, to avoid a stony bit along the foot of the hills about half way. Pass Patuch (right bank) at 2 miles (20 houses), Niris (left bank) at 6 miles (10 houses), and Rákót (left bank) at 9 miles (8 houses). Firewood plentiful; grazing obtainable; supplies scarce. |
| 2. KHARAT (*hamlet of Bábá Tangi*) (9,800 ft.) | 16 | 26¾ | Road easy along right bank or in the bed of the river for 13½ miles, passing through much willow jungle. At 6½ miles pass Yúr on opposite bank, 1½ miles beyond which is the hamlet of Sanin, the ravine behind which leads to the Khán Kón pass to Ziábeg in the Yárkhún valley. At 13½ miles ford river. Road now over stony fans on left bank. At 16 miles Kharat, first hamlet of Bábá Tangi, a scattered village of three hamlets (Kharat, Ghazgit, and Patír). Kharat only contains about half a dozen houses, but Bábá Tangi altogether contains about 30. Supplies procurable. Firewood plentiful. At Bábá Tangi the river runs in a narrow gorge. |
| 3. WAZÍT (*opposite Sust*) (9,500 ft.) | 12 | 38¾ | Pass through Ghazgit and Patír, hamlets of Bábá Tangi. At 2¾ miles ford river to right bank. Road now runs for several miles over stony fans; then through level grassy plains covered with low jungle. At 10½ miles pass Kala Yust on left bank. Up the ravine, behind it, lies the road to the Rich pass. At 12 miles hamlet of Wazit, opposite which is Sust. Supplies, except forage and firewood, scarce. |
| 4. KALA PANJA (9,050 ft.) | 12¼ | 51 | Road through low jungle and meadow land for 5 miles, when pass hamlet of Ghaz Khán (right bank), and Áb Gach (left bank). At 5½ miles ford river. Road now goes through low willow jungle for a mile or two; then for over a mile across a broad stony fan, and for the remainder of the way over grassy plains, past low jungle, or through fields. At 6¼ miles pass the junction of the Great Pamír branch of the Panja, up which lies the summer road to Yarkand. |

ROUTE No. II.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| Kala Panja consists of one large fort in good order, a smaller fort, and about a dozen tiny hamlets, most of them now deserted. The fort is the residence of the Governor of Wakhán, and is garrisoned by one *Bahrak* (100 irregulars). Supplies procurable. Firewood and grazing abundant. The Wakhán valley, from Sarhad downwards, is fairly level and from 1 to 3 miles broad, except at Rachau and about Bábá Tangi. At these two points it is a narrow defile. But for the rapids at these places, the river would be navigable. | | | |
| 5. KHANDÚT - - | 13½ | 64½ | The road is level and very easy throughout, running generally through splendid pasture land or through willow and tamarisk jungle in places, though it crosses broad shingly fans. At 7½ miles pass some low rocky mounds, the place being known as Misgah; near this the road leading to Turikho by the Ochil pass branches off. There are no villages *en route* along the left bank, but there are several small hamlets on the opposite side of the river. Khandút probably contains about 200 people. Forage and firewood abundant. |
| 6. PIGASH - - - | 6 | 70½ | Road level and easy through pastures, &c. At 3 miles pass village of Yemit, and at 6 reach Pigash (population 150). Here trees are plentiful. Forage and firewood abundant. This is a very short march, but if Urgand were made the stage, the march would be too long. |
| 7. ÚRGAND - - | 13¾ | 84¼ | Road level and easy, chiefly through jungle and over stretches of shingle, no villages *en route*. At 10¾ miles pass Shitkár on the opposite bank, from which there is a path into Shignán. Úrgand contains 50 or 60 inhabitants. Firewood plentiful. |
| 8. SHIKÁRF - - | 9½ | 93¾ | Round the base of the spur which divides Úrgand and Dígargand. At 2 miles pass the latter, at 4½ Warúp. The road now goes over a low, broad, rocky undulation. At 5½ miles pass a ricketty foot-bridge across the Panja, the only one in all Wakhán. At 8 miles pass Langar, and at 9½ reach Shikárf, a pleasantly wooded village (population 150) on the bank of a stream. Forage and firewood obtainable. |
| 9. ISHTRÁGH - - | 10 | 103¾ | For nearly 4 miles down a gentle, stony slope, at the end of which pass the hamlet of Kashkhán. Cross a sandy bay of the river about ¾ of a mile wide; at 6 miles pass Warg (population 200), a prosperous place with extensive groves. The road onwards is very easy. Ishtrágh (100 inhabitants) is the residence of the Naib of Wakhán; from it a bad path to Tirich in Chitrál. |
| 10. ISHKASHAM (8,560 ft.) | 10½ | 114¼ | Cross the Ishtrágh stream, and at 1 mile reach Kázideh (population 200). Through the fields of this place. At 2½ miles there is a long low spur, the moraine of a worn-out glacier, which runs right down to the river, and gives an excellent natural position for the defence of Wakhán. At 6 miles pass Patúr (population 60), the last hamlet in Wakhán. At 7 miles commence the ascent of the hill separating Wakhán from Ishkasham. At 8½ miles reach the crest, which is about 1,000 feet above the river. Two miles lower down cross the main stream, and camp in a large garden on its left bank. Ishkasham is a large scattered place with over 100 houses. Supplies plentiful. |
| 11. BÁZGIRÁN - - | 8¼ | 122½ | Up the hill to the Sardáb Kotal (3¼ miles). This *kotal* is only about 1,000 feet above Ishkasham, and the ascent is very easy and gradual through a gap in the mountains about ½ mile |

ROUTE No. II.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| broad. At 2 miles pass Sikmal (6 houses). On north side of pass, the descent is equally easy. At 5 miles Neichám (4 houses), ½ a mile off road; at 5½ Khúshnák (8 houses); at 6½ Ansát (6 houses), both on left of road. At Bázgirán, 40 houses. Forage and firewood plentiful. | | | |
| 12. ZÉBÁK - - | 10½ | 133 | From Bázgirán the road runs along the right edge of some marshy meadows for a couple of miles; then crosses a rapid stream about 20 yards wide by a ford. At 5 miles pass Zarkhán (45 houses). From here the road lies through splendid pastures and low jungle. At 8½ miles cross river. At 10 miles pass Karkhán (15 houses); at 10½ reach Zébák (30 houses). Splendid pasture, forage, and firewood; supplies abundant. Excellent trout, up to 3 pounds weight, in the streams below Zébák. |

## ROUTE No. III.

### ZÉBÁK TO THE ARKÁRI VALLEY, *viâ* THE NUKSÁN PASS.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. DEHGÚL - - | 9½ | — | After leaving the fields of Zébák, the road runs either in or along the edge of the river-bed, which is full of boulders. At 5½ miles cross to the left bank of the Deh Gúl stream, which in summer is only fordable before midday. The road now crosses stony fans for about 4 miles, when Deh Gúl is reached. Deh Gúl is a miserable place, and only contains about 20 houses. Abundant firewood near at hand, but other supplies scarce. |
| 2. KHÁNA MA-ÁBÁD - | 8½ | 18 | Leaving Deh Gúl, at ½ mile the road crosses to the right bank of the river, which should be forded before noon. The road from here onwards is very rough and rocky. At 2½ miles pass the mouth of the Mach Dara, a favourite raiding route of the Káfirs, which leads to Gabar in the Lutkú valley. At the junction there is a good deal of birch and willow jungle, also some grazing. At 3½ miles the road becomes very steep, and even more rocky than before. At 4½ miles pass the mouth of the Agram Dara, up which is the shortest route to Chitrál, but one not practicable for horses. At 6½ miles the altitude is about 11,000 feet; there the path crosses to the left bank; at 8 miles it crosses a stream from the west. Khána Ma-ábád, a place marked by a small stone hut, is usually made a stage, as firewood is here procurable. |
| 3. LASHKARGÁH - - | 12 | 30 | At ¾ of a mile above camp the Khatinza and Nuksán roads diverge, and the road to the latter soon becomes very steep and difficult. At 2½ miles reach a glacier, along the southern edge of which the road goes for about a mile. At 3¾ miles reach the *kotal* (16,560 feet). The first 300 yards of descent is excessively steep and difficult. The road then goes along the northern edge of a glacier for nearly 2 miles. At 8½ miles reach Karobáh, a spot sometimes used as a stage; but there is no firewood, and on that account Lashkargáh, 3½ miles further on, is a much better place. Here there is firewood. Horses should only be taken over the Nuksán by night on account of the snow. |



WATERFALL
(BETWEEN ISKATOL AND SANGLICH).

## Route No. IV.

### Zébák to Chitrál, *viâ* the Dúráh.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. Iskatól - - | 10 | — | Past Zébák village to the Dehgúl stream, which ford at ¾ of a mile. Up this stream is the route to the Nuksán, Ágram, and Khatinza passes. For the next mile the road runs through meadows and low jungle, crossing two branches of the Sanglích stream. At 2 miles Kedah on the left bank, a small hamlet. The next 6 miles are on the whole very stony, lying either in the bed of the river, or over shelving fans. In one or two places it is bad for laden animals, but is nevertheless practicable throughout. At 5 miles pass Tírahád (30 houses), and at 6 Flakhmárikh (25 houses), both lying on the hillside just above the road. At 7 miles pass Parch (40 houses) on the opposite bank, and at 8 miles cross to right bank by a bridge 60 feet × 4 feet. For the next mile and a half through the fields of Iskatól; then recross to the left bank by a very good bridge 30 feet × 3½ feet; pass through the village of Iskatól (60 houses), and encamp in the fields above it. The cultivation about Iskatól is considerable, and supplies are obtainable; also forage and firewood. |
| 2. Sanglích - - | 9½ | 19½ | Road stony and a good deal up and down, but quite good for laden animals. At 3 miles it descends into the river bed, which is here overgrown with willow jungle. At 3½ miles cross a rapid, but shallow, stream, 10 feet broad; ½ a mile further on there is a long, somewhat steep, ascent up the side of a spur. At 4¾ miles reach the crest. At 8 miles cross a small stream; the road now runs close to the river's edge. At 9½ miles cross the river by a bridge fit for animals, but somewhat dangerous. It is better to ford a mile lower down. Sanglích (4 houses) stands in the midst of considerable cultivation, all on the right bank. From it a footpath goes up to the Unai Kotal, by which the Dúráh can be turned; it is not open, however, till August. |
| 3. Camp (1 *mile below Lake Dufferin* (*Hauz-i-Dúráh*). | 11½ | 31 | Road stony, but easy. At 4 miles pass the mouth of the Imkán ravine on the opposite (left) bank. Up this there is a road to Júrm. Here the river bed widens to at least ½ a mile, and continues so for over a mile to the mouth of a ravine from the south-west, up which there is a road to Munján, the kotal being about 6 miles up the ravine. This widening of the river bed is known as Gaugird-Dasht, from the sulphur obtained there. It is a shingly place, with tamarisk coppices growing here and there. The road now turns south-east. At 6 miles ford the stream from the Dúráh, and continue to follow it up its left bank. At 7½ miles Gazíkistán, a good camping ground, with plenty of forage and firewood. At 10½ miles reach a small lake a few acres in extent, full of small trout. Just below this the road crosses to the right bank of the stream, and goes along the right or east side of the lake. A mile further on there is ground to encamp, but no firewood, although there is a certain amount of forage. Firewood can be got about two or three miles lower down. On account of the want of firewood, *kafilas* often halt at Gazíkistán instead, but this makes the next stage a very trying one. |
| 4. Sháh Salím (1,100 feet). | 12½ | 43½ | Up a narrow ravine, path very stony. At 1¼ miles reach the lake (Hauz-i-Dúráh). Along its edge, for 1½ miles, path stony and difficult for horses. Then a very steep zigzag, mounting to a plateau about 900 feet above the lake. Ascent now becomes gradual, and comparatively easy, except the last 100 feet, which is very steep. At 5½ miles reach the Dúráh Kotal (14,800 feet). Descent steep for a couple of hundred feet, then very easy, but in places very rocky |

ROUTE No. IV.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 12½ miles cross Unai stream, over which there is a foot-bridge, and camp on its left bank. Forage and firewood plentiful. The place is locally famous for its hot springs. | | | |
| 5. BARZÍN - - | 10 | 53¼ | This part of the route is described in detail in Route No. VI., 1st Part, Chitrál to Zébák, *viâ* the Dúráh. It lies down the deep valley of the Lutkú. It is considered practicable for laden mules, but is excessively difficult. |
| 6. DRÚSHP - - | — | 60½ | |
| 7. SHOGHÓT - - | 1 | 71¼ | |
| 8. CHITRÁL - - | 12¾ | 84 | |

## ROUTE No. V.

### MASTÚJ to YÁSÍN, *viâ* THE TÚI PASS.

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 1. BREP (8,290 ft.) - | 13 | — | *Vide* Route No. VIII. Janjrót to Mastúj *viâ* Darkót Pass, &c. |
| 2. MÍRAGRÁM - - | 11 | 24 | |
| 3. JHOPÚ - - | 8½ | 32½ | |
| 4. SHÁH JANÁLI - (12,700 ft.) | 8 | 40½ | Over a high swelling stony fan for about a mile, and then along the left bank of the Gazan Dara. At 2 miles reach Rakshín, the first hamlet of Gazan, and at 2¾ miles cross to river bank by a bridge fit for unladen animals. The river may, however, be forded. Pass through the fields of Gazan for ½ a mile, and then along stony hill slopes; path bad in places. At 4½ miles enter a fine birch jungle, cross a stream, and at 6 miles ascend a short steep spur, after which the road lies between the steep hill side and the bank of a lateral moraine. At 7½ miles the trench thus formed opens out into a stony undulating valley, about two or three hundred yards wide, between the mountains and the aforesaid moraine. This is known as Sháh Janáli, and offers an excellent camping ground, as firewood, forage, and water are all obtainable. |
| 5. CAMP (*east end of Túi glacier*) (11,750 ft.) | 10 | 50½ | From Sháh Janáli to the *kotal* it is 3¾ miles, the first 3 miles of which are either over moraine or gently shelving beds of shingle, and are quite easy. The rest is very steep up a sliding, shingle slope, which, when under snow, is very difficult and slippery. The *kotal* (14,700 ft.) is a deep gap about 200 yards wide. From it to the first possible camping ground it is 6 miles. The first mile is very steep and always under snow; then for ½ a mile there is a fair path along the hill side, and then the road goes on to the Túi glacier, which it follows the rest of the way. The road is here frightful; the glacier is covered with rocks and shingle, but is none the less difficult, as the stones give but a treacherous foothold. Camp in bed of Túi river. Firewood plentiful. Forage scarce. |
| 6. NALTI (TÚI) - - | 11 | 61½ | The road for the first 1½ miles is stony and bad; it then enters a fine birch and willow jungle, and is good the rest of the way. At 2 miles across a stream from the north-east. |



THE TUI PEAKS

(FROM SHÁH JANÁLI).



THE TUI PASS

(FROM THE SHÁH JANÁLI SIDE).



THE TUI PASS

(FROM THE VÁSÍN SIDE)



FROM THE TUI PASS

(LOOKING EAST).



FROM THE TUI PASS

(LOOKING WEST)

ROUTE No. V.—*continued.*

| Stage or Halting Place. | Distance in Miles. | | Description, &c. |
|---|---|---|---|
| | Intermediate. | Total. | |
| 7. HÚALTI - - | 11½ | 73 | Down the river bank of the Túi river by a fairly good path through the fields and hamlets of Túi for about 4½ miles, passing Shikamdast, Chirát, Khún, Harf, Darch. At 4 miles, opposite Dapas, there is a bridge (30 feet by 4 feet); the rest of the road to the junction of the Túi with the Yasín river (at 10 miles) is along cliffs and stony hill sides, but the path is good. At the junction on the left bank of the Túi is the hamlet of Barnas, which can be reached by fording. The road now turns south down to the Yasín river; at the angle there is a rocky promontory, which can only be turned by fording. The rest of the road is very good. Hualti (40 houses). Ample room for encamping, but forage and firewood scarce. |
| 8. YÁSÍN - - | 6 | 79 | For 1½ miles pass the fields of Hualti; then for 3 miles over the level Dasht-i-Taos. At 5 miles ford the Nasbúr Gol. Camp on polo ground. Road throughout this stage good. |

## CHAPTER VI.

### Notes on the Geology of the Districts traversed by the Chitrál Mission, by Surgeon G. M. Giles, I. M. S., Medical Officer and Naturalist.

My acquaintanceship with the science is of a general description, but, as it happened, there was really but little field for the exercise of special knowledge in the identification of the strata, on account of the monotonous uniformity of the whole district from a geological point of view.

In fact all that there is to discover in that direction is that the rocks are throughout metamorphic, and hence every attempt to assign them a relative position in time must be more or less a "scientific use of the imagination," and the description of the strata resolves itself into one of their mineralogy.

With the view to the more accurate determination of this point, specimens of the rocks met with were kept and submitted to Mr. Medlicott, who kindly identified them for me, so that the nomenclature of the rocks is something better than the guesses of an amateur.

The rocks of the district are, as already remarked, everywhere metamorphic. For miles one passes over interminable masses of gneiss, for miles more, over a sort of schistose slate, which is very characteristic of the Chitrál valley. Limestone is less common, but there are large tracts of this mineral, of a grey dense crystalline character, in several localities.

In speaking of the district as wholly metamorphic I, of course, except the recent alluvia of the valleys, on which stand such scanty patches of cultivation as exist.

The country described lies between 71° and 74° 30′ East Longitude, and 36° 30′ and 37° 20′ North Latitude, and within these limits, with one doubtful exception, we never touched upon any but distinctly metamorphic strata.

This one exception was at the south-western extremity of our wanderings, at Mírkandí on the Chitrál-Dír frontier.

At this place, not more than a mile from our extreme point, we passed over some broad bands of a chocolate-coloured sandstone.

It contained, as far as one could say on very hasty examination, no fossils, but strongly reminded me of the red sandstone beds seen at the Murree hill

station. The character of the hills composed of this were quite different from the ordinary landscape, amongst the gneiss and schists, and resembled that of the Murree hills. It seemed in fact a sort of peninsula of unchanged sedimentary rock, thrown out from a larger mass which, to judge from the colour of exposed distant escarpments, extended for a long distance to the south-west.

The band was perhaps two miles in width and formed a sort of neck, jutting out into the metamorphic rock, for on either side there was nothing but gneiss. The strike of this, probably sedimentary, rock was 58°, while that of the gneiss was 80°. The latter, however, was so contorted that I should hesitate to pronounce the junction unconformable, as a bed of alluvium hid the actual junction from view at the point where the road passed over it, and local deviations of as much as 22° are by no means uncommon in this neighbourhood in places where the rock happens to be much twisted.

Thus the only points of interest left to determine were the strike and dip of the rocks, and the physiographical features of the country.

If a glance be taken at the map that accompanies these notes it will be seen that the eastern half of the route is characterised by the singular uniformity of the strike of the rocks.

Within this limit the strike nowhere deviates more than 15° from, and is most frequently due, east and west.

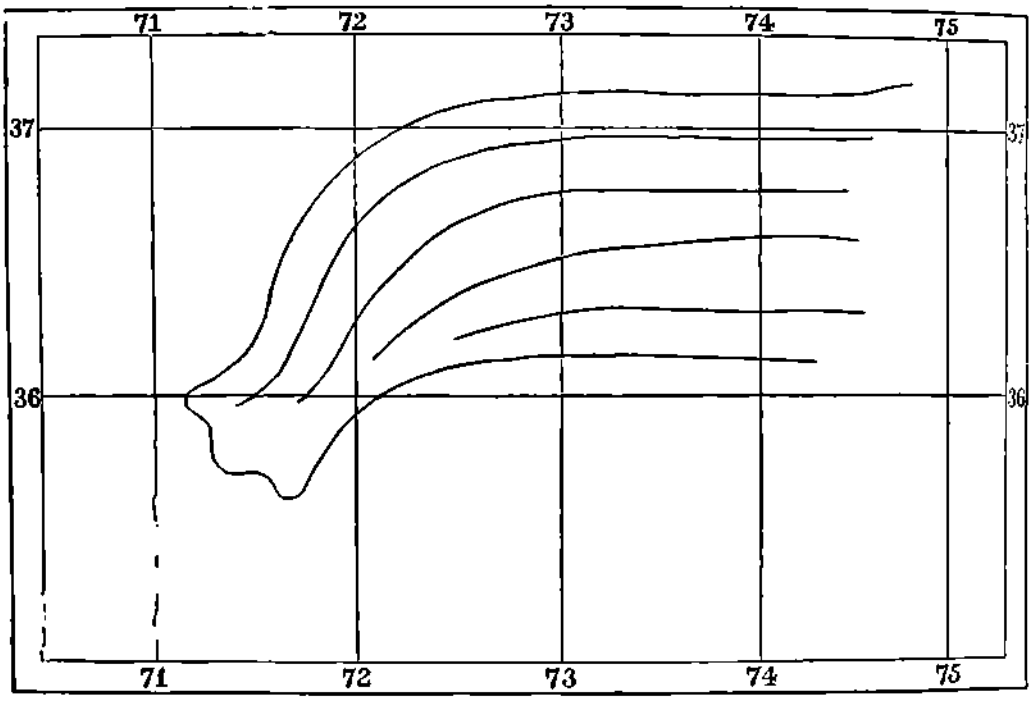
The route traversed the ground from north to south for a distance of over 80 miles from point to point, and for a similar distance east and west at either extremity of the north and south track forming a sort of U. A third north-east track more than half crosses the distance between the western ends of the eastern and western limits.

Taking again the northern arm of the U through Wakhán, and following it on to the eastern half of the map, it will be seen that shortly after leaving Kala Panja, the strike begins to sweep round to the south, so that at Urgand it is north-east and south-west, and at Iskashm it has become due north and south. The bend here is easy and gradually progressive, and marked by no great amount of contortion.

This north and south strike continues to be the rule from Iskashm right across the Hindú-kush to Chitrál. Such ground, however, as was visited to the west of this line was characterised by a great variability of strike and general contortion, which attains its maximum at the Dúráh Pass, and in the western portion of our route where the strike varies greatly within every few miles.

Starting again from Chitrál to meet the eastern portions of our routes already described, it will be seen that there is the same bold sweep round

.rom N. and S. to E. and W. in the strike that characterised the corresponding curve in our northern track through Wakhán and Badakhsháu. It will be further noticed that the sweep is very nearly parallel to the corresponding portions of the curve due north of it, and not the completion of the other segment of a loop. Thus the facts represented in detail on the map might be graphically represented on a smaller scale as below.




It will be observed that the most westerly line on this diagram is represented as forming a much distorted loop. I would not, however, wish to indicate any deduction that any such loop was formed by the original folding of the rock, for the strike above the region of the Dúráh pass is far too contorted to admit of any such hypothesis.

It is merely so represented in order to give at a glance as many as possible of the various readings taken in that portion of our route.

The dip of the rocks everywhere gives evidence of the immense amount of elevation and folding that they must have undergone to have shaped them to present form.

This is evidenced by the circumstance that the dip of the rocks everywhere closely approaches the vertical. With the exception of a few places, where good sections showing anti=, or syn= clinal folds were met with, it was extremely rare to meet with a dip of less than 75°.

The reason of this is doubtless that the anticlinal folds, forming originally the highest portions of the ridges, would naturally be first planed off

by the action of denuding agencies, while the synclinals would either be hidden by the alluvial débris falling from above, or denuded by the action of the streams that would naturally flow along such situations.

So deep indeed is the folding of the rocks in this district that, as a rule, it is very difficult to decide, owing to local minor distortions, to which side the strike predominates.

On this account it would be very difficult, without most prolonged and minute examination, to attempt to give sectional representations of the dip of the strata. Nor indeed have I attempted to do so, for, apart from my lack of skill, the observations were always taken on the line of march, and necessarily so hastily, that one had not the opportunity of doing more than record such facts as came under one's eyes without attempting to identify the stratum of one side of a fold with its interrupted extension on the other.

In the map that accompanies this report I have plotted as nearly as possible the various readings of strike and dip taken. The route has been sketched in as a red line, while the principal rivers are represented as blue lines. The line of strike is shown at the points of observation by short black lines, while the dip is shown by arrows starting from the strike observation to which they refer.

For the sake of clearness the mountains have been left out.

With respect to topography it does not pretend to be more than approximately accurate.

Barren as it is from a purely geological point of view the physiography of the country is extremely interesting.

With a view to understand this it should be first stated that the tract is a comparatively rainless one.

Such watery vapour as is precipitated is nearly always thrown down on the peaks as a coating of snow.

During the summer the comparatively cloudless sky gives full play to the action of a very powerful sun which, in such low latitudes, must always exert a powerful influence on the rocks during summer, however short that may be.

There is probably no more powerful denuding influence than the alternate action of intense cold and fierce heat, and it is to such an action that this huge mass of metamorphic rock has been exposed ever since its elevation to its present level.

The action of alternate heat and cold is to split off comparatively large fragments of rock, as contrasted with the finer powder resulting from denudation by rain.

On this account the beds produced by the fallen material form a great contrast to the results of denudation in less extremely variable climates.

Perhaps the most remarkable features of the tract are the immense accumulations of detritus that will be found to be frequently alluded to in the annexed geological route report as "shingle slopes."

These are talus formations, often of very huge proportions, and consist of angular pieces of rock of various sizes, which have fallen from the precipices above.

Since my return to India, on reading over Dr. Stoliczka's diary (scientific results of the second Yárkand Mission, Calcutta, Office of Superintendent of Government Printing, 1878, page 40), I notice that, referring to a very similar district, he uses the nearly similar term of "shingle beds."

The editor, Mr. W. T. Blandford, has appended a note that "it is not clear what Dr. Stoliczka's views were on these formations." Taken with the context of the diary I feel sure that he refers to the formation I am about to describe.

So familiar indeed had this, at first strange, feature of the landscape become to me that, for the moment, it seemed strange, forgetting how little this district has been visited, that anyone should be in doubt as to what was meant.

These tali are composed of a material exactly like the "road metal" resulting from the labours of the stone-breaker for macadamizing roads, and result from the continual fall of small angular fragments from the crags and precipices above.

They differ only from the tali, with which all are familar, in less variable climates, in the extreme homogeneousness of the material of which they are composed and in their huge proportions. Owing to the absence of rain, there is no fine detritus to fill up the interstices between the fragments and cement them together; so that the resulting "shingle" remains always ready to move wherever the angle of the accumulation exceeds that at which it naturally stands.

Owing to the rocks being everywhere of nearly the same specific gravity, this angle is always nearly the same, and is, as I have ascertained by repeated measurements with Abney's level, universally about 30°.

Thus, the ordinary landscape of a Dárdistán valley, save the alluvial openings to be described further on, consists of a monotonous repetition of crags above and shingle slopes, running right down to the river, below. The size of the individual fragments varies a great deal with the rock of which they are composed.

The weathering of the gneiss produces slopes composed of fragments mostly about the size of rather coarse road metal. The slate weathers into

flattened fragments, rather smaller, while the more finely laminated schists produce tali composed of fine particles, which often decompose further into a sort of clay.

The most curious effect is produced where the precipices from which the talus is derived is composed, *e.g.*, of schist below and gneiss above. In such a case the upper part of the slope is composed of the schist detritus, which forms a flat inclined plane, down which the large lumps of gneiss roll to accumulate at the bottom. In such situations there is at all times during summer a continuous rain of fragments from above, and after one of the rare passing showers that occur during spring and autumn, the path, where it leads across such places, becomes positively dangerous.

The limestone does not weather in this way to anything like the extent that is the case with the gneisses and schists, and the tali to be found at the foot of such rocks are of very moderate proportions. Indeed, it is only in limestone strata, and to a less extent in such as are formed of quartzite, that true gorges are to be found.

The length from foot to precipice of some of these "shingle beds" is astonishing. Examples indeed are by no means uncommon where this amounts to a mile, and even larger ones are to be seen.

The fall of most parts of the larger rivers is inadequate to carry away fragments of such size, which thus, after they reach the river, as all must in time, have to lie there until the attrition of smaller fragments has ground them to a suitable size and form for transport down stream.

It entirely depends on the relative preponderance of these two antagonistic actions whether the river raises its bed or cuts deeper and deeper into the rock.

Even at the present day certain portions of the river courses are raising their beds in this manner. As a rule, however, the reverse process is in progress.

It is obvious that to secure the raising action a certain definite proportion of summer heat and winter cold is necessary.

With long summers and short winters, always assuming, as is at present the case, that a sufficiency of snow falls to feed them, the rivers will be full for a long period, and the grinding down of the pebbles proportionately more prolonged than will be the case during a period of short summers and long winters. The balance is always very nearly held, and but little preponderance of either action is required to turn it.

It is now generally recognised that the successive periods of glaciation to which the earth's surface has been subjected must be accounted for by the variation of climate, alternating between the northern and southern hemispheres, produced by the phenomenon known as the "precession of

the equinoxes." Given then a period of glaciation, with accumulating snow above and low rivers, the attrition of the water will not be sufficient to carry away the vast amount of fragments of "shingle" that is continually falling into it from above, and which are too large to be moved by the direct action of the current. Under such circumstances the incompletely worn pebbles will accumulate in the bed of the river, the interstices between them will be filled up by the finer débris to which such crannies afford a resting place, and we have before us a view of the method in which the vast alluvial beds were built up, the remains of which are so frequently alluded to in the route notes extracted from my diary.

These remarks apply mainly to those portions of the valleys lying at moderate elevations. At the higher levels, a more purely glacial, but still somewhat similar action is in progress. To this I shall have to refer in a few remarks I have to make on the physiography of the Pamír steppe, so will at present return to the alluvia that specially characterise the hills this side of the Hindú Kush.

Fair examples of these slopes may be seen in some of the photographs.

Another peculiar feature of the geology of the region is the alluvial fan. These are formations of boulder clay thrown out at points where lateral torrents enter the main river. It is on such formations that nearly the whole of the cultivation of the country are situated. They form fan-shaped elevations jutting out into the valley of the larger stream, and as a rule slope down to the river at an angle of about 10°; most of them are in course of denudation and the stream that originally formed them has cut deeply through their middle. At present, indeed, only very small ones, secondary or tertiary to these, are in course of formation.

There is a very good illustration, showing their principal characteristics in Mr. Lydekker's Memoir on the Geology of Kashmir (after Drew). See also some of the photographs; nor should I allude to them further here were it not that I was fortunate enough to actually witness a small fan in course of formation.

This was during our march from Húnza to Áta-ábád, at the end of April, at which period the melting of the snows is in full progress. I extract the following notes from my diary which was written while the circumstances were fresh in my memory:—

During this march a curious phenomenon of denudation was witnessed, a small alluvial fan being formed before our eyes.

At about 6 miles from Hunza, at a place where the gorge is rather narrow, a small stream enters from the western side, making a leap of about 200 feet. The melting of the snow had converted this, from a waterfall into one of thick mud, mixed with stones and boulders of all

sizes, from pebbles to masses weighing many tons. These made their leap with a noise like thunder, and then slipped down the slope of the rapidly growing fan, which had an angle of about 15°, to the river, by which all save the larger pieces was rapidly carried away. The whole surface of the fan was in slow motion towards the river, but there was always a channel where the flow was much more rapid, and the mud thinner than elsewhere. It was a wonderful sight to watch this channel as the mud came flowing along it. Large boulders, such as it would require several men to lift, were being carried along with the stream, rolling over and over as if they were mere blocks of wood. In this channel the speed of the mud must have been two or three miles an hour; it did not however remain for any length of time in one position.

Soon the rain of boulders, too large to be carried, would fill up the bed close under the fall. Then it would burst its bank and take a new course, generally quite to the opposite radius of the fan, only to fill up this new bed and to wander back again. The suddenness with which this change took place made the business of crossing the fan, even at the river's bank, 250 yards from the fall, a matter of considerable danger, and a portion of the party were detained over two hours until, the heat of the day being over, the flow diminished. During this time the fan increased perceptibly in size, and the level of the river above it was raised quite a foot owing to the obstruction caused in its channel by the entry of such a quantity of boulders too large for the stream to carry away.

It is easy to see that this process, on a somewhat larger scale, might give rise to the formation of a lake in the course of the river above.

There was a sort of pulsation in the flow over the fall, which alternately slowly diminished to very moderate dimensions, and then increased suddenly to many times its minimum volume. The advent of these gushes could always be foretold by the noise above, and a violent vibration of the soil which was quite as strong as that experienced during some of the minor earthquake shocks that we felt during our journey in Kashmír last year.*

* This pulsation is due to the fact that occasionally an enormously large boulder is started up the ravine, and rolling into a narrow part of the channel, becomes blocked there and an accumulation takes place behind it. At length the pressure becomes too great for the retaining forces, and the rock with all its accumulation once more starts on its irresistible career. I climbed up the hillside to a spot whence I commanded a good view of the ravine for some distance of its length, and saw this process going on. Occasionally the obstruction took place at the edge of the leap itself, and I am inclined to think that this was by no means the first time a large fan had been formed here, and that to the washing away of a previous one was due the little precipice of 200 feet, alluded to by Dr. Giles, as the head of the old fan still formed a little triangular plateau, and caused an obstruction in the first instance. (R. G. Woodthorpe.)

Apparently the wave of vibration travels through the soil with a velocity greater than that of sound through air, as on several occasions the shock distinctly preceded by some seconds the noise of the coming rush. It may be however that it is only capable of making itself felt at a longer distance, and that the shocks were transmitted from places distant, more than ear-shot, up the ravine.

Now the fan that was thus formed, or at any rate vastly increased, in this short period of a few hours, although by no means as large as those which form the present village sites, was yet of sufficient dimensions to make it probable that both owe their origin to the same process, viz., to the rushing down of masses of half-melted snow and mud from above.

Such an action is necessarily confined to comparatively small and steep ravines, but smallness and steepness are the common characteristics of the feeding streams of nearly every fan that I have noticed. Moreover, small, comparatively speaking, as the stream of the mud fall was, it was obvious that, but for the close proximity of the river, the fan must soon have grown to considerable proportions. Given a broad valley bottom, such as results from the river bed raising action, already described, and it is obvious that by far the greater part of the débris would have been deposited *in situ*, by the draining away of the more fluid portions of the mass. Nor is this an entirely fanciful picture, for although the instance described was by far the most striking, it was by no means the only one we met with. Further up in the Kanjút valley we met with other similar mud flows, where, the main river being more distant, the flow had been unable to reach it. At the extreme edge such flows consisted entirely of the finest mud, all the larger débris having settled down further up on the declivity. Now some of these latter fans, on which this was taking place, were quite large enough for cultivation, and probably would have been tilled had they existed at a lower level.

This also accounts for the irregular appearance of stratification that is to be often seen in sections of such fans. For as the larger débris accumulate above, and the slope of the fan increases, the larger boulders necessarily find their way further and further towards the river, so that one layer will be characterised by larger boulders than the next, and the climatic differences of individual years will also tend in the same direction.

Thus it is I think, generally possible to tell from a section merely to which category an alluvium belongs. Those originating from the first sort of action (talus) are never stratified, consist of imperfectly waterworn fragments, and are of uniform structure across the whole breadth of the

valley. On the other hand, in the section of a fan of any extent, there will be always more or less signs of stratification (if the section be a transverse one) and in an axial section, if the main valley be wide enough, it will be seen that the deposit grows finer and finer as the main stream is approached. Moreover I am inclined to think that as a rule the component pebbles, as is natural, originating as they do in mountain torrents, are better rounded and polished.

It is easy to see that a sudden flow of this kind, entering at a narrow portion of the main valley, may throw such immense masses of rocks into the stream as to dam it up and give rise to the formation of a lake in its course above. It is in this way doubtless that most of the, comparatively few, instances of lacustrine alluvia met with have originated.

A certain proportion of the more elevated lakes have originated, in another way, by the impinging of the lateral moraine of a glacier against the hill side of the bounding valley, and so interrupting the course of the stream which is always to be found in such situations. Lacustrine formations are, however, comparatively rare in this region, or at any rate form one of its least characteristic features, and hence call for no further mention here.

Thus the whole region traversed south of the Hindú Kush is one of narrow valleys and almost precipitous crags, weathered into every fantastic outline imaginable, the valley presenting a monotonous repetition of the alluvial formations just described.

North of the Hindú Kush, however, or at any rate the elevated part of the country to which our exploration was confined, the country, though still very mountainous, is less contracted and "cut up" than that to the south.

The characteristic feature of the Trans-Hindú Kush is the Pamír steppe, the peculiarities of which, though to a less marked extent than on the Pamír proper, can be recognised throughout nearly the entire length of the Wakhán valley.

The word steppe is a somewhat misleading one, as it is apt to give the impression of a plain. This, however, is far from the truth, as the Pamír is a succession of mountain valleys differing only from those met with elsewhere in the Himalayas by the superior width of the valley bottoms.

The Pamír, or at any rate the portion traversed by us, is a broad valley bounded by hills, but little less craggy than those south of the Hindú Kush, and which rise from 3,000 to 5,000 feet above it. Shingle slopes form a less prominent feature of the landscape, but tolerably large

ones are to be seen here and there. The valley bottom and the lower spurs of the bounding hills consist of alluvial material, mostly with angular fragments, with a superficial coating of peaty soil of considerable depth, and the whole is covered thickly with grass which was as dry as hay when we passed over it. The stumps and roots of numerous other plants can be seen, and these at present form a very efficient protection against denudation. It is difficult to account for the formation of these broad flat-bottomed valleys, which form such a contrast to the lower gorges of the rivers. They are by no means confined to the Pamír. Very similar valleys are to be found just below the heads of several of the Cis-Hindú-Kush rivers, notably the Shandúr plain, and head of Ghizar river, and the ground just below the Túi and Killik passes. The Pamír forms the most marked instance, but all the more elevated portions of the valleys, on both sides of the range, have a tendency this way.

In some cases portions of these broad valleys are due to lacustrine action, such lakes being usually formed by the extension of a lateral fan, or glacial moraine, into the main valley; but this will account for only a very limited portion of the ground. For the most part the portions of Pamír traversed by us had an uniform, very gentle, descending slope, and evidently had been valleys and not plains, at any rate, for a very long period.

To form any idea of their formation one must consider the forces to which they are exposed. Even now the ground is covered with snow for six months in the year, and for the remaining six exposed to a burning sun. The snow supplies an abundance of water, which, in early spring, starts a luxuriant vegetation, which tends to form a soil capable of retaining it.

On the upper part of the Pamír I could see no genuine glaciers, nor any traces of extinct ones. Nevertheless the formation must be, in the broad sense of the word, considered glacial. That is, the accumulation that forms the bottom of these valleys is carried down by the snow during its melting period. One could see the process going on plainly enough when we passed over the ground. Wherever we passed sufficiently near to the bounding hills we found the herbage encroached on by detritus which had slidden down from above imbedded in the snow. The rate of progress of these descending fields of snow is, of course, too slow to be visible to the eye, but its pace is very different from that of a glacier. When the snow has melted off, one can see the stems of the herbage all bent down, as if some huge roller had passed over them. The snow brings with it quantities of weathered fragments of rocks, together with much mud, produced by the grinding of one piece upon another, and



ON THE LITTLE PAMIR.



THE LITTLE PAMIR.

in appearance, quite indistinguishable from true glacier mud. This mud is, of course, carried further into the valley than the large débris, and the two together, retained by the binding action of the plants that spring up in summer, go to increase the slope of the ground just below the hills, until it too stands at such an angle that the snow slides over it, and builds up the alluvium further and further into the valley. This action is by no means confined to the period of spring, but goes on all the winter, as may be gathered from the circumstances that the snow never lies thickly on the more sloping portion of the hills. Thus the period of winter is one of growth for the valley bottom alluvium. In summer, on the other hand, the rocks above are cracked and made ready to be carried down to the valley by the winter snow, but do not actually for the time degrade to any great extent. On the other hand, the copious flow of water from the melting snow of the peaks denudes the valley bottom rapidly.

Thus here, too, it is all a question of relative length of summer and winter, whether the valley alluvia accumulate or degrade. At present they are growing at the heads of the valleys only; elsewhere degradation is in the ascendant.

Here again the cycle of change, in the comparative length of seasons, has exposed the ground to alternations of average duration of winter, and it probably was during the last exacerbation of cold that the present Pamír alluvia filled up the deep valley that had been cut during the previous period of heat.

Thus I think it may be fairly said that the action is essentially a glacial one, as it will be observed that it is identical with the process by which a glacier is fed, and which is a primary necessity for the formation of a glacier at all.

The explanation why glaciers are not now formed on the Pamír is to be found in the width of the valleys. A deep valley of V-shaped section is a primary necessity of glacier formation. Without this the snow cannot be accumulated in sufficient depth to gain the necessary pressure, nor is there sufficient wedging action to concrete it into ice.

If the melting front of any glacier be examined, it will be seen that the ice is composed of much contorted strata, produced by the folding towards each other of the margins, where it has been forced through narrow gorges by the weight above; without the immense pressure thus exerted it would be hardly possible for true ice to be formed.

It is possible that true glaciers may have had something to do in the cutting out of the deep valleys now filled up and again undergoing degradation, but, for reasons already stated, I am not inclined to think

that this has been the case on the Pamír itself; but a little lower down at Langar, where the true Pamír ends, are some extensive beds, which from their general appearance are probably morainal, and appear to be the remains of an extinct glacier that once came in from the higher mountains to the south. A further confirmation of this is found in the circumstance that the ground for some distance above is very clearly an old lake bed.

It will be understood that I would in no way wish to exclude the other two alluvial actions, just described, from some share in filling up of the originally deep valley. Alluvial fans exist, even in the Pamír proper, and, no doubt, the "shingle slope" had its share in forming the deeper parts of the alluvium, wherever the valley cut out, had been sunk to a sufficient depth for this form of action to come into efficient play. For, as already indicated, the shingle slope is characteristic of the deeper valleys, while the Pamír formation is peculiar to the more elevated.

The Pamír alluvia, as already stated, are made up of angular fragments very like the material of a moraine and differing from it only in containing fewer large boulders, and in that, such as exist will exhibit no true deep glacial scratches.

Thus the whole of the alluvia of the country may be divided into four categories :—

1st. Shingle slopes and river pebble alluvium; the former composed of quite angular, and the latter, of mostly incompletely rounded fragments.

2nd. Alluvial fans. More or less stratified, and containing well-rounded pebbles.

3rd. Pamír formation composed of angular fragments.

4th. Lacustrine beds.

To this might be added a fifth category, in the shape of the moraines of active and extinct glaciers, many examples of which are to be met with, scattered over the country, although they account for only a very small area of ground.

One more point remains to be noticed. This is the remarkable tendency all the great rivers have to take their course parallel with the line of strike, while the feeders necessarily cut it at right angles.

The only river of any size that forms an exception to this rule is the Hunza river, which, for the greater part of its course, runs almost directly north and south, while the strike is, very uniformly, very nearly east and west. In the other large rivers it is often curious to notice how, in even comparatively small bends, the river has followed some local deviation of the strike.

Such valleys as are formed by streams cutting the strike at right angles are, as a rule, exceptionally narrow and precipitous.

As may be gathered from the foregoing description, the country is poor in valuable minerals.

In the hills to the north-west of Drasan there is a mine of orpiment which is met with in large pieces of great purity. We were not able to visit these mines so that I know nothing of their immediate surroundings.

A vein of lead ore exists near the top of the Zidik Pass, between the Gabar and Bashgal valleys, but both these minerals are situated in such inaccessible places that their practical value is comparatively small.

A certain amount of gold is washed from the sands of the Gilgit river, but the quantity is so small that the labour is extremely unremunerative, four annas worth being a fair average yield for a man's day's labour.

All salt, iron, and copper is imported.

The detailed notes of the geology of the routes that follow have been extracted from my various note-books and diary. The determinations of strike were taken with a small compass graduated to 360 degrees, and those of dip are approximations judged by the eye.

For the nomenclature of the minerals I am, as already mentioned, indebted to Mr. H. B. Medlicott.

## Gilgit to Hunza, Killik Pass, Kala Panja.

*Gilgit to Pilchí, 6 miles.*—Valley rather wide. Level stretch of sand at bottom. Bounded by abrupt steep slopes of gneissic rock, mostly of dark colour. No opportunity of reading the strike.

*Pilchí to Nomal, 8 miles.*—At first as yesterday. Then valley narrows somewhat. At 5 miles, rock consists of dark "greenstone" and slaty strata, strike 280° dipping slightly S., at Nomal extensive alluvial beds.

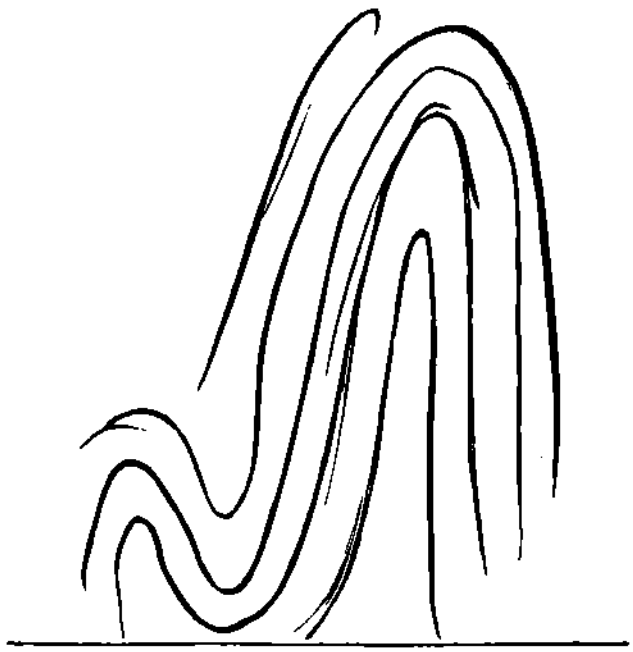
*Nomal to Safed-áb, about 8½ miles.*—Valley soon narrows, the stream having cut a narrow passage through very hard rock, which forms tremendous precipices.

For first four miles rock gneissic, or granite? No stratification to be made out. After this the valley widens and crosses a considerable extent of the ordinary boulder alluvium, forming the fan of a ravine coming in from the east. Both the main river and the stream of this ravine have now cut deeply into this.

After passing this the rocks change to a dark gneiss containing much mica, with lighter coloured beds interspersed.

Strike exactly east and west. Dip nearly vertical, but a little to the north. A long way up the slopes can be seen outcrops of quartzite, much ochre-stained.

Safed-áb is situated on a level stretch of sand overlying boulder alluvium, which the river has cut very deeply into. On the opposite bank a very fine section of gneissic rock is exposed, alternate dark-coloured bands making stratification very plain; it shows a curious contortion of the dip; section nearly at right angles to line of strike.



Level of river which washes base of precipice.

The strike here, still east and west, but dip, in most places, to south, about 85°.

*Safed-áb to Chalt*, 5½ *miles*.—River runs, for four miles, through a very narrow gorge with precipitous sides: strata as at Safed-áb, for about three miles, when it changes into a pale gneiss, showing no signs of stratification.

Chalt stands on a large fan of boulder alluvium, high above present level of river. The stream of the lateral ravine, which formed the fan, has now cut some 200 feet through it, but still has not reached the bed rock.

Amongst the débris were some lumps of a peculiar crumbling limestone which breaks up between the fingers into crystalline grains identical with the rock they call "stinking stone" in Chitrál.

*Chalt to Mayun*, 7 *miles*.—After crossing Garmasti stream (about 1½ miles) stratified beds are again met with, consisting of slaty rocks. Strike 262°

dipping very slightly to south, but nearly vertical. These slaty rocks continue, without change, to Mayun.

Throughout the march the river runs in a deep gorge, cut in alluvium. Mayun itself stands on the brink of a precipice entirely composed of such alluvium, and nearly 500 feet high.

*Mayun to Hiní, 6 miles.*—Strata still strike east and west, so nearly vertical that it is difficult to say which way they dip; if either, perhaps to north. Rock consists of micaceous schist. At some distance, saw a band of crystalline limestone. Much of the road runs across slopes of half-clayey débris, derived from slaty rocks, and standing at an angle of about 30°. On these slopes the débris is in continual motion, bits always falling down from above. In places, where water channels had rendered the slope somewhat steeper, lumps as big as a fist were rolling down. After rain, large pieces come down, rendering it very dangerous to pass. Some of these slopes must be more than a mile from the river to the outcrop of decomposing slate above, from which they are derived.

*Hiní to Hunza, 11½ miles.*—For the first six miles the rocks consist of slaty schist; strike east and west, dipping more and more distinctly to south, till it amounts to as much as 60°. About this distance the rocks consist of garnetiferous mica schist.

The Hunza valley forms a broad basin, filled up with boulder alluvium derived from the conjoined fans of the numerous ravines that converge here. The river has cut very deeply through this, and now runs many hundred feet below the level of the villages, but still is cutting through alluvium.

The second half of the road was across these beds, at a distance from the hill sides, which I did not get close to again until I arrived at Hunza fort.

The rocks had here changed character, being again gneissic, distinctly stratified, striking, as before, due east and west, but now dipping distinctly to north, about 60°.

*Hunza to Áta-ábad, 9 miles.*—Leaving Hunza, one descends an alluvial precipice, several hundred feet, to the level plain (possibly lacustrine), forming the upper part of the Hunza basin at Altit.

This small plain is but little above the present level of the river, and its level surface is in great contrast with the steeper slopes of combined fans on which the Hunza fort stands.

The rocks of the bounding hills rise quite abruptly from this level, and consist of darker and lighter bands of gneiss, striking east and west, dip 45° north.

After leaving this place the valley contracts, and in a short distance extensive beds of white crystalline limestone are met with.

This shows some signs of stratification, but does not appear to strike conformably with the overlying gneiss, but at an angle of 45° with it, dipping very slightly to south-east, but nearly vertical.

After passing this, the gneiss continues to strike east and west with diminishing northerly dip, about 30°.

Our camp at Áta-ábád was situated on a perfectly level plain of sand, quite a mile wide, in the midst of which flows the river. The sides of the basin are extremely precipitous, and we were told that, within the memory of man, a large lake had existed in this situation, but that about 70 years ago a sudden freshet had swept away the *bund*, and left the plain in its present condition. The village is situated on some alluvial beds, some hundreds of feet above the river, which, at the time of their formation, must have flowed some distance to the west of its present line.

*Ata-ábád to Gulkin*, 8,100 *feet*, 12 *miles*.—The whole distance lies between precipices of gneissic and granite rock, with no distinct stratification.

For a considerable distance the bottom of the ravine is a broad level stretch of sand, almost certainly of lacustrine origin. Gulmit (10 miles) is situated on the alluvia of a large fan, at a considerable elevation above the river.

Gulkin is placed on a small, perfectly level, plain, in the recess of the moraine of a large glacier, which here comes down from the west; the ice reaching to within a few hundred yards of the river.

The moraine is a very striking one, issuing from the ravine like a huge railway embankment, the top being about 500 feet above the plain on which the village stands.

This latter is evidently lacustrine, the *bund* of the lake having been formed by a lateral moraine, now destroyed, or, rather, cut through.

*Gulkin to Pású*, 6 *miles*.—Passing round the foot of the glacier, which is rather over a mile in width, one comes on a level plain of sand of some extent, evidently the bed of a lake which once existed here, when the glacier, more active than at present, was able to dam back the river. Somewhat above the level of this sandy plain is a larger one, of clayey sand, on which stands a small village.



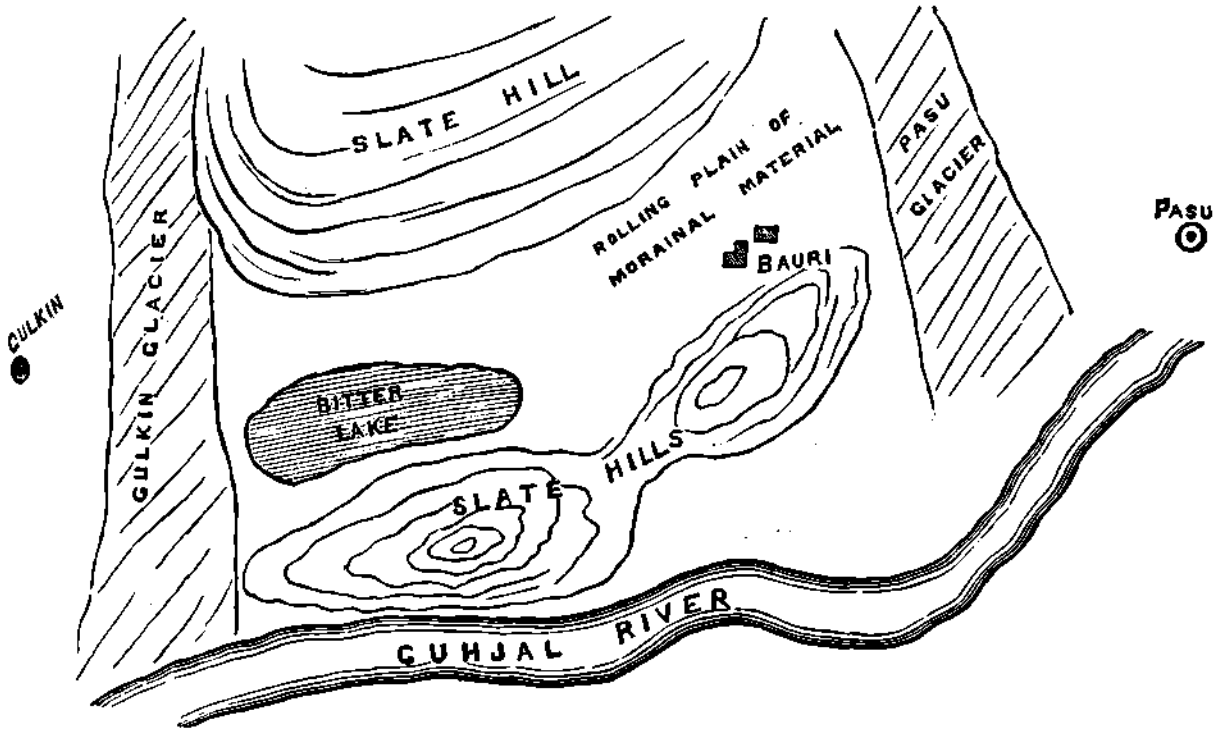
ON THE ROAD BETWEEN ATA-ABAD AND GULMAT.



THE PÁSU GLACIER.

On the opposite side of the river, just beyond the entry of the glacier, the precipices are formed of slaty rock, strike 100°, dip nearly vertical, but appeared to be rather to south. These slate rocks can be seen to extend far up the northern side of the Gulkin glacier.

Passing up this side of the glacier, one comes upon a little lake, situated in a small alluvial hollow between two slate hills and the glacier.




The water of the lake, which is about ¾ miles long, is very bitter and alkaline. Above (to north-east of) the lake, some rolling alluvial plains, formed of morainal material, fill up the hollow between the main range and the isolated slate hill that separates the lake and downs from the river. These extend right up to the Pású nulla, which contains a considerable glacier, which, however, at present stops short some three miles from the river. The alluvium of the downs gives one the impression of being of glacial origin, and it may be that the Pású glacier once joined the Gulkin one by this route.

On the south side of the Pású nulla the strike of the slate continues as before, but the dip is here distinctly to the north, 60°.

On the northern side of the Pású nulla the rocks are mainly a rather dark-coloured, fine-grained gneiss, changing to ochre colour when exposed to air, only a few bands of slate being interspersed.

The junction appears conformable, and behind the Pású village a fine cliff shows a section, exhibiting a very distinct synclinal fold, the strike being distinctly to north at the southern end of the cliff, and, making a perfectly visible curve, changes to one 45° south at its northern end. The same features could also be made out on the face of the corresponding cliff, on the opposite side of the river, an even greater width being visible. A nearly vertical dip is rapidly regained, being within 20° of it on either side of the synclinal at no greater distance than about ¼ mile.

*Pású to Khaibar*, 10¼ *miles.*—With exception of a few bands of slate, the rocks, for the next six miles, consist of pale grey, crystalline limestone, showing no particular signs of stratification. At this point an outcrop of very perfect slate is passed, quite sufficiently finely laminated to yield roofing material. Strike, as before, 100°, dip south 25°. The slate continues for about two miles, but at Khaibar the rock is again the above-mentioned pale grey limestone. A stream enters from the west at this place, and at the mouth of its ravine are the remains of an old moraine, but no glacier is at present in sight, though one probably exists further up, to judge from the appearance of the stream.

During this march, while passing over a low spur of rock, at some little elevation above the river, I noticed a number of parallel markings on its surface, in the direction of the stream, that seemed to show that the main valley has, at some period, contained a glacier. Having seen much of this sort of markings lately, I feel tolerably sure as to the nature of them.

*Khaibar to Gircha*, 7½ *miles.*—Rocks still strike 100°, nearly vertical, with slight southerly dip, and consist, for the greater part of the march, of pale greyish limestone, very compact. Near Gircha the slate reappears; strike and dip as above.

This place stands on alluvium which is pretty clearly lacustrine. A few inches beneath the surface, there is a curious bed of travertine formed into tubes and irregular plates. This is about 8″ to 10″ in thickness, and lies upon a bed of sandy clay about two feet thick. Below this are some crushed beds of travertine and then more clay.

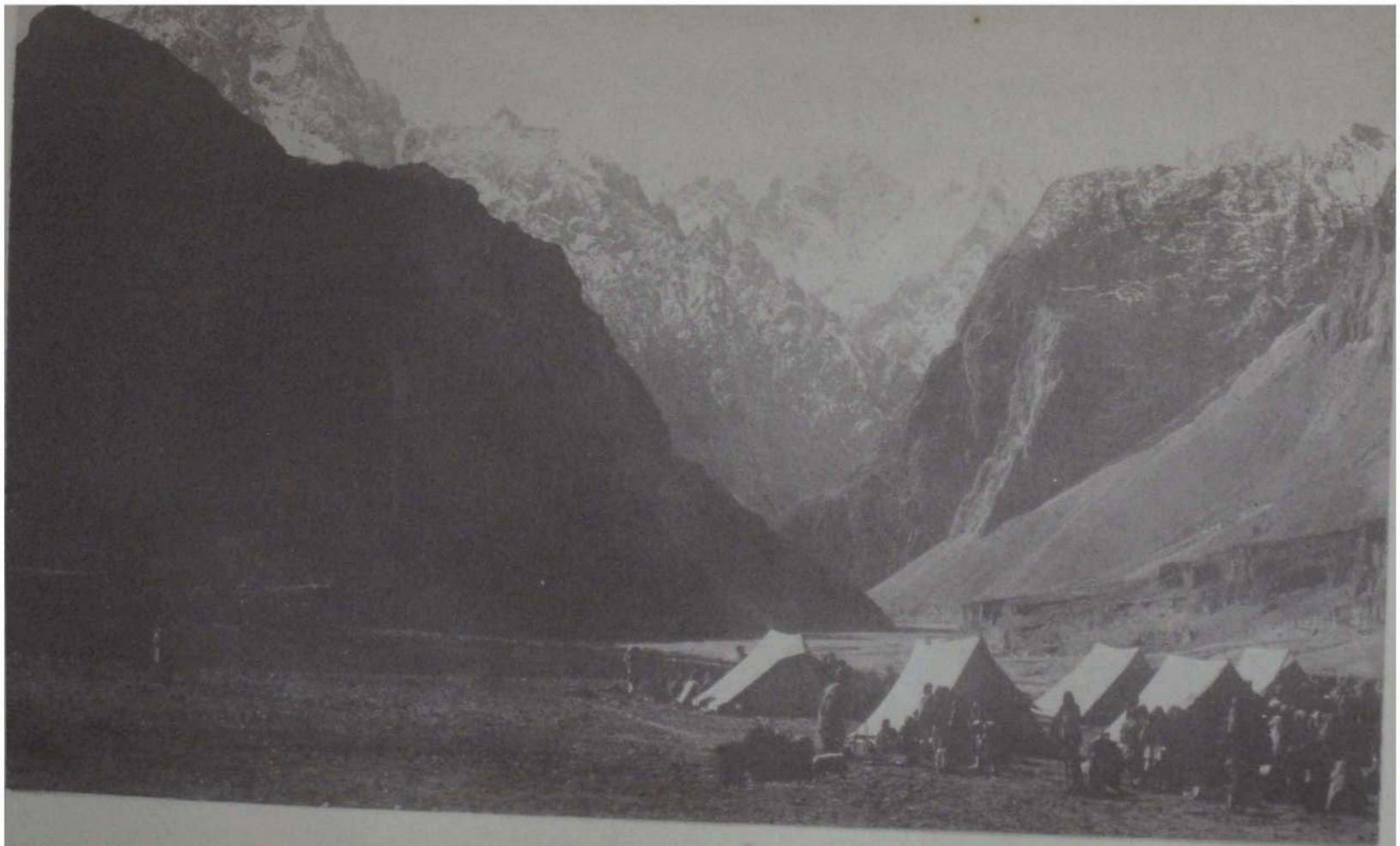
There are some fine springs, much impregnated with lime, just behind the fort of this place.

*Gircha to Misgar*, 11¾ *miles.*—In the early part of this march, the rocks consist of a sort of slaty schist. The strike is still east and west, and the dip, if either, to the south, but so nearly vertical that it is difficult to say definitely to which side it more frequently strikes.



GIRCHA

(LOOKING NORTH TOWARDS THE KILIK).



CAMP GIRCHA

(LOOKING SOUTH).



MUSHKIN

(LOOKING WEST).

Further on, the path is kept at a distance from the unaltered rocks by immense detritus slopes. The material of these was of the same character as before, schistose slate, and fine-grained gneiss.

*Misgar to Mushkin*, 12 *miles*.—For the whole distance immense detritus slopes intervene between the path and the rocks. As far as could be seen, however, the strike was nearly east and west.

*Mushkin to Bun-i-kotal-i-Kilik*.—Ground covered with snow.

*Bun-i-kotal-i-Kilik to Ghil, on Tághdumbásh Pamír*.—Across the Kilik pass 15,600 feet. Path and ground almost completely covered with snow. A few isolated rocks cropped here and there out of the snow, and consisted of dark, fine-grained gneiss, but no readings of strike could be obtained.

*Ghil to Pamír-i-Khurd*.—Road leads over the Wakhujrúi pass, 16,200 feet. Ground completely covered with snow. Rocks, where small bits could be seen, consist of fine-grained gneiss, with here and there some slate.

*Foot of Wakhujrúi Pass to Bozai Gumbaz*, 26 *miles*.—The rocks between the Wakhujrúi pass and Bozai Gumbaz consist entirely of gneisses, rather fine grained and of dark colour, of quartzite and of schistose slate. Owing to the upper portion being covered with snow and to the breadth of the valley, I only got one reliable reading of the strike during the distance. This was at about eight miles above Bozai Gumbaz, and here the strike was east and west, dip north 50° to 60°.

*Bozai Gumbaz to Langar*, 16½ *miles*.—After passing across the lacustrine plain, and doubtful moraine, already alluded to, the path runs over recent alluvium, at some distance from the rocks, which, to judge from the detritus and from boulders in water channels, are still of the same character, gneiss and schist.

The river has cut itself a deep bed right to the very bottom of the alluvia, and even below it, a great contrast to the Pamír, where the banks, though steep, are not of any great height.

Further on, the road ascends a small valley, which runs nearly parallel to the main stream, and soon reaches the bed of an old lake, now nearly dried up. On the hills bounding it, a broad band of reddish rock could be seen. Boulders that had come down from this showed it to be a breccia consisting of fragments of various kinds of metamorphic rock of generally angular form, imbedded in a matrix of earthy, calcareous grit of a deep

chocolate colour. The matrix is so abundant that good sized pieces containing no fragments could be broken off.

*Langar to Sarhad-i-Wakhán*, 24¾ *miles.*—The change in the character of the country is very marked. The hills are as steep and "shingle slopes" are as numerous as in Chitrál, the river running through a gorge of great depth with precipitous banks.

The red bed of breccia can be traced at some 1,000 feet up the hill side for a considerable distance and then disappears. The other rocks consist entirely of schistose slates and mica schists for the whole distance. The road rises gradually and finally regains the main valley by a stiff climb over the Dalíz kotal (14,000 feet).

The strike here bends round a little, being on the crest of the pass, about 76°, dip nearly vertical, sometimes slightly south, more often north. Sarhad-i-Wakhán stands on what appears to be an old lake bed.

*Sarhad-i-Wakhán to Ruchao*, 11 *miles.*—Rode the whole way across a very stony plain, bounded by very steep hills; the rocks above, to judge from their débris, must be mainly gneissic. Path too distant from hills to get the strike.

*Rachao to Bábá Tangí*, 18 *miles.*—The first part of the march is along the middle of a wide, flat-bottomed valley of river alluvium. Some few stretches are crossed, where the road is very rough, from rough angular boulders forming the tails of alluvial fans thrown out by lateral valleys. The valley narrows in towards Bábá Tangí. The hills are mainly composed of gneiss with occasional narrow beds of schistose slate. Strike 65°, dip north-westerly.

In most parts of this valley the remains of old lake (?) alluvium can be made out at a considerable height above its present bottom.

*Bábá Tangí to Kala Panja*, 22 *miles.*—The whole way down a broad valley in the course of which are one or two dried up lake beds. Rocks mainly consist of gneiss and slate. Strike east and west, dip north 45°.

The ground at Panja is, in the middle of the valley, lacustrine. Several alluvial fans, however, encroach more or less on it, and one large nulla which enters from south, just below the fort, contains a large still active glacier. The scratched rocks at its mouth show that this, at one time, extended right down to the Panja valley.

The rocks on the north side consist of very friable gneiss of an ochre-yellow colour interbedded with black mica schist. We climbed some 700 feet

up this side of the valley and found patches of alluvial material here and there, quite up to this height, and even above it. The strike of the gneiss is 80°, dip south.

Opposite Kala Panja, *i.e.*, on the north side of the valley, the lateral streams cut their way through to the Panja in a remarkable way, the ravines having sides almost parallel and perpendicular, as if they had been cut through the range with a chisel. One of these, just above the fort, shows a fine north and south section, visible for a considerable distance. In this it is perfectly apparent that an anticlinal line exists a few miles to the north of Panja, as one can see the dip gradually diminishing as one follows the section, until it becomes nearly horizontal.

*Kala Panja to Urgand*, 35 *miles.*—The country continues of exactly the same character as before—a broad, flat-bottomed valley with tolerably deep river alluvia, encroached upon every mile or so by lateral fans. On the south side patches of alluvium can be seen far up the hill sides. On the north the hills are bare and so inclined as to very nearly coincide with the dip. The rocks, as before, are all metamorphic gneiss, and schists, and the line of strike follows very accurately that of the river.

*Urgand to Warg*, 16 *miles.*—Valley has quite the same character as before, and the rocks are still metamorphic gneisses, quartzite, schist, and silicious schists. The strike sweeps round still further, and is now nearly north-east and south-west (50°).

*Warg to Ishkashm*, 11 *miles.*—The road follows the valley for some 3 miles, then crosses a low spur from the southern range clothed almost completely with alluvium and finally descends to the valley of the Ishkashm stream. At this point the Panja, which has so long followed the line of strike, makes a great sweep to the north, cutting right across the strike of the rocks.

The character of the valley coincidently with this alters completely, narrowing considerably, and generally presenting a greater resemblance to the country we were accustomed to south of the Hindú Kush. The strike sweeps round still more, and near the end of the march is from 20° to north and south, the dip nearly vertical, but dipping somewhat west. Rocks consist of very friable gneiss, with occasional beds of ochre-stained quartzite.

*Ishkashm to Zebák*, 17 *miles, across the Ishkashm Pass.*—The features of this march are very curious.

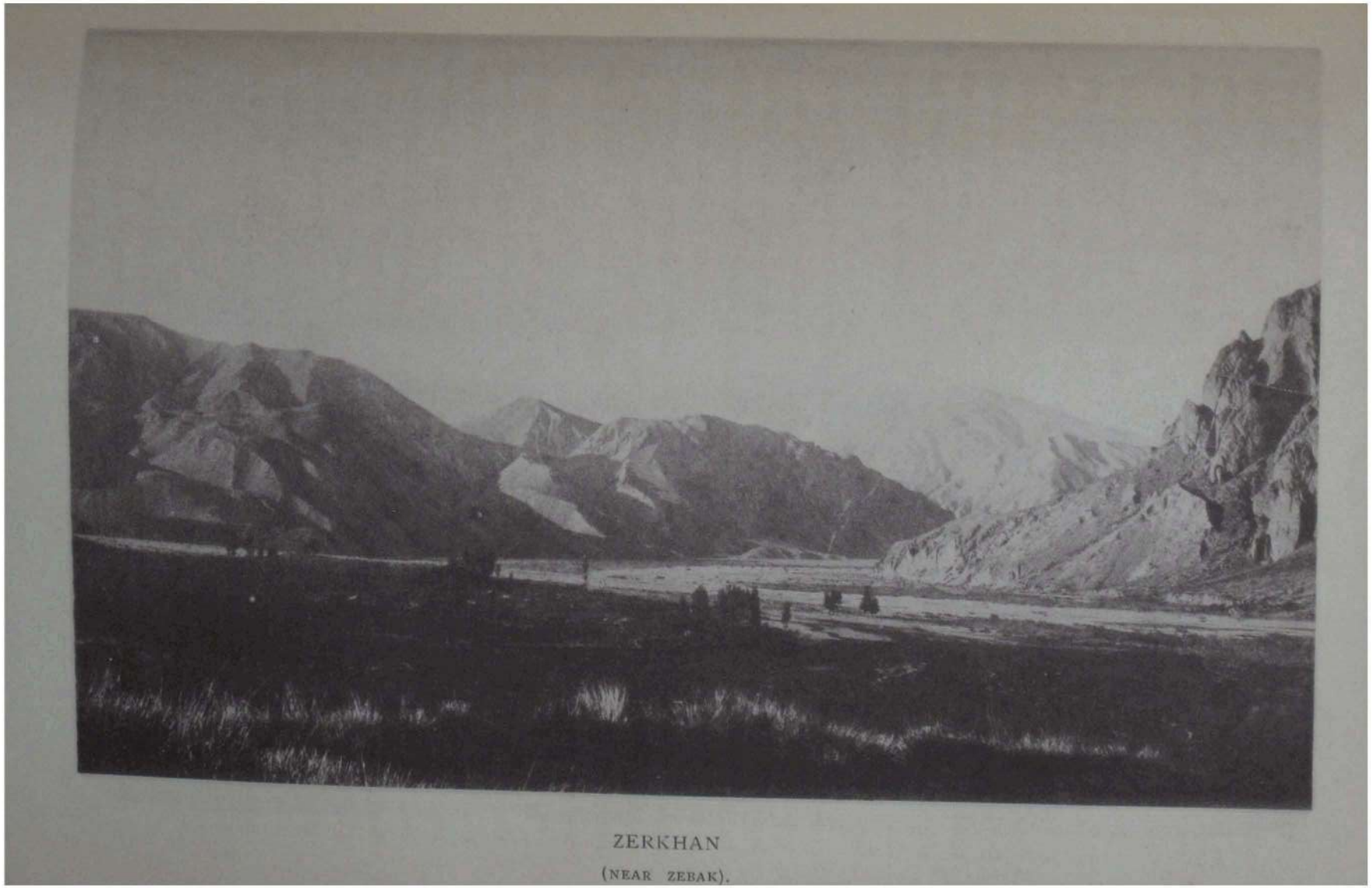
The pass pierces the range, forming the watershed between the Panja and Kokcha rivers. The range is a very high and rugged one, averaging at least 15,000 to 16,000 feet with peaks reaching 20,000 feet. The pass is the most wonderful gap, with the exception of the Baróghil pass, we met with, as its crest was not much over 9,000 feet.

Both ascent and descent are alike very gradual, and it is somewhat difficult to determine where the actual highest point is situated. The gap is very wide and filled up with alluvium which is itself, to the east of the path, cut up into a miniature range. The position of the actual crest seems to be determined by a fan which runs in from west, and is a good deal below the level of some of the elevated alluvial remains noticed in our march down the Panja valley. The only pass at all resembling it is the Shandúr, but that has been pretty clearly cut by a glacier, the remains of whose moraine form the ground over which one crosses.

The two small streams which originate on either side of the *kotal* are far too small to have cut so immense a gap, and besides the crest, as well as the ascent to the pass, is alluvial. The conclusion is forced upon one that the Panja river must have at some period followed round the line of strike and passed by this route into the channel of the present Kokcha river, and by it reached the main channel of the Oxus below Faizábád, for certainly no smaller stream could be capable of accomplishing so huge a work of denudation. The rocks are of the same character as before. Strike north and south, dip west.

It is a curious thing that near the end of the march some sections of alluvia are to be seen pretty clearly stratified, with strike conformable with the bed rocks and dip much less inclined than that of the latter, which are nearly vertical, but still in the same direction. This would seem to indicate that a certain amount of elevation has been going on since the deposition of these beds. Two or three old moraines are met with, near the Zebák end of the pass, entering it from the west. Possibly the higher parts of the glaciers which formed them are still in existence. Zebák lies in a broad basin, the floor of which is so level that it must be lacustrine in origin. The river at present flows so nearly level with the plain that even now it not unfrequently overflows and makes a temporary lake.

*Zebák to Iskatól*, 10¼ *miles*.—After leaving the broad Zebák plain the valley becomes extremely narrow and rugged, with extensive "shingle slopes" and rugged precipices. Rocks in the early part of the march gneissic, at Iskatól mainly limestones, some of them finely crystalline. Strike 170°, dip east 15°.



ZERKHAN

(NEAR ZEBAK).



THE LOWER DÚRÁH LAKE.



ROAD TO THE DURÁH PASS, GAZIKISTÁN.



LAKE DUFFERIN—HAUZ-I-DÚRÁH.

*Iskatól to Sanglich*, 9 *miles*.—Very much of the same character as the last march. Rocks consist mainly of a pale grey crystalline limestone.

*Sanglich to Gazíkistán*, 7½ *miles*.—About two miles after leaving Sanglich the valley widens out into an extensive lacustrine plain, and continues thus for the rest of the march. Rocks mainly of limestone and gneiss. Strike 25°, dip 15° to east and south.

*Gazíkistán to Dúráh Pass*, 11 *miles*.—The valley, right to the foot of the pass, is a chain of lake beds, two of which, the lower Áb-i-Dúráh and Lake Dufferin, are still in existence. The sides of the valley are bounded by precipitous crags from which descend high "shingle slopes." Rocks consist of gneiss and mica schist, striking 70° on the ascent to the pass, dip to south, nearly vertical and much contorted.

*Dúráh Pass to Sháh Salím*, 6 *miles*.—The rocks near the top of the pass are mainly mica schist, with occasional bands of crystalline limestone. Strike 20°, dip easterly, but nearly vertical and very much contorted.

At Sháh Salím there are some hot springs, temperature about 180°, but rather variable. The water has a strong sulphurous odour, and deposits a crust of sulphide of lime ? on cooling. The springs issue from a mass of mica schist.

*Sháh Salím to Parabek*, 12 *miles*.—There is a considerable amount of boulder clay in the bottom of the valley. The rocks consist at first mainly of mica schist, but afterwards coarse-grained dark gneiss predominates. The rocks are everywhere much contorted, so that strike and dip vary much within short distances. Just after starting strike is 350° dip east; at 10 miles, 220° dip west and south. Dip is nearly vertical everywhere. Gabar, a village half way on this march, stands on an old lake bed.

*Parabek to Drushp*, 5½ *miles*.—The valley continues of much the same character. Rocks, still much contorted, consist of ochre-tinted gneiss with bands of slate.

There is another hot spring about half way on this march. Temperature 140°. It springs from much the same kind of rock as the upper spring, but is not so sulphurous. At the springs the strike is north and south, dip east, very steep.

*Drushp to Shoghót*, 11 *miles*.—The valley on this march is extremely narrow and precipitous, widening out only at Andarti, 3 miles, where there

is what appears to be an old lake bed. The strata are extremely contorted, and strike varies every few miles. Just opposite Drushp are extensive beds of garnetiferous mica schist dipping to the eastward, the strike varying from 5° west to 20° east (355°—20°). After some miles they change to gneiss, strike 160°, dip west 45°. Finally, between Andarti and Shoghót, the rocks are almost entirely a rather pale-coloured slaty schist, so contorted that no two readings approach each other nearly. Strike varying from 5° to 40°; dip on the Andarti side 70° to east, nearer Shoghót 45° to north-west. Shoghót is situated on the alluvial fan of a large stream that enters here from the north.

*Shoghót to Chitrál*, 13 *miles*.—On leaving Shoghót, the road passes through a tremendous gorge, the sides of which rise almost perpendicularly for some 2,000 feet. The rocks here consist mainly of limestone with irregular masses of coarse granite. The limestone strikes 30°. Dip nearly vertical, but, if either, to the south-east.

At Randúl, about half-way, one comes on the schistose slate of which the bounding hills of the Chitrál valley are almost entirely composed and continues on this until one gets fairly on to the valley alluvium.

## From Gabar (10 miles below Dúráh Pass) through Kalásh Gól to Chitrál.

*Gabar to Zamanak*, 5½ *miles*.—Road follows the Zidik stream. The valley is extremely narrow and bounded by steep crags of fantastically weathered rocks, with extensive "shingle slopes" at their bases. Here and there there are small level widenings of the valley bottom, evidently once the sites of a chain of miniature lakes. The rocks are mainly coarse gneiss, but narrow bands of dark micaceous schist are interbedded with it. The dip is nearly vertical, but rather to east, and strike 340°.

*Zamanak to Ahmad Díwána*, 11 *miles*.—Road crosses the Zidik pass (14,850 feet). Ascending to the pass the rocks consist of coarse gneiss, much contorted, strike varying from 320°–60°; dip nearly vertical. Irregular veins of granite intrude into gneiss, and at the *kotal* the rocks consist of unstratified granite. Close by it, but a little to the west, is an outcrop of a vein of galena, which is quarried and worked by the Káfirs. I also found amongst the débris of the granite some tolerably fine pieces of rock crystal. The rock containing the galena strikes north and south, dip east 80°. On the descent the rocks are mainly gneissic, but beds of schist more or less slaty are also met with.

*Ahmad Diwána to Apsai*, 5 *miles*.—Valley fairly open, with narrower portions. At one or two places there appear to have existed lakes. The rocks are gneissic, strike 70°, dipping south-east 80°.

*Apsai to Lut dih*, 8 *miles*.—Valley of the same character as before. Rocks also of the same character, but much contorted, so that strike and dip vary greatly at first about 60°, near Lut-dih 170°, dip west 60°.

*Lut-dih to Sháwal Pass, about* 15 *miles*.—Road ascends a fairly wide valley with bottom formed of boulder alluvium. After a short distance, turns to right, up the bed of a torrent, which it follows to the pass, near which it opens out a good deal. Three small lakes are met with just below the pass.

At first the rocks are gneissic, then mica schist and schistose slates predominate; strike 40°.

*Sháwal Pass to Bumbaret*, 13 *miles*.—Road follows round the Kalásh river from its head. The valley, after leaving the open head of the pass, is at first very narrow, between stupendous "shingle slopes" crowned by extremely rugged crags. Lower down it opens and has a fairly wide alluvial bottom. At first only gneissic rocks are met with, but after about 8 miles one comes on slate, more or less schistose; strike north and south; dip about 80° west.

*Bumbaret to Ayán*, 8 *miles*.—Road follows the Kalash river for some distance, the valley being here wide and alluvial, and then crosses a low spur to gain the Chitrál valley at Ayán.

Shortly after leaving Ayán we passed some extensive beds of crystalline limestone to the north. Strike about north by east, dip 45° east by north. With this exception the rocks are entirely schistose slate, striking north and south; dip west 60° to 80°.

Near Ayán the road passes across some tolerably large downs consisting of boulder alluvia belonging to the Chitrál river, but fully 400 feet above its present level.

*Ayán to Chitrál*, 10 *miles*.—Road follows right bank of Chitrál river, the valley of which is very wide here. Remains of alluvium can be seen 700 feet, and more above the present river level. There is a slight contraction of the valley about three miles from Chitrál. Rocks the whole way slate, more or less schistose; strike north and south; dip east 75° to 80°.

The Chitrál valley is a broad open space bounded by steep hills of the usual rugged character. The alluvium of which it is formed consists of the

combined fans of a number of streams that here enter the Kunar or Chitrál river from either side. As elsewhere, the alluvium consists of boulders of all sizes, mostly waterworn, mixed with sand and clayey material. Sections of this sometimes present a sort of appearance of stratification, *i.e.*, if looked at from a little distance, it will be seen that certain strata are characterised by the presence of larger boulders than others, while other bands perhaps of almost pure sand or micaceous débris are to be met with.

The slope of the land averages about 10° down to the river on either side, and the transition from hill to valley is rather abrupt, except in such places as there are "shingle slopes" encroaching on the surface of the boulder clay.

Great masses of alluvium can be well seen quite a thousand feet above the present river level. Some of these masses are of very considerable extent, notably one that evidently forms the remains of the, once much larger than at present, fan of a considerable stream coming in from the left, a little to the north-east of the Chitrál fort. The general character of these alluvial beds of boulder clay are well seen in a photograph of this fan taken from our camp at Chitrál.

The hills bounding the valley are composed almost entirely of schistose slate, sometimes sufficiently cleavable to yield fair roofing material. In the village of Ayán I noticed that this property had been actually utilised for roofing, though of course only as a support for the usual coating of mud.

In most parts the slate is alone, forming beds of immense thickness; in others, narrow layers of other materials, such as gneiss, are interbedded.

Notably the rocks on the right bank of the river, near the Chitrál bridge, consist of regular alternations of a yard or so of slate, and of beds of from about a foot thickness of earthy quartzite. The slaty strata cover a considerable area extending from Shoghót to Ayán, a distance of about 20 miles, and some 15 miles in breadth.

## Chitrál to Kala Darósh and Dír Frontier.

*Chitrál to Broz*, 11 *miles*.—Road follows left bank of Kunar river, much of it across extensive "shingle slopes." Rocks at first slaty, towards the end some gneiss met with. Strike everywhere nearly north and south; dip west, very nearly vertical.

*Broz to Késu*, 12 *miles*.—Valley wide, although the river often comes very close to this, its eastern boundary. For the first nine miles the strata

are mainly slaty. Strike 20°; dip west, nearly vertical. Afterwards rocks mainly gneissic.

*Késu to Mírkandí*, 14 *miles*.—At five miles, road passes Kala Darósh; up to here gneiss, strike north-east, dip north-west nearly vertical. Here the valley widens out remarkably, a number of low alluvial spurs extending back to east for some distance. At about nine miles some beds of chocolate-coloured earthy grit are met with, strike 58°, dipping north-west 75°. After this, the rest of the way gneiss, bedded conformably.

## Chitrál to Mastúj along the Left Bank of the Kunar River.

*Chitrál to Kóghazi*, 11 *miles*.—After passing for about three miles over the Chitrál alluvium, the road passes along a narrow gorge which does not widen until the Kóghazi fans are reached. The Chitrál slate extends for five miles, strike north and south, dip so nearly vertical that its direction cannot be determined. After this the rocks become gneissic.

*Kóghazi to Baranas*, 12 *miles*.—The road runs mainly through narrow gorges with occasional alluvial widenings.

The strata are very much contorted, strike and dip varying a great deal, every few hundred yards. At first they are uniformly gneissic.

After about two miles a band of garnetiferous limestone is met with, strike 30°, dip to west, nearly vertical. Bands of this material, alternating with more or less schistose slate and gneiss, continue the rest of the way; the strike sweeping round to 23°; dip south-east at 11 miles, and varying so much locally, that in places at no great distance on the opposite of the river it is east and west.

Close to Baranas the strike is 30°, dip north-west. On the opposite side of the river are some extensive beds of a *breccia* with a reddish matrix like that met with at Langar in Wakhán. It is distinctly interbedded with the gneissic rock.

*Baranas to Buní*, 12 *miles*.—The valley is more open during this march several large alluvial openings being passed.

For some considerable distance the rock consists of a dense grey limestone with narrow bands of schistose slate interbedded; strike 30°, dip 80°, to south-east. At about six miles the rocks change to gneiss; strike 40°, dip north-west, and continues thus to the end of the march. On the opposite side of the river the limestone and gneiss have about the same extent, but the former dips to the opposite direction.

*Buní to Sanóghar*, 11 *miles.*—Valley open the whole way over large alluvial beds, some of which are solidified into a dense conglomerate. On the opposite side of the river there are extensive alluvial downs rising to over a thousand feet above the present river level, and on the top of this, an outcrop of very dense limestone, striking north-east and south-west, which apparently occupies the line of an anticlinal. On this side the rocks are mainly gneissic.

*Sanóghar to Mastúj*, 9 *miles.*—Road crosses to right bank of the river, and follows this to opposite Mastúj, where it recrosses, to the left bank.

Rocks at first gneiss, which changes, as we proceed, to slate, strike 60°, dipping south 65°. At about five miles this changes to a dense crystalline limestone, at first much veined with darker-coloured material, but afterwards changing to a pure marble. This is doubtfully, if at all, stratified.

Lastly, opposite Mastúj the slates, schists, and mica schists re-appear, striking 35°, dip north-west.

The Mastúj valley is of a considerable size and the lower portion of it evidently consists of an old lake bed, a large marsh at present existing on its site. The remainder of the valley is formed by the alluvial fans of the Sar Laspúr river, and those of one or two other streams.

### Mastúj to Gákúch *viâ* the Shandúr Pass.

*Mastúj to Rahman*, 13 *miles.*—Road starts up right bank of the Sar Laspúr stream, crosses about half way and follows left bank to Rahman.

The valley is a narrow one, the river running between shingle slopes of immense extent. The rocks are everywhere a dark, close-grained gneiss. At entrance of the valley, the strike is 40°, dipping north-west about 80°. Further on, at Rahman, the strike is 50°, dip north-west.

*Rahman to Laspúr*, 6 *miles.*—Of the same character as the last march. Rocks as before, mainly dark-coloured gneiss with lighter coloured bands interspersed, strike sweeping round more to east and west. At the village of Laspúr it is 68°, dipping north and west.

*Laspúr to Ghizar, across the Shandúr Pass*, 27 *miles.*—The road at first follows up a small tributary of the Sar Laspúr river, coming from the west, to its head. Here the strata consists of green quartzite, striking 100° dipping north about 80°. The head of the nullah is formed of a recent alluvium, consisting of sand intermixed with angular fragments of various metamorphic rocks. This alluvium, which has a nearly level



SHANDUR LAKE.



PANDUR LAKE.

surface, forms the head of the pass, so that this, instead of being, as in most passes, a V-shaped gap, has the form of the letter truncated—



On reaching the crest of the pass one finds oneself on a nearly level plain about five miles long by three wide, surrounded, save at the openings at either side, by the usual precipitous hills. In the midst of this plain is the Shandúr lake, which is still of considerable extent, and has its outlet to the west. Between, however, the head, or eastern end of the lake and the crest of the pass the rise of the ground is so slight as to be scarcely perceptible.

The alluvia forming the crest give one strongly the impression that they are the remains of the moraine of a glacier, which once descended from a ravine to the north. This is fairly well shown in the photograph, which is taken from the crest of the pass looking north.

The opposite side of the plain ends in a nearly similar alluvial scarp, with this exception, that in the middle of the truncation of the V, the alluvial bank is much deeper, being nearly a thousand feet thick.

It will be observed that on the other or crest end of the plain, the bed rock reaches very nearly to the summit, and the only explanation of the peculiar physiography of the tract that suggests itself is that the glacier, when active, reached the head of the Shandúr valley, near a low portion of the watershed, was turned by it to the westward, and finally accumulated so large a moraine as to overtop this low portion of the divide, the huge alluvial bank that faces the Ghizar valley being the remains of the foot of the glacier.

After descending this one finds oneself in the Ghizar valley, which here descends very gently and gradually, and evidently once formed a chain of lakes, one of which, the Pandar, which will be met with further on, still exists as a lake, the others being represented either by marshes or dry plains.

From the foot of the pass to Teru (24th mile), the rocks consist entirely of green quartzite, showing but little signs of stratification. Here some thin clay slate is interbedded, strike east and west, dip so nearly vertical, that direction uncertain.

*Ghizar to Chashi*, 11 miles.—The valley at first continues open, then contracts somewhat before coming to the Pandar lake, a stretch of water about two miles long by half a mile wide, along the southern shore of which the road skirts to near its outlet. In the Ghizar village there is an isolated

mass of greenstone, outcropping from the village alluvia, striking 140°, which ill agrees with the readings on the other side. I was uncertain, however, as to its accuracy, as the rock was much weathered.

In the gorge just before the Pandar lake the rocks become more slaty and the strike is certainly east and west, dip north 80°. Further on the strike is 100° to 110°, dipping south.

The outlet of Pandar lake is curious, as, while the main part of the end of the lake is closed by an alluvial bank, the river finds its outlet by a narrow gorge cut through the solid rock. A somewhat similar state of things is to be seen in an old lake bed just above Ghizar. The road follows an outlet of the old lake; a little to the south of it is the present channel of the river, also cut in the hard quartzite rock, while still further to the south is a mass of alluvium.

In these cases it is very difficult to understand why the course of the stream should so determine as to cut through the harder in preference to the softer material.

*Chashí to Pingal*, 11 *miles*.—The valley, at first fairly wide, contracts after the first four miles to a narrow gorge bounded by "shingle slopes," and only opens again at Pingal, which is situated on an alluvial fan of a comparatively small extent. The rocks are at first green quartzite, striking 100° to 110°, dipping south, and afterwards gneissic with a somewhat more northerly strike (85°).

At about eight miles there is a band of the same peculiar breccia of large angular fragments, with chocolate-coloured matrix, as that met with near Sanóghar, and at Langar in Wakhán.

Some of the boulders in the stream consist of a different kind of rock from that on either side, and are of such immense size that they can only have been transported to their present position by the agency of ice.

*Pingal to Jinjrót*, 20 *miles*.—Of the same character as the last march, rocks mainly gneiss; strike about east and west, dip south.

In places there are bands of the green quartzite interbedded with the gneiss.

*Jinjrót to Roshan*, 8 *miles*.—The valley retains the same character as before.

Opposite Jinjrót are some tremendous precipices of green quartzite, striking east and west; dip nearly vertical, to the south.

After passing the mouth of the Yásín river the rock changes to gneiss, at first with interbedded bands of the green quartzite.

At Roshan the strata are curiously bedded, thin layers of several minerals, granular limestone, hornblende, and quartzites alternating with broader bands of gneiss. The strike of these is 106°—93°, dip varying from vertical to 75° south.

*Roshan to Gákúch, 20 miles.*—Road runs mainly through very narrow gorges with a few openings containing alluvial fans. Just after leaving Roshan the strike bends rounds a little, to 120°. Dip still to the south, but with this exception the strike is nearly everywhere nearly east and west, as a rule not varying 10° from this, and the dip still always southerly. The rocks are much contorted with nearly vertical dip, and consist of gneiss of darker and lighter shades.

Gákúch stands on some elevated alluvial fans separated by an outcrop of bed rock, from the old lake bed through which the river flows, about 700 feet below.

From Gákúch to Gilgit the ground has already been, I understand, examined by competent geologists, so it will be needless for me to describe the marches in detail, beyond stating that the strike continues with curious uniformity about east and west, and that the rocks, as elsewhere, are purely metamorphic.

## Mastúj to Roshan *viâ* the Túi Pass and Yásín Valley.

*Mastúj to Jhopu, 20 miles.*—The road follows the Yárkhún river. The valley, at first fairly open, afterwards contracts and runs between tremendous precipices and "shingle slopes."

Shortly after starting, the rocks are slaty, striking 50°; dip very steep, to north-west. Further on there is much limestone, but this is very faintly stratified, if at all.

*Jhopu to Sháh-Janáli, 9 miles.*—After a short distance the valley widens out into a plain (probably lacustrine) of some extent; the end of the plain is closed by the foot of a large active glacier.

After leaving the plain the road follows the depression between the hill-side and the right lateral moraine, along which a small stream runs. In the course of this is a chain of small plains, the sites of old miniature lakes. For the first five miles the unstratified limestone continues as before. After this the rock changes to schistose slate, striking 100°. The method in which lakes, such as existed once along the road, are formed, was well seen on mounting on to the top of the glacier. From this position it could be seen that the lateral moraine is not a simple single bank, but a very

complex structure frequently sending out oblique spurs towards the hill-side in such a manner that, when complete, they must necessarily block up the water-way that exists between all lateral moraines and the hill-side bounding their valley. A very good example of this in an existing lake is to be seen at Sangosir, above Astór, in Kashmír territory.

*Sháh-Janálí to foot of Túi Pass.*—Road leads across the Túi *Kotal* (14,200 feet). It follows the lateral moraine of the glacier for about three miles, and then, turning to the north, climbs a snow-covered hill to the crest of the pass. After a steep descent of about 1,000 feet it reaches the head of a very large glacier, and descends on the glacier to its foot. The rocks, where visible, were slaty; on the top of the pass the strike was north-east and south-west; dip north-west, very nearly vertical.

*Foot of the Pass to Yásín, 27 miles.*—The road descends the Túi Valley to its junction with the Yásín River, and then descends the latter about six miles. The valley is of exactly the same character as those already described. The rock consists of alternations of gneiss and schist, more or less slaty. The strike soon bends round to east and west, and remains uniformly so for the rest of the road.

*Yásín to Roshan, 17 miles.*—In some portions of the Yásín Valley the ground appears lacustrine; the village itself, however, stands on a large alluvial fan. The rocks continue of the same character. After about eight miles the Yásín falls into the Ghizar River, and the road follows the left bank of the latter to Roshan, within a short distance of the previous route.

The rocks continue of the same character, and in the latter part of the march agree in strike, &c. with the corresponding parts of the section on the other side of the river already described.

(*See* map at the end of the book.)

## CHAPTER VII.

### Medical Notes, by Surgeon G. M. Giles, M.B., Medical Officer.

#### 1.—Equipment.

When starting on this expedition I was instructed to provide myself with such instruments and medicines as I might consider necessary for a six months' absence, from the Medical Store Depôt at Mían Mír.

With respect to medicines, I fortunately took a fairly ample supply, as our absence extended over fifteen instead of six months; and although I indented for a fresh supply at the time of our first return to Gilgit, the state of the passes prevented its reaching me in time for our second start, so that it only came to hand too late to be of any use.

The articles I selected were—

1st.—A pair of regulation field panniers.

2nd.—A mule-load of extra medicines and medical requisites, packed in a pair of the old-fashioned panniers, made of cane wicker covered with painted canvas. Although old, and indeed condemned when I got them, these boxes rendered excellent service, and, with occasional repairs, stood me in good stead to the last.

3rd.—Instruments.

In addition to the capital case belonging to the field panniers the following instruments were taken:—

| | |
|---|---|
| Lithotomy case (small). | Ophthalmoscope. |
| Tooth instruments (large). | Reid's enema syringe. |
| Eye instruments (large). | Reid's stomach pump. |
| Scalpels in case. | Twelve gum elastic catheters. |
| Dissecting instruments (small). | Spare saw. |

Tourniquets, glass-brush, and other minor instruments.

These packed in a strong wooden box, which I had had constructed in the Bombay dockyard, formed less than half a mule-load, and could be easily carried by a coolie.

At the outset, our transport consisted entirely of mules, but as we got further into the less frequented portions of the country, these had to be given up and coolie carriage substituted.

Indeed, on our second start, the pair of field panniers, which are too heavy to be carried by coolies, was the only load carried on an animal. The field panniers proved a great convenience throughout, but the circumstance of their being unsuitable for coolie carriage proved a great drawback, as the roads are such that horse-loads have to be repeatedly removed, and carried across difficult places in nearly every march.

During our long winter halt at Gilgit I constructed a pair of boxes suited to coolie carriage, for the special purposes of our march through Hunza.

As our troops in India have not unfrequently to operate in regions where coolie carriage is the only practical form of transport, I cannot but think that it would be useful if a few such boxes could be constructed and kept in stock.

I append a few notes on the construction of such boxes, as well as of one or two improvements, which experience has suggested to me, in the details of the field panniers.

## 2.—Personnel.

It was originally intended that I should be accompanied by a compounder only.

These men are useful as dressers and compounders, but it would be quite unjustifiable to allow one of them to administer chloroform. Foreseeing that surgical work would be almost impracticable under such circumstances, I represented the necessity of attaching a hospital assistant to the Mission most urgently to the Officer Commanding. Colonel Lockhart entirely agreed with me on this point, and through his exertions the required addition to the party was sanctioned by Government. Accordingly, 2nd class Hospital Assistant Alí Ahmad, No. 86, received orders to join the party, and caught us up at Dulai, three marches beyond Murree, on 12th June 1885.

## 3.—Route taken by the Mission.

The officers and staff of the Chitrál-Káfiristán Mission assembled at Ráwal Pindí on 2nd June 1885.

After a few days' stay in that station, which was occupied in completing and arranging equipment, the party started on their journey to Gilgit.

We left Murree on June 9th, and thence marched, without halt, to Srínagar. After a few days' stay there we moved on to Bandípúr at the north-east corner of the Wular lake. The season was a very late one, and news now reached us that the Kamrí pass was still quite impracticable for laden animals. This involved the delay of an entire week at Bandípúr, at

the end of which we moved forward, across the Trághal pass (11,700 feet) and through the Gurais valley, to the foot of the Kamrí pass (13,400 feet), but here we were forced to delay four more days before the road across the pass was pronounced practicable.

With much difficulty, a party of the Maharájah's sappers made a path through the deep snow that still lay for many miles on the higher parts of the road, and we were at length enabled to move forward, *viâ* the Astór valley, to Bunjí, where we crossed the Indus and then ascended the Gilgit tributary to Gilgit. Owing to these repeated delays we did not arrive there until July 29th.

A halt of ten days was made at Gilgit, after which we proceeded on our march to Chitrál, crossing the Shandúr pass (12,100 feet) on August 23rd, and reaching Mastúj on the 26th.

Here a halt of ten days was made to await the return of a detached party, which had been sent out to explore the Darkót and Baróghál passes.

Chitrál was reached on September 11th, and here a prolonged halt was made.

On September 19th the officers of the Mission, with a small escort, started to explore the Dúráh pass, and to pay a visit to Káfiristán.

On account of transport and supply difficulties we had to travel very lightly, taking with us only the barest necessaries. Accordingly the hospital stores and staff were left at Chitrál (where indeed they could do the best work) under the charge of the hospital assistant, while I proceeded with the exploring party, taking with me only a small box of absolutely necessary medicines and stores.

As the extreme precautions against breakage indispensable with mule carriage are not necessary where human agency is employed, such boxes would not be expensive, and might easily be constructed in this country.

After visiting the Dúráh pass (14,800 feet) we crossed by the Zidik pass (14,850 feet) into Káfiristán, marched through the Bashgal country as far as Lut-dih, and then returned to Chitrál, *viâ* the Sháwal pass (14,200 feet) and the Kalásh Gum, arriving on October 5th.

After a further stay of more than a fortnight in Chitrál, an expedition was made down the left bank of the river to Kála Darósh and the Dír frontier. On this occasion again the hospital remained at Chitrál under the native doctor, who treated a large number of cases in my absence.

It now became necessary to divide the party, as the old difficulties of supply and transport made it impracticable for us all to march back in one body. Accordingly half the escort, with all heavy baggage, under the

medical charge of the Hospital Assistant, started for Gilgit on October 18th, the Compounder remaining with me.

The officers of the Mission and the remainder of the party did not leave Chitrál until November 17th, and taking nearly the same route as that by which we came, arrived in Gilgit on December 9th.

Here the party wintered, all issues from the valley being closed by the snows.

A fresh start was made on April 16th, but again transport difficulties rendered the division of the party necessary.

The officers, with 10 sepoys, the Compounder, and Botanical Collector, marched through Kanjút (Hunza) and Little Gujál to the Killik pass (15,600 feet).

This was crossed on May 7th. On the 8th we halted on the Tághdumbásh, Pamír, and on the 9th crossed the Wákhujrúi pass (16,600 feet) to the head of the Little Pamír, down which we marched to Sarhad-i-Wakhán, which was reached on May 16th.

A two days' halt was made here to explore the northern slope of the Baróghil pass, after which we pushed on to Kala Panja, where we arrived on May 23rd.

After a halt of 14 days at this place, we moved on, down the Panja valley, to Ishkashm and across the Ishkashm pass to Zebák in Upper Badakhshán.

Here we halted a week, and were joined by the rest of the party who, starting from Gilgit on May 7th, had marched by Chitrál and the Dúráh pass.

The whole party now started on the return march to India by the Dúráh pass to Chitrál, thence by the Túi pass (14,200 feet) to the Yásín valley, and thence to Gilgit, where we arrived for the third time on July 27th.

We now marched to Astór, where a 10 days' halt was made, and thence travelled by the route we came to Srínagar, whence, after a short halt, we marched by the Jammu route to India, arriving at Siálkót on September 15th.

### 4.—General Character of the Country and Climate.

It is almost needless to remark that the country traversed by the Mission forms, perhaps, the most mountainous tract in the world.

The Kashmír valley and the road to it are too well known to require description. In this and the Kishenganga valley there is a fairly large rainfall, and the hills are well wooded. Beyond the Kamrí pass, however,

a change is apparent. The hills are higher and barer. Forest exists only in scattered patches, and, march by march, the country becomes drier, more rugged, and, beyond the limits of cultivation, utterly barren.

Outside this nothing but rocks, bare and glaring, interspersed with tufts of the grey-tinted absinthium, meets the eye, while a few stunted junipers are all that are met with to replace the palundars and deodars of the outer ranges.

Speaking broadly, no portion of our route lies below the level of 5,000 feet, while the highest point reached was the crest of the Wakhujrúi at 16,600.

Cultivation nowhere extends beyond 11,000 feet, and but little is to be found beyond 9,000. As a great part of the area lies above the higher of these levels, and much that is below it consists of inaccessible crags and precipices, the cultivable area bears but a small proportion to that which is irretrievably barren and unproductive.

Small as it is, the cultivable area is by no means fully occupied, and deserted village sites, marked by traces of old terracing and irrigation channels, are frequently met with, to indicate that, at some not very remote period, the land supported a much larger population than it does at the present day. In the Gilgit, Yásín, Chitrál, and Hunza valleys the rainfall is but small, and the cultivators depend entirely upon irrigation for their crops.

During the winter a great deal of snow falls, completely covering the country down to 7,000 feet. Below this, snowfalls are frequent enough, but it does not, as a rule, lie for any great length of time. In Gilgit (5,000 feet), during the winter we passed there, snow fell but once in the valley itself. The season was, however, an exceptionally mild one. In Chitrál, at the same level, snowfalls, lying for some time on the ground, are common in January and February, and the climate is generally more extreme than at Gilgit. In valleys situated at higher levels the climate is of course proportionately more severe. In Wakhán, for example, the snow is said to lie continuously for between four and five months in the year.

In the lower portions of the river courses the valleys are generally extremely narrow, and bounded by precipices of great height. Where a tributary stream joins the main channel, it broadens, and a fan-shaped piece of tolerably level ground is produced from the alluvia brought down by the side stream. It is on such pieces of ground that most of the villages are situated, the stream that has made the fan serving for its irrigation. Most of the larger valleys have been produced by the confluence of the fans of a number of tributaries entering the main stream near each other.

Some few villages are situated on old lake beds. These, however, are generally placed at considerable elevations, as they have usually been produced by the impinging of the lateral moraine of a glacier against the side of the containing valley, but closing the line of drainage which always runs down such situations. Apart from lacustrine action, however, the more elevated valleys are usually much less contracted and precipitous than those situated when the river has cut itself a deeper bed in the rock.

From a consideration of the foregoing description, it will be seen that such sites are, from a sanitary point of view, very favourably situated. At whatever level they may lie, their water supply always comes by a precipitous channel direct from the snows. Even when other villages are situated higher up on the course of the water-supply, the water passes at such speed, and is so freely oxygenated, that any impurity it may pick up must be rapidly destroyed.

Further, the ground of such sites has usually an inclination of 10° or more, and, even were it far less than this, the soil would never become water-logged, as it always consists of an extremely porous boulder alluvium. Were it not that the people are extremely uncleanly in their homes, and none too nice about their persons, the population should be an ideally healthy one, for it is far too scanty and scattered for conservancy difficulties to weigh heavily on the soil. Moreover, there is nearly always a breeze blowing either up or down the valley, so that a continuous supply of pure air, coming fresh from the large unoccupied spaces, rapidly dilutes any impurities caused by the carelessness of the people in such matters.

## 5.—Diet and Housing of the Population, &c.

In the matter of food these mountaineers are not badly off. A good indication of this is, that, save in Kafiristan, the children are everywhere fat, rosy, and confident.

The crops are practically independent of rain, and it is very rare for the winter snowfall to be so deficient as to cause the irrigation channels to run dry. Still, localised famines do occasionally occur from this cause, and when they do so, bear heavily on the people, as they are far too indolent to lay by any reserve supply, and the difficulty of the roads renders the carriage of grain from more fortunate localities well nigh impracticable. In a few spots, two crops, one of grain and another of rice, are gathered yearly from the same land. This, however, requires a low level and an exceptionally fertile soil.

Rice is cultivated up to 6,000 feet and, exceptionally, as high as 7,000. Wheat ranges to a somewhat greater elevation, while barley and millet form the sole crops of the more elevated villages.

Nearly everywhere there is an abundance of excellent fruit; indeed in Hunza, where the population is somewhat congested, the people are said to depend largely on their apricot trees for food. This is their most common fruit, nearly every village possessing large orchards, which are looked upon as common property. They may be met with, although in a stunted condition, as high as 9,000 feet. During the season they are eaten largely by all classes, and great quantities are split and dried in the sun for winter consumption.

The mulberry is equally common and has about the same range of vertical distribution.

Besides these they have several varieties of the grape, which grow well up to 7,000 feet; some apples and pears, besides water-melons of exceptionally fine flavour. The principal wild fruits are the pomegranate, the raspberry, strawberry, and blackberry. These, although not cultivated, do not stray much beyond the limits of cultivation, as outside this the country is mostly too barren for their growth.

This abundance of fruit, no doubt, makes up for the deficiency of pot-herbs, with which, excepting onions, they are but ill supplied. From 12,000—14,000 feet a wild onion of very good flavour grows abundantly, and several wild succulent plants are gathered and eaten as "ság."

Their possessions in cattle and sheep are but small. As a rule, there is no grazing whatever in the neighbourhood of the villages. In summer, the cattle are sent to elevated pasturages, often distant several days' journey. In winter they have to be supported entirely on "bhusa," stacked during the summer. The supply of this latter requisite is very scanty and puts an effectual check on more extensive cattle-breeding.

As the cows during the summer are absent, and during the winter are dry, milk can hardly be said to enter into their dietary. During the summer however, on the "eiláks," or mountain pastures, *ghi* is manufactured and stocked sufficient for the entire year's consumption. It is made into small parcels, wrapped in birch bark, and when it has been kept several years and has undergone considerable decomposition it is looked upon as a great luxury. To a European the smell and taste is extremely revolting, but our native comrades partook of it with great gusto, although we had almost to fly the camp during the process of cooking. The taste, like our own for highly flavoured cheeses, is doubtless "acquired."

Meat enters but little into the dietary of the poorer classes, who depend mainly on bread, which is made in thin leavened cakes. Those, however,

who can afford it eat meat daily. Practically the only kind of meat is mutton (generally goat's flesh) and fowls. It is only rarely that they can afford to kill an ox, but the Gilgitis and Chitrális are fond of beef when obtainable. The people of Káfiristán, and also those of Hunza, look upon beef and fowl as unclean. With the latter this is doubtless a relict of old Káfir superstitions, and they are rather ashamed to confess their prejudices to other Muhammadans.

This description applies mainly to the districts lying on this side of the Hindú Kush. In Wakhán and Zebák the dietary differs widely from that of Dárdistán. No portion of the country lies much below 9,000 feet, and there is always abundance of grazing ground in the immediate neighbourhood of the villages, so that the people depend far more on the produce of their herds than on that of their fields. Butter, cream, and milk they possess in abundance, but barley is the only grain that can be cultivated. With the latter they make excellent bread in the form of thick leavened cakes.

Of fruit, beyond a few stunted mulberry trees, they have none.

On the other hand, there is an abundance of brushwood for fuel, an article very scarce in Dárdistán.

On both sides of the Hindú Kush the population are, as a rule, well clothed in good woollen garments of their own manufacture, each household weaving for its own use. In Chitrál a little cotton is grown and woven, but for cloth of this description they depend mainly on Manchester, good English unbleached calico being obtainable in the sarai at Chitrál as cheaply as five yards for the English rupee, everywhere known as the "double."

Cotton clothing is, however, the luxury of the rich, the poor being completely clothed in homespun wool. A peculiar and very warm sort of cloth is made by mixing the down of wild fowl with the ordinary wool in the yarn.

Most households possess a few brightly patterned carpets with cotton woof and woollen weft, of home manufacture.

The supply of salt and spices is everywhere scanty, both articles being very expensive, as also is sugar, which is entirely imported. Dried mulberries, however, go far to neutralize the scarcity of the latter article.

In Káfiristán the people are by no means so well off, and this, although the county is well wooded and has altogether very much greater capabilities.

Manual labour is looked upon as degrading, and is accordingly relegated entirely to the women, whose labour yields only a bare supply.

It is on the women and children that the pinch falls most heavily, and the half-starved, shivering condition of all contrasts most unfavourably with the well-to-do appearance of the surrounding tribes.

In the treeless parts of the country the houses are low huts, built of stone and mud, which must be extremely unsanitary in winter, when the scanty supply of fuel necessitates the closing of the door, which, save an opening in the roof of the living room, to give exit to the smoke, forms the only aperture.

In Wakhán, although of the same general plan, the rooms are larger and more airy, while in Kafiristan they are built mainly of wood, and in size and natural ventilation are better than elsewhere.

## 6.—Prevalent Diseases.

(*a.*) *Epidemics.*—It is somewhat difficult, amongst people, but few of whom speak any language commonly with oneself, to glean very certain information of their past epidemic history. The general tendency too, to class all the specific fevers under the head of "bukhar" further makes all definite information uncertain.

On this account only such maladies as have very distinctive symptoms are known among them separately. Cholera is one of these exceptions. It is, however, a very rare visitor, and was never present in the country during our stay there.

A few cases appear to have occurred during the epidemic of 1881, and the memory of a more severe outbreak is retained, but I was unable to obtain any reliable approximation to its date. My informant was a man between 28 to 30 years of age, and he states vaguely that it happened before he was born. It probably refers to the great cholera wave of 1856–58, but does not appear to have been either severe or long continued. Had the visitation been severe tradition would have tended rather to exaggerate than to forget. Indeed, the natural sanitary advantages of the country are such that cholera can hardly ever be likely to become formidable.

Small-pox is well known under its Persian designation (*chichak*), but is certainly less common than in most parts of Hindustán, the percentage of badly marked people being very small. During our stay in the country I only once had to treat cases of this disease. Vaccination is unknown, but inoculation, though rarely practised, had a certain reputation.

Out of the kafila line from the Dúrah pass to the Dír frontier, but little communication goes on between the villages, so that outbreaks of

this disease must have a strong tendency to localise themselves without spreading widely through the country.

One or two cases of continued fever were met with, which it was difficult to refer to any other cause than typhoid fever. The diagnosis, however, must be regarded as very uncertain, as I had no opportunity of seeing either of them more than once.

Measles, scarlet fever, and whooping-cough appear unknown. No such cases presented themselves for treatment, and I could not discover that the natives were in any way acquainted with them.

(*b.*) *Endemic maladies.*—But one disease can be said to be really endemic to this region. I refer to goître. Throughout nearly the whole region, a very large percentage of the population is affected with this disease. Its distribution is however very irregular, some districts being much more affected than others.

In Gilgit and Chitrál it is very rife, especially in the former. In Hunza, Káfiristán, and Astor, though very common, it is decidedly less so than in the first two places.

In Little Gujál I saw very few cases, and in Wakhán and Zebák it appears practically unknown.

Where prevalent, rich and poor are alike affected; neither sex nor age appears to afford any exemption.

The impression I formed was that neither the drinking of snow-water, nor of water impregnated with lime, can be regarded as efficient causes. Limestone formations are quite exceptional, and although snow-water, it is true, forms the supply of the whole country, this is nowhere more markedly the case than Wakhán, where, as already remarked, the disease is very uncommon.

The only condition that appears to bear any relationship to the relative prevalence of the disease is that of house accommodation. Owing to this, there was an apparent connexion between the prevalence of the disease and the abundance or scarcity of wood. Where this is scarce the houses are impervious structures built of stone, the rooms are small to save wood-work, and for the same reason the doors very small and low. The accompanying scarcity of fuel causes the people to shut up the one aperture of their habitations as closely as possible in winter, so that they must necessarily suffer from all the evils consequent on the repeated inhalation of the same air. On the other hand, where wood for carpentry and fuel are more plentiful, the houses are built of more pervious material, and the people are not driven by cold to abjure ventilation to anything like the same extent. It is in the districts in which the houses are most unsanitary

that the disease is most rife, while those where comparative cleanliness of the home exists are proportionately free from it.

At the same time this, though doubtless an important factor, cannot be the sole, nor the specific, cause. There are plenty of localities where poverty and cold doom people to homes at least as unsanitary as those of Dárdistán, and yet where goître is unknown.

The conclusion is thus forced upon one that the malady depends on some specific "germ," and is more or less contagious. This probability is confirmed by the circumstance that it is a common thing for every member of a family to be affected, while in the same village other households may be found, none of whom show any signs of disease.

A point that I do not think is generally known is the very short time of exposure to goîtrous influences that suffices to bring about the disease. This point was illustrated by the goîtrous condition of the Kashmiri garrison stationed at Gilgit.

The men on the average had not been two years in the command, and had come from Jammu, where the disease is comparatively rare, and yet, after this short exposure, eight per cent. of the troops had become goîtrous. The earliest cases appeared after five months' stay in Gilgit, and the average time of appearance was after about nine months. Now out of our party of over sixty souls not one contracted the disease, although we remained more than a year within the endemic area. It remains to remark that the quarters occupied by the Kashmiri sepoys were even more overcrowded than the huts of the villagers, while the men of our party were always either living in tents, or well and warmly housed. This to me appears a most significant and important fact, as, if my deduction be correct, goître must be reckoned as a thoroughly preventible disease; moreover, I am strongly inclined to suspect that an investigation of the disease by a competent bacteriologist would yield valuable results.

Fever, *i.e.*, malaria, is much more common than the considerable elevation of the entire country would lead one to expect. In places lying at 5,000 feet, and having extensive rice cultivation, such as Gilgit and Chitrál, malarial fevers are very common, although rarely severe.

To such comparatively low levels, however, it is by no means confined. It appeared to be more or less present everywhere. Even in Wakhan, where the lowest point attainable without emigration is 9,000 feet, the disease is by no means unknown.

The population is everywhere a very stay-at-home one, so that the conclusion is forced upon one that even such very considerable elevations do not completely prevent the production of the malady, and that the continuation of a temperature not less than 70° for some considerable

interval, usually supposed to be essential, is by no means necessary. In Wakhán this point is rarely reached as a diurnal shade maximum, and the thermometer falls at night to from 60° to 50°, even in the very hottest part of the year.

It is needless to remark that the disease becomes less common as one ascends. The point which it is desired to emphasise is that even such heights as 9,000 feet do not confer immunity, even on permanent residents.

Dysentery is a somewhat uncommon malady, and of such cases as were met with, none were of a severe character.

*Pneumonia.*—No case of croupous pneumonia was met with.

Rheumatism and catarrhal maladies, such as bronchitis, are naturally common during the winter, especially among the elder people. The people however, are very hardy, and appeared to suffer far less from such diseases than the severity of the climate would lead one to expect.

*Stone.*—This disease is far less common than in the Punjab. Only nine cases were met with, which, considering the region was, surgically speaking, quite fresh ground, is a very small total. Another significant point is that all my patients complained merely of the subjective symptoms of stone, and were surprised when told their cause. In the Punjab and in other parts, where calculus is common, one's patients complain not of pain, &c., but as a rule make a correct diagnosis for themselves, and tell you simply they have a stone.

Syphilitic disease is by no means uncommon. Comparatively few cases of primary chancre came to me for treatment, shame probably acting as a deterrent, but of the more remote effects of the disease a large number of cases were seen, the connexion between them and the original sore not being suspected by the sufferers.

Gonorrhœa was comparatively uncommon. On the other hand, a sort of sexual hypochondriasis was extremely prevalent, not only among the old, but frequently in quite young and healthy men. It was, of course, mainly among the rich and well-to-do that this was the case, and such cases were continually pestering me for some imaginary specific, warranted in a single dose to restore their exhausted powers. It was extremely difficult to persuade them that I possessed no such remedy, and more than once I was offered a fee if I would only supply them with the desired medicine. Nay! even when this had been refused, I feel sure that, believing firmly every man to have his price, they merely regretted their inability to afford mine. So difficult was this idea to expel that

after a time I took to giving them some general tonic as an infallible cure, provided the accompanying directions were minutely followed. As these included prolonged chastity and cold tubbing, which they would be sure not to carry out, the efficacy of my sulphate of iron pills remained unquestioned.

Surgical maladies, the result of falls and intentional violence, are common enough, and generally result badly for the patients, as they usually aggravate the original mischief by the application of irritating and dirty intended remedies.

## 7.—Indigenous Medicine.

The indigenous medical lore is crude in the extreme. There are no hakims or tabibs permanently resident among them, and although such men, either from Lahore, on the one hand, or on the other from Central Asia, do occasionally visit them, they appear usually, with a certain amount of shrewdness, to have expelled them from the country after a very short, but perhaps convincing trial of their skill, or the lack of it.

Although a number of very useful drugs, such as rhubarb, aconite, datura, assafœtida, pomegranate, willow, and numerous astringent barks, &c. are indigenous to the country, none seemed to have any idea that the plants possessed any medicinal properties, and it was very difficult to make them believe that such common every-day surroundings could be genuine and powerful drugs. With medicine, however, they do not dabble much. Several sorts of rocks are reputed to have great medicinal powers, notably, a much decomposed and granular limestone, with a singularly evil smell when first broken. But beyond such insoluble and comparatively harmless matters they do not appear to take drugs internally, but charms and texts from the Koran, enclosed in embroidered bags, and tied on to the affected parts are their great stand by. Another great panacea for all ills is the application of the actual cautery. If a man has neuralgia they brand him in the face; for lumbago he is fired on the loins, for colic on the abdomen. One cannot examine a single man without finding him scarred in this way in a large number of places. The little children must often suffer cruelly, for the burnings are often numerous and repeated, and having no voice in the matter they are often far more severely burned "for their good" than their elders would care to submit to in their own persons. I have more than once come across cases where a juvenile indiscretion in the matter of apricots has landed the small gourmand in the application of the red-hot iron to half a dozen spots on the abdomen, each "dagh" being as large as a rupee.

## 8.—General Health of the Party.

The general health of the party was, all considered, excellent. Not unnaturally, such cases as occurred were mostly serious, the life being an excellent one for keeping sound men in health, but terribly severe on such as broke down.

Our number varied at different times, but generally averaged between 60 to 70 souls, and, saving the four instances noted below, hardly a case came under treatment of such severity as would have in cantonment life required admission to hospital.

Havildar Buta Singh became ill with dysentery and fever during the winter march back from Chitrál to Gilgit. The weather was intensely cold, and though both the above symptoms were of a very mild type, and he was able to ride, he was in a very weak and depressed condition when we reached Gilgit. After we had been some time comfortably housed at that place the fever became more severe, though never of a type to cause any alarm. In a short time it yielded to the usual remedies, but in spite of its disappearance the man remained lethargic and weak. A marked and progressive anæmia set in, which quite resisted all treatment. Beyond this extreme bloodlessness, and its attendant dyspnœa, there were no objective signs whatever. All organs appeared perfectly healthy, but the anæmia steadily increased until his condition, from this alone, became alarming, and he ultimately died about two months after the first outset of his illness.

I can assign no other cause of death than "malignant anœmia," but believe the case to have been one of "Hodghen's" disease. The man was of too dark complexion for the characteristic brozzing to show itself, even if present, and indeed he succumbed at too early a stage for this to become at all marked in an European.

Sepoy Hukam Singh became ill at the same time and under the same circumstances as the previous case. The symptoms too, dysentery and fever, were at first exactly the same character as in the other man. He was, however, a much younger man, and although he was a long time (50 days) unfit for duty he completely recovered in time for our second sally from Gilgit, and enjoyed good health during the remainder of the work.

Sawar Kishen Singh, soldier surveyor, poisoned his thumb with a spicule of bone on the 1st March from Chitrál to Gilgit. A very bad whitlow resulted, and the greater part of the terminal phalanx became necrosed, but after the removal of the sequestrum he quickly recovered with some shortening and deformity of the member.

Aziz-ud-din, my compounder, had been ailing for some time with occasional attacks of fever, during the greater part of our stay in Wakhán. These symptoms, however, were not sufficiently severe to incapacitate him from duty, until the weather, on our approach to the Dúráh pass, again became very cold.

The snow on this pass was so deep that it was impossible for a man to either ride or be carried. All that could be done was to help him across on foot. He reached the other side much exhausted, but was able to ride the next march. The next, however, he was too ill to proceed, and had to be left behind at a village with the native doctor. He became delirious with constant fever and violent vomiting and died two days after. This case was that most markedly due to severity of cold and the severe nature of the work.

Slight cases of fever and catarrh were not uncommon among both escort and followers, but scarce any of them would have required admission to hospital, even in ordinary military practice.

The officers of the Mission enjoyed almost uninterrupted good health. Shortly before our second start from Gilgit, both Colonel Woodthorpe and myself were somewhat troubled with slight malarial fever, and at Kala Panja Colonel Lockhart, C.B., commanding, had a slight dysenteric attack; we were however, none of us ever so indisposed as to be incapacited for work.

Our numerous following of coolies suffered more. Although extremely hardy men, they were naturally exposed to greater hardships than the regularly enlisted staff of the Mission.

During the first phase of the expedition four died, weakly individuals, apparently rather worn out by the severity of the work than from any definite disease. It is, however, a curious circumstance that all these cases occurred while we were halted at Chitrál, and under circumstances of comparative comfort. The habits of the people are dirty and unhygienic in the extreme, and it is more than probable that the unavoidable fouling of the portion of the camp they occupied may have had a good deal to say in the production of these rather anomalous cases.

During our second expedition three men died, two from simple exhaustion and cold while crossing the very elevated Wakhujrúi pass (16,150 feet) and a third from tetanus, during our march through Wakhán.

This latter appeared to be a "specific" instance of the disease, as there was no surgical lesion whatever to account for the mischance. He resisted the advance of the disease for some time, but it was impossible to nurse him properly while continuously on the march.

During this second march some 15 other coolies became so ill that it became necessary to leave them behind at villages on our route. The greater number

at any rate recovered, and ultimately duly reported themselves to the Kashmíri authorities at Gilgit. Some, however, had not turned up when we passed through Gilgit on our return.

It does not, however, at all follow that they should be added to death-roll, as it is more than probable that they may have found employment, or even have been detained amongst the tribes they would have to pass through on their return march. In any case, the only chance for them was to leave them, as they were all in such case that a continuation of the advance must have been almost necessarily fatal.

In all such instances an adequate reward was authorized for their conductors on their appearance at Gilgit, so that self-interest assured their being as well taken care of as the means of the villagers allowed.

While crossing the Hindú Kush from Kanjút to the Pamír, we were for five days almost continuously in the snow. By far the greater proportion of the coolies became more or less affected with "snowblindness."

The regularly enlisted staff were all provided with green glass goggles and nearly all escaped, but it was impossible to procure these locally, and the contingency of so long an exposure to snow-glare was quite unexpected.

A few remarks as to clinical aspect and treatment, resulting from so long an experience cannot be out of place here. Both Colonel Woodthorpe and myself were slightly affected, so that I have the added advantage of personal experience.

The disease is undoubtedly the result of reflex vasomotor changes, caused by over stimulation of the retina.

From this it results that not the conjunctiva alone, but the entire eyeball becomes intensely conjested. The subjective symptoms are, it is true, mainly conjunctival, but instances are not uncommon where the superficial pain is very trifling, and the most prominent manifestation is a diminution of visual power.

Objectively the main symptoms are profuse lachrymation, and congestion of the conjunctivæ with an almost spasmodic contraction of the pupil. The condition of my own vision prevented my being able to examine the state of the fundus ophthalmoscopically. As a rule cases rapidly get better as soon as the snow is left, and it becomes possible to rest the eyes by looking at the darker surface of the soil. It is astonishing the immense relief that is felt by standing even for a few minutes on a mere path of bare rock.

The treatment is simple and lies ready at hand. Nothing appeared so effective as a compress of snow, kept on as long as it could be borne, followed by a warm opaque woollen bandage over the eyes. Atropin gives relief where the pain is severe, and it may occasionally become necessary to administer an opiate to procure sleep.

It is probable that cocaine would also be found useful in painful cases, but my stock of this drug was by far too limited and too valuable for operative purposes to admit of my making experiments with it.

On the other hand, it cannot be too strongly insisted on that all astringents, such as sulphate of zinc, &c., are positively harmful and should be carefully avoided, as by contracting the superficial vessels they augment the congestion of the body of the eyeball, and moreover increase the tendency to corneal mischief.

In some few cases keratitis and ulceration supervened. None of these went on to perforation, but in one or two, small permanent opacities were left.

On the same occasion a number of partial frost-bites occurred. It was perhaps a providential circumstance for these that the threatened snowblindness drove me down from the crest of the pass, while there was still daylight, as the men were so utterly exhausted that it required strong persuasion to induce them to rub each other's feet, and more than a dozen were in such a state that but for immediate attention the loss of a large portion of the foot must have resulted. By timely rubbing, however, with snow, followed by friction with flannel, such evil results were obviated, and the worst that occurred resulted only in the loss of a portion of the last phalanx of the great toe.

It is a curious point that the portions of skin that just escaped necrosis remained for a long time extremely sensitive to cold, so that the men, although apparently quite sound, would cry out with pain when fording a stream.

## 9.—Medical Work among Indigenous Population.

From the time of the departure of the Mission from British territory until its return, the hospital tent was always open to all comers.

The amount of work that it was possible to do was a good deal limited by the large proportion of our time that was occupied in actual marching. Although the stages were usually short as to the distances, the difficulties of the road usually delayed the arrival of the baggage until the afternoon was far spent.

At first I was rather shy of operating under such circumstances, but as I got further into the wilds I grew hardened to operations, and leaving the next morning, often never hearing of the ultimate results of the operations. The reflection that most of these cases would never have another opportunity of consulting a European surgeon, and so must remain unrelieved if I left

them untouched, did much to reconcile me to a line of action which might at first sight appear somewhat rash. On the whole, judging from several cases I again met with after many months, I have every reason to be glad that I decided to do so.

In this way I not unfrequently performed even such operations as lithotripsy and extraction of cataract.

Necessarily I had always to operate with the tent widely opened, or even in the open, and usually I had a large, if not critical audience, as many as fifty or sixty people often crowded closely round my chair. The expressions of wonder elicited by the more striking surgical manipulations, such as the extraction of the stone in lithotomy were not only amusing, but flattering. The plastic operation for loss of nose was also one which excited great wonder. One of the chiefs we met actually had his curiosity so excited that he, more than half seriously, proposed to mutilate a man on the spot in order to enjoy the satisfaction of seeing me mend him up. As a rule, the crowd was a very obliging and manageable one, and I soon got to take no notice of their presence.

A rough record was kept in the hospital of the names and diseases of such as were treated. Necessarily however, more especially on the march, this was but loosely kept, and I believe were one to add 50 p.c. to the number, one would be still considerably under the real total.

The district is a very sparingly populated one, and the number of sick in any given village very small.

Serious cases, however, often came from great distances to see me, and hence the number of operations done is very large in proportion to the comparatively small number seen.

Although, I feel sure, very incomplete, the "Admission" book doubtless indicates fairly the relative prevalence of the various diseases, and I give the figures below with such further remarks as appear necessary:—

The total number of cases recorded was 2,826, and the details are as follows:—

## Table showing Number of Cases recorded of each Disease.

| Diseases. | Number of Cases. | Remarks. |
|---|---|---|
| Small-pox | 2 | Appeared to be sporadic cases, as no epidemic was raging. |
| Dysentery | 81 | A considerable number of these cases occurred in Kashmiri sepoys. |
| Ague | 390 | Commonest at time of irrigation of rice crops (this includes remittent fever). |
| Erysipelas | 1 | |
| Primary syphilis | 31 | |
| Secondary syphilis | 3 | This very inadequately represents the number of cases met with. Doubtless a number entered under skin diseases, &c., should have been recorded thus. |
| Gonorrhœa | 18 | |
| Scrofula | 3 | |
| Tænia solium | 2 | Entozoic disease is certainly rare. |
| General debility | 44 | |
| Scurvy | 13 | |
| Rheumatism | 99 | All of chronic type; no case of acute rheumatism or its sequelæ met with. |
| Lumbago | 43 | |
| Non-malignant growths | 13 | *Viz.*, Lipomata 3, Enchondroma 1, Vascular 1, Epulis 1, Keloid 1, Fibromata 3, Cystic 1, Polypus Nasi 1, Auri 1, doubtful 1. |
| Malignant | 2 | Both epitheliomata. |
| Diabetes | 1 | |
| Neuralgia | 103 | The larger number of cases doubtless originate from the biting winter winds. |
| Hemicrania | 8 | |
| Sciatica | 25 | |
| Chorea | 4 | |
| Mania | 1 | A Kashmiri sepoy; caused by Indian hemp. |
| Conjunctivitis | 103 | A good many cases of deeper mischief are doubtless included under this heading. |
| Ophthalmia | 154 | A large proportion of these were cases of snowblindness. |
| Cataract | 12 | *See* operations. |
| Leucoma | 10 | Ditto. |
| Entropion | 3 | Ditto. |
| Iritis | 3 | A large number of cases of this description have been entered by the native doctor under conjunctivitis. |
| Ulceration of cornea | | |
| Ptyrigium | 8 | |
| Phlyctenula | 1 | |
| Dislocation of lens | 1 | |
| Lachrymal fistula, with obstruction of duct. | 3 | |
| Tarsal ophthalmia | 1 | |
| Exclusion of pupil | 1 | |
| Otorrhœa | 15 | |
| Induration mem. tymp. | 1 | *See* list of operations. |
| Valvular disease of heart | 4 | |
| Palpitation | 1 | Dyspeptic. |
| Bronchitis | 235 | Seldom acute. |
| Catarrh | 12 | |
| Broncho-pneumonia | 8 | |
| Pulm. phthisis | 2 | |
| Pleurisy | 10 | |
| Asthma (spasmodic) | 11 | |
| Gum-boil | 5 | |

TABLE showing NUMBER of CASES recorded of each DISEASE—*continued.*

| Diseases. | Number of Cases. | Remarks. |
|---|---|---|
| Carious teeth | 51 | |
| Dyspepsia | 301 | |
| Diarrhœa | 26 | |
| Constipation | 104 | |
| Colic | 11 | |
| Piles | 17 | |
| Fissure in ano | 1 | |
| Hepatitis | 3 | |
| Jaundice | 2 | |
| Ascites | 8 | |
| Lumbricus | 3 | |
| Enlarged spleen | 8 | |
| Splenitis | 1 | |
| Bronchocele | 362 | |
| Cystitus | 1 | |
| Stone in bladder | 9 | |
| Orchitis (not gonorrhœal) | 3 | |
| Hydrocele | 3 | |
| Phymosis (not gonorrhœal) | 11 | |
| Stricture of urethra | 1 | |
| Ostitis | 2 | |
| Necrosis | 7 | Femur 3, handbones 2, radius 1, scapula 1. |
| Anchylosis (joints) | 5 | |
| Synovitis | 2 | |
| Abscess | 26 | |
| Chronic abscess | 2 | |
| Dry eczema | 2 | |
| Herpes circinatus | 16 | |
| Prurigo | 2 | |
| Tinea tonsurans | 1 | |
| Leprosy | 7 | |
| Urticaria | 3 | |
| Herpes zoster | 1 | |
| Scabies | 44 | |
| Ulcer | 225 | |
| Phagadina | 1 | |
| Boil | 13 | |
| Whitlow | 7 | |
| Burns and scalds | 4 | |
| Concussion of brain | 2 | |
| Loss of nose | 2 | |
| Sprains | 4 | |
| Fractures | 8 | |
| Dog-bite | 1 | |
| Plastic operations for deformities | 9 | |

## List of Minor Operations performed.

| Operations. | Number. |
|---|---|
| Incision of abscess, boils, &c., &c. | 41 |
| Phletotomy | 1 |
| Catheterization for stricture | 1 |
| Hydrocele tapping and injection of iodine | 3 |
| Extraction of carious teeth | 51 |
| Suturing wounds | 6 |
| Injection of bronchocele with iodine | 362 |
| Tapping for ascites | 5 |
| Total | 470 |
| Other operations performed (*see* list following) | 126 |
| Total of operations, major and minor | 596 |

## List of Operations performed.

| No. | Name. | Disease. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| | | | | 1885. | |
| 1 | Jamal Din | Lipoma | Excision | 10th July | Tumour about the size of the fist, situated on nape of neck, not encapsuled. Elliptical incision. |
| 2 | Mala | External hæmorrhoids | Ditto | 14th „ | Snipped off with scissors. |
| 3 | Mir Muhammad | Staphlyoma | Amputation | 22nd „ | Anterior portion of eyeball removed behind ciliary region on account of a protusion which prevented closing of the lids. |
| 4 | Dadu | Senile cataract | Extraction | 26th „ | Modified flap operation. Lens followed the knife. The patient had to be left the next day, but was seen a year after, when it was found that the pupil had become excluded in healing process. An iridectomy then gave useful sight. |
| 5 | Gulbez | Ditto | Ditto | 27th „ | Modified flap. Lens shipped back into posterior chamber and could not be recovered with scoop. Eye closed. Had no opportunity of seeing patient again. |
| 6 | Opri | Staphyloma | Amputation | 1st August | Large protusion of eyeball threatened sympathetic affection of other eye. Removed anterior portion of eyeball behind ciliary region. |
| 7 | Fazal | Ditto | Ditto | 1st „ | A little boy with grape-like protusion preventing closure of lids. Operation as in previous case. |
| 8 | Zogh (*f.*) | Leucoma | Iridectomy | 2nd „ | Leucoma obscuring greater part of cornea. Clear portion externally above meridian, artificial pupil made beneath this. Fair sight resulted. |
| 9 | Zulfakar | Ditto | Ditto | 2nd „ | Leucoma above. Pupil formed below. Result, useful sight. |
| 10 | Shere Khan | Senile cataract | Extraction | 2nd „ | Transfixion 2m. above meridian, some very fluid vitreous followed the exit of the lens owing to patient coughing violently. Much general inflammation of eyeball followed, and I had little hope of a good result when we left Gilgit. I was agreeably surprised on visiting the man's village after our return to find good sight had resulted. |

LIST OF OPERATIONS PERFORMED—*continued.*

| No. | Name. | Disease. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| | | | | 1885. | |
| 11 | Garib | Internal hæmorrhoids | Ligature | 3rd August | Very large internal piles, causing great suffering after defæcation. About six ligatures applied. Result, cure. |
| 12 | Daslan Shah | Necrosis of hand | Removal of sequestrum. | 3rd „ | Greater part of a metacarpal bone removed. |
| 13 | Karamdad Khan | Leucoma | Iridectomy | 3rd „ | Central opacity rendering eye useless. External inferior artificial pupil formed. Good sight resulted. |
| 14 | Moti | Fibroma | Excision | 3rd „ | Tumour about the size of a large walnut on outer and upper aspect of thigh. No capsule, but adherent to skin, requiring elliptic incision. |
| 15 | Dadu | Loss of nose | Plastic | 4th „ | The result of a judicial mutilation done 17 years before. A flap brought down from forehead in the usual way and secured to the freshened stump. On return to Gilgit the connecting bridge was removed, and a very good nose resulted, the scar on the forehead being scarcely perceptible. This man had his right hand cut off at the same time. By the aid of our workmen I made him a leathern socket, fitted with a strong iron hook to wear on the stump. |
| 16 | Laghart Khan | Stone in bladder | Lithotomy | 5th „ | Left lateral operation. Stone small. The patient (a boy about 7) got well very rapidly, passing all his water by the urethra by the end of a week. |
| 17 | Sargam | Leucoma | Iridectomy | 5th „ | A very small portion of cornea retained any transparency. An artificial pupil, made behind this, however, gave a certain amount of vision. |
| 18 | Muhammad Said | Fracture of metacarpus. | Reduction | 5th „ | Result of a blow. Anterior splint and bandage. |
| 19 | Daisu | Phymosis | Slitting | 6th „ | Patient a sepoy of Maharaja's troops. Preputial orifice contracted so as to only admit a director, causing, when inflamed, a considerable amount of retention of urine. This condition is very common amongst the Hindu sepoys here. Usually complicated with contraction of meatus urinarius from chronic balanitis. Prepuce slit up in dorsal aspect and sutures applied so as to convert the vertical into a transverse wound. Meatus slit up and mucous membrane of urethra stitched to that of glans so as to prevent the opening from again contracting. |

LIST OF OPERATIONS PERFORMED—*continued.*

| No. | Name. | Disease. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| | | | | 1885. | |
| 20 | Pau - - - | Hydrocele - - | Radical cure - | 6th August - | Tapping sac and removal of fluid, followed by injection of iodine into the sac. |
| 21 | Salamat Shah - | Hæmorrhoids (Intl.) | Ligature - - | 24th „ - | A bad case causing much hæmorrhage and pain. Several ligatures required. |
| 22 | Aman - - | Fibroma - - - | Excision - - | 14th September | A fibrous growth (possibly keloid), about the size of a plum, irregular oval form adherent to skin over root of nose. |
| 23 | Zaman Shah - | Compound fracture of tibia and fibula. | Reduction - | 14th „ | This was a fracture at a junction upper and middle thirds, much comminuted, caused by a stone having fallen on it 40 days before admission. The tibia was projecting, and a large area of skin had sloughed, the wound full of maggots and in a terribly neglected condition. A number of splinters removed, a piece of projecting upper fragment cut off, and the leg put up on back and side splints, covered with macintosh sheeting. He was dressed regularly during our further stay in Chitral (over four weeks), and was left with wound much contracted and some signs of commencing union. On our return in June 1886 it was found that he could use the leg, only a small indolent ulcer remaining in the centre of the scar. |
| 24 | Jhar - - | Cystic tumour - - | Excision - - | 17th „ - | A thin-walled cyst of parotid region, about the size of an orange, containing a thick greyish putty-like material. There was considerable difficulty in getting out the hinder part of the cyst, as it was intimately united with the fibrous trabeculæ of parotid. |
| 25 | Izat Khan - - | Stone in bladder - | Lithotomy - - | 15th October - | Left lateral lithotomy. One large and one small stone removed. Patient did well for first three days, when he was attacked by severe renal colic due to the descent of another stone from kidney. The boy's strength appeared to be unequal to the expulsion of this from the ureter and he died on the eighth day after the operation, worn down by the repeated attacks of spasmodic pain. There were never any signs of peritonitis and the wound did well, some water commencing to come from the urethra the day before his death. |

LIST OF OPERATIONS PERFORMED—*continued*.

| No. | Name. | Disease. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| | | | | 1885. | |
| 26 | Gulsher | Soft cataract | Needle operation | 28th October | A young woman, with a well-marked soft cataract. Cut up lenses with needles with a view to absorption, as we were expecting to leave place soon, and after treatment, on that account, could not be supervised. |
| 27 | Manwar Shah | Enchondroma | Excision | 18th November | An enchondroma of the size of a small orange, springing from middle phalanx, right index finger. As the extensor tendon had been destroyed by pressure, and to avoid recurrence, amputation would have been the best course. The man, however, would not consent to this, so excision only done. |
| 28 | — | Fibroma | Do. | 20th „ | A largish growth over ala of one side of nose producing great disfigurement. It was intimately adherent to both skin and cartilages, and was dissected off with difficulty. |
| 29 | Devia | Hæmorrhoids | Ligature | 12th December | An ordinary case of rather severe hæmorrhoids. |
| 30 | Huzal | Necrosis femur | Removal of sequestrum. | 16th „ | Sinus on outer aspect of thigh, just above the knee-joint, leading down to dead bone. Cut down upon a director to the bone, and found the sequestrum consisted of a piece of the posterior surface of femur, in popliteal space. There was comparatively little new bone formation, and the sequestrum, having first been cut in two with bone forceps, was removed without any particular difficulty. |
| 31 | Walli Shah | Hæmorrhoids | Ligature | 13th „ | An ordinary case of internal piles, causing troublesome bleeding. |
| 32 | Malip Kuli | Entropion | Plastic | 11th „ | An ordinary case of medium severity, removed an elliptical piece of skin with a strip of orbicularis muscle. Result, cure. |
| 33 | Ali Nur | Hare lip | Do. | 11th „ | Patient a Balti coolie with complete fissure of lips, hard and soft palates. Did the ordinary plastic procedure for the hare-lip, producing great improvement in appearance and speech. |

| No. | Name. | Disease. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| | | | | 1885. | |
| 34 | Butha - - | Chronic ulcer - - | Excision - - | 16th December - | This patient, a young sepoy, presented an ulcerated surface about size of a rupee on muscle of right thigh with indurated base. It had remained pretty much in its present condition for three years. There was no glandular implication, and subsequent microscopical examination showed only granulation tissue and no micro-organisms. Excised the ulcerated surface with border of healthy skin. Wound healed in four days. |
| 35 | Bauka - - | Hæmorrhoids - - | Ligature - - | 16th „ - | An ordinary case of internal piles. Cured. |
| 36 | Malak - - | Entropion and strabismus. | Plastic and tenotomy | 20th „ - | Entropion of both eyes, internal squint of left eye. Excised elliptical pieces of skin, with strip orbicularis, from both eyes, and cut tendon internal rectus of squinting eye. Result, cure. |
| 37 | Ali Yar - - | Entropion - - | Plastic - - | 24th „ - | Operation as in previous case. Result, cure. |
| 38 | Bothu - - - | Phymosis - - | Slitting prepuce - | 24th „ - | Case and operation exactly similar to 19. |
| 39 | Talit - - | Double hare-lip - | Plastic - - | 30th „ - | A native of Darel came to me at Roshan on our way down, but funked. Hearing about previous case, mustered up grace of heart, and was operated on with equally good result. |
| | | | | 1886. | |
| 40 | Daulat Pana - | Necrosis radius - | Removal of sequestrum. | 1st January - | A youth brought by Nizam-ul-Mulk from Yasin. Eighteen months before fell from mulberry-tree fracturing radius. Rough bandaging seems to have caused much sloughing. About 2 inches of lower extremity of radius, lying dead at bottom of sinus, was removed. He recovered rapidly with a useful hand. |
| 41 | Shah Beg - - | Leucoma - - | Iridectomy - - | 2nd „ - | A case of central leucoma from an old ulcer. Made an artificial pupil behind least altered part of cornea. Result, cure. |
| 42 | — | Hæmorrhoids (internal and external). | Ligature and excision. | 2nd „ „ | A severe case of internal and external piles. The former took origin higher up the bowel than usual and gave some difficulty in bringing down to ligature. The external piles snipped off with scissors. |



GHIL, TAGHDUMBASH PAMIR

(LOOKING NORTH).

LIST OF OPERATIONS PERFORMED—*continued.*

| No. | Name. | Disease. | Operation. | Date. | REMARKS. |
|---|---|---|---|---|---|
| | | | | 1886. | |
| 43 | Rahmat - - | Traumatic paralysis of arm. | Excision of piece of clavicle. | 4th January - | Patient, a little boy, who had fallen 12 months before, fracturing the clavicle. The bone had united without any great amount of deformity, but the arm was completely paralysed. It appeared most probable that this was due to pressure on the brachial plexus either by callus or inflammatory products. Accordingly I cut down and removed a piece of the clavicle from over the plexus and cut down on the nerves, which, as far as I could see, were unaltered. The wound healed quickly and well, but there was no improvement in the paralytic condition during the time he remained under observation. Had I to do with the case again, I would stretch the cords of the plexus. |
| 44 | Hakima - | Contracted fingers - | Plastic - - | 7th „ - | A little girl, with left hand contracted from burns received a year ago. The little finger bound completely down to palm, the middle and ring bound to a less extent by cicatrical bands. Did my operation of scar shifting. Liberated little finger and divided bands of middle and ring sub-cutaneously. Lifting of little finger left a large palmar wound, made a longitudinal incision in dorsal aspect in ulna border of hand and liberated the skin, so that it could be shifted to the palmar wound, leaving the gaping wound on the side of hand, where its contraction could do no harm. Result, a fairly free condition of all four fingers. |
| 45 | Shah Bey - - | Leucoma - - | Iridectomy - | 8th „ - | Same patient as No. 41. The first eye having recovered the effects of the operation with good sight. Operated on the other eye for artificial pupil in the same way. This man, whose sight before limited to counting fingers, obtained good clear vision. |
| 46 | Shamshir Khan - | Necrosis radius | Removal of sequestrum. | 12th „ - | The result of a neglected fracture. A considerable portion of shaft of bone removed. Very little new bone had been thrown out. |
| 47 | - - - | Chronic keratitis - | Peritomy - - | 19th „ - | A case of chronic vascular keratitis of considerable duration, excised an annular zone of conjunctiva. The contraction following on this was followed by great improvement. |

LIST OF OPERATIONS PERFORMED—*continued.*

| No. | Name. | Disease. | Operation. | Date. | REMARKS. |
|---|---|---|---|---|---|
| | | | | 1886. | |
| 48 | Rumala - - | Fissure lip - - | Plastic - - | 25th January - | Patient had received a severe cut from a stone four years previously; this had healed badly, quite simulating a hare-lip. Freshened edges of the wound and brought together with hare-lip pins and sutures. Result, cure. |
| 49 | Banpa - - | Fissure in ano - | Incision - - | 25th ,, - | Same patient as No. 35. Operated upon, more than a month ago, for hæmorrhoids. These appeared to be cured, as no further bleeding, but pain after defæcation continued. Careful examination revealed a fissure in posterior part of rectum. Incised base of this and cut into the sphincter, producing immediate relief. |
| 50 | Duran Khan - | Anchylosis of knee joint. | Forcible extension | 30th ,, - | This patient came in from Chilas. Two years previously received a sword cut over left knee which apparently opened the joint, resulting in firm anchylosis in a position of extreme flexion, making the limb completely useless. Under chloroform I did "Huttoning," and broke down the adhesions till I got the limb to within 20° of straight. This required the exercise of very great force. The patella was so firmly adherent that I feared to do more lest post-dislocation should be produced. The limb was fixed on a "Macintyre" splint, and by careful bandaging and gradual extension with the screw of the apparatus was brought very nearly straight. After about six weeks' treatment the man left for his home, walking with only a slight limp. |
| 51 | Ramatula Khan - | Pterygium - - | Excision - - | 3rd February - | This man was Wazir of Ali Murdan Shah of Wakhan. He had pterygium just commencing to encroach on the cornea in both eyes. When seen again in June he was quite cured. |
| 52 | Amin - - | Entropion - - | Plastic - - | 3rd ,, - | This was a bad case, both upper and lower lids being affected in both eyes. Removed elliptical pieces of skin and strips of orbicularis muscle from all four lids. Result, cure. |
| 53 | Juma Khan - | Deafness - - | Division of scar on memb. tympani. | 3rd ,, - | Deafness in both ears. Memb. tympani, and ossicles had disappeared in one ear; in other a dense scar on the membrane. Having seen accounts of benefit in such cases from division of the scar, I did this with a cataract knife, but no improvement resulted. |

LIST OF OPERATIONS PERFORMED—*continued.*

| No. | Name. | Diseases. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| | | | | 1886. | |
| 54 | Mohri | Phymosis | Slitting prepuce | 4th February | Case and operation as No. 19. Result, cure. |
| 55 | Kishen Singh | Necrosis | Removal of sequestrum. | 4th ,, | Sowar Kishen Singh, soldier surveyor, injured his thumb with a piece of bone on the march from Chitral. Septic inflammation and necrosis of terminal phalanx followed. This was now removed. |
| 56 | Mirza Khan | Rodent ulcer | Excision and plastic operation. | - - - | Patient, an old man from Chilas. The greater part of left side of nose and part of cheek had been destroyed by an ulceration that had lasted three years. The edges were indurated, but no glands implicated. Cut away the whole of the ulcerated surface, cutting wide of the indurated edges, and removing also a portion of the nasal and superior maxillary bones that appeared dangerously near the base of the ulcer. Then brought down a flap from the forehead, as in the operation of restoration of lost nose. The gap was a very large one, and required a larger flap than in the case of that operation, but it united by first intention, and the wound on the forehead also healed rapidly. I was unable to persuade him to stay long enough to perform the second operation of cutting the connecting bridge, as he was quite contented with the result without it. |
| 57 | Ali Mir Khan | Pterygium | Excision | 5th ,, | An ordinary case. Both eyes operated on. Result, cure. |
| 58 | Mista | Chronic ulcer | - | 9th ,, | Patient, a boy with ulcerated surface, of 12 months' duration, on the left temple. This formed the centre of a largish scar, and seemed unlikely to heal in any moderate time. A small flap of skin, raised from above, and twisted into the site of the freshened scar, the gap of the fresh wound being closed by sutures. Both wounds now healed rapidly. |
| 59 | Shah Mir Khan | Necrosis of femur | Removal of sequestrum. | 19th ,, | A similar case to No. 30. The sequestrum formed of a portion of the posterior surface of the femur in the popliteal region, about 2 inches by 1. After breaking in two, it was removed with but little difficulty. |
| 60 | Kalu | Phymosis | Slitting prepuce | 19th ,, | Hindu Kashmir. sepoy. Similar case to No. 19, &c. |
| 61 | Akbar Shah | Stone in bladder | Lithotomy | 24th ,, | Left lateral operation. Stone of medium size. Result, cure. |

LIST OF OPERATIONS PERFORMED—*continued.*

| No. | Name. | Disease. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| | | | | 1886. | |
| 62 | Feroz Khan - | Stone in bladder - | Lithotomy - - | 25th February - | A Hazara Pathan, about 20 years of age. Stone of medium size. Result, cure. |
| 63 | Birbul - - | Tumour (fatty) - | Excision - - | 25th „ - | A small fatty tumour from scapular region. Result, cure. |
| 64 | Shah Khan - | Polypus auri - | Avulsion - - | 28th „ - | Mucous polypus torn away by means of forceps and silk loop. |
| 65 | Abdulla - - | Stone in bladder - | Lithotomy - - | 9th March - | Left lateral operation. Stone of medium size. Result, cure. |
| 66 | Jamat Khan - | Keloid tumour - | Excision - - | 26th „ - | A large raised keloid growth, occupying the whole of the left side of forehead, between eyebrow and hair. Excised the growth, and brought sides of the wound as nearly as possible together vertically. The wound healed quickly and well. |
| 67 | Muhammad Pana | Obstruction of nasal duct. | Slitting canaliculus | 29th „ - | An ordinary case of obstructed duct, with chronic inflammation of lachrymal sac. Slit canaliculus, and passed Bowman's probe, followed by a style, which kept in for 14 days. Result, cure. |
| 68 | Mulla - - | Stone in bladder - | Lithotomy - | 29th „ - | Left lateral operation. Stone medium size. Patient æt 25. Result, cure. |
| 69 | Halu - - | Phymosis - - | Slitting prepuce - | 29th „ - | Hindu sepoys of Maharaja's regiment. Cases and operation similar to No. 19. |
| 70 | Hansa - - | Ditto - - | Ditto - | 29th „ - | |
| 71 | Rhumu - - | Anchylosis knee joint | Forcible extension | 20th „ - | Patient, a little girl about nine years of age. Consequent on old chronic disease of knee joints, now cured, both knees were fixed in a position of extreme flexion, and the child was completely helpless, being able only to crawl about in a sitting posture by means of her hands. Under chloroform, I extended forcibly both knee joints, bringing them to within 20° of straight, and fixed in gum and chalk bandages. Rigidity of the tissues prevented further extension on that occasion, as skin over popliteal region showed signs of yielding. After about a week she was able to get about on crutches in erect posture. A month after the bandages were removed it was found that the skin behind joint had improved in nutrition and softness. Complete extension was now performed, under chloroform, and bandages replaced. In a few weeks she was able to walk without artificial aid. |

LIST OF OPERATIONS PERFORMED—*continued.*

| No. | Name. | Disease. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| | | | | 1886. | |
| 72 | Ghulam Shah - | Fistula frontal sinus | Plastic - - | 4th April - | Patient 14 months ago received a blow on forehead with a stone, fracturing outer table and opening left frontal sinus. A fistulous opening into this remained. The communication with œthmoidal cells appeared free. Dissected away the funnel-shaped scar, and brought edges of wound with sutures. *See* No. 76. |
| 73 | Idyat Shah - | Fibrous anchylosis wrist. | Forcible extension | 4th „ - | Twelve months ago fell, and fractured fore-arm near wrist. The wrist and all the finger joints firmly bound by fibrous adhesion, and quite useless. Under chloroform forcibly broke down the adhesions, so as to restore motion to all the joints affected. |
| 74 | Juma Khan - | Clubbed hands - | Plastic - - | 5th „ - | Both hands clubbed from cicatricial contraction after burns. The right hand had suffered mainly on ulnar and palmar aspects, the little finger being completely united to palm, and all the other fingers bound, so that only a very small opening of the hand was possible. The left hand was most injured on the dorso-ulnar aspect, the little finger being dislocated and united to the back of the hand, and the other fingers so drawn back that they could not be opposed to the thumb. In each case dissected away the cicatricial bands, and freed all but little fingers, leaving large gaps on palm and dorsum respectively; then dissected out the bones of the useless little fingers, and so obtained large skin flaps, which were twisted into the gaps left by freeing the other fingers. A pair of hands, with three freely moveable fingers on each, resulted. |
| 75 | Debia - - | Internal hæmorrhoids<br>Fissure in ano - | Injection of carbolic acid.<br>Incision. | 6th „ - | In this case the whole mucous membrane appeared in a hæmorrhoidal condition, turgid and bleeding at a touch, but with no localised varices. Injected pure carbolic acid by hypodermic syringe into most prominent portions. Divided base of the fissure and sphincter. Result, cure. |
| 76 | Gu'am Shah - | Fistula frontal sinus | Plastic - - | 9th „ - | *See* No. 71. Wound healed by first intention, but secretion accumulated underneath, and ultimately tore open the new cicatrix. Accordingly drilled a free passage through the spongy bones, from frontal sinus into middle meatus. Case was doing well when I left Gilgit. |

LIST OF OPERATIONS PERFORMED—*continued.*

| No. | Name. | Disease. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| 77 | Walli - - | Tumour lumbar region. | Exploratory incision | 1886. 9th April - | Patient had been ill for many weeks, and was carried into hospital in a helpless state, complaining of great agony; referred to lumbar region. An ill-defined tumour could be made out very deep in left loin. The diagnosis appeared to lie between abscess and renal calculus. I cut down upon the tumour, but could make out no definite growth or stone. No pus or urine escaped from the wound, but on recovery from the anæsthetic the patient was free from pain, and ultimately left quite cured. I have never been able to understand this case. |
| 78 | Asmal Khan | Fissure of lip - | Plastic - - | 9th „ - | Result of badly-healed wound. Treated as for hare-lip. |
| 79 | Kashmir - - | Loss of nose - | Plastic - - | 11th „ - | The result of a judicial mutilation done 20 years ago. Brought down flaps from forehead. The new nose united excellently. I had, however, no opportunity of doing the second operation. |
| 80 | Narain - - | Vascular tumour - | Injection carbolic acid. | 11th „ - | Patient had inner half left lower lid occupied by a vascular growth, which lately had shown tendency to spread. Injected pure carbolic acid into the substance of the growth. This caused it to shrink up without any sloughing. |
| 81 | Shah Murad - | Contracted finger - | Plastic - - | 18th „ - | Finger bound by cicatrix of burns. Dissected away the cicatrix, and shifted the scar to side by incision on one side of joint. |
| 82 | Kasir - - | Pannus - - | Removal - - | 25th „ - | Dissected off, and brought conjunctival wound together with stitch |
| 83 | Tu'u - - | Leucoma - - | Iridectomy - | 25th „ - | Lower half cornea opaque Pupil excluded. Made an artificial pupil opposite clear part of cornea. Result, useful sight. |
| 84 | Tulu - - | Leucoma - - | Iridectomy - | 25th „ - | Central opacity. Made inferior, artificial pupil. The man, who was practically blind before, obtained useful vision. |
| 85 | Nasir Mohamed - | Leucoma - - | Iridectomy - | 26th „ - | Lower half cornea opaque, iris adherent to scar, pupil excluded, made superior artificial pupil. |

LIST OF OPERATIONS PERFORMED—*continued.*

| No. | Name. | Disease. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| | | | | 1886. | |
| 86 | Gulam | Epitheleoma | Excision | 26th April | Large epitheleomalous growth over left malar bone. Cervical glands unaffected. Excised the growth and neighbouring skin. |
| 87 | Khul Murud | Epulis | „ | 17th May | Tumour about size of a nut, springing from superior maxilla. Excised. |
| 88 | Saif Azir | Leucoma | Iridectomy | 27th „ | Central corneal opacity. Made infero-external artificial pupil. |
| 89 | Ghulam Haidar | Old iritis | „ | „ | Cornea clear, but pupil excluded from old iritis. Made artificial pupil which allowed vision, though margin of lens obscured centrally by pyramidal cataract. |
| 90 | Ghafar Khan | Ptyrigium | Excision | „ | Patient is the Hakim of Wakhan. Ptyrigium in each eye, which has encroached about 1 m. on to cornea. Excised. Conjunctival wound sutured. |
| 91 | Saif Azir | Leucoma | Iridectomy | 2nd June | Opacity central. Made external artificial pupil. |
| 92 | Mukhtur | Cataract | Extraction | 7th „ | Patient blind from birth, from congenital cataract. Both lenses extracted through linear incision 2 m. above equator. We marched next morning at daybreak, so result unknown. |
| 93 | Muhammad Hussian. | Leucomata | Iridectomy | 13th „ | Lower halves of cornea opaque and inflamed. Superior iridectomy done. |
| 94 | Bahi | Polypus nasi | Avulsion | „ | Mucous polypus. Torn out with forceps and meatus cauterised freely with Ag. N. $O_3$. |
| 95 | Daulat | Anchylosis | Forcible extension and tenotomy. | „ | Right foot fixed in extension from old inflammation following injury. Divided tendo-achilles subcutaneously and tried to break down adhesions, but could not effect complete flexion. |
| 96 | Muhammad Hakim | Onychia | Amputation | 13th March | Top of third finger quite disorganised from effects of neglected onychia necessitating amputation last phalanx. |

LIST OF OPERATIONS PERFORMED—*continued.*

| No. | Name. | Disease. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| | | | | 1886. | |
| 97 | Khuda Beg | Pterygium | Excision | 15th July | Excision and suture conjunctival wound. |
| 98 | Phukr Ali | Pterygium | Excision | 16th July | Right eye external. |
| 99 | Mir Muhammad | „ | „ | „ | Both eyes, internal. |
| 100 | Gulbaz | Exclusion of pupil | Iridectomy | 1st August | This patient was operated on last year when passing through this village for cataract. Cornea clear, but sight prevented by the iris having prolapsed during healing, and closed pupil. Made artificial pupil; next day had some sight. |
| 101 | Delta | Hæmorrhoids | Ligature | 2nd „ | A severe case of internal piles, causing much pain and bleeding. Six ligatures required. |
| 102 | Gulbaz | Cataract | Extraction | „ | Same patient as No. 100. Operated on the other eye, the transfixion made 2 m. above equator. Marched next day, so result unknown. |
| 103 | Khan | Stone bladder | Lithotomy | „ | Boy aged 14. Left lateral operation. Two stones extracted, one weighing 487 grains, the other 30 grains. Recovery. |
| 104 | Muzula Khan | Leucoma | Iridectomy | 6th „ | Central opacity. Made inferior artificial pupil. Good sight. |
| 105 | Soral | Stone bladder | Lithotomy | „ | Left lateral operation. Patient æt. 12 years. Stone moderate. Recovery. |
| 106 | Mohun | Caries | Amputation | „ | Disease of metacarpo-phalangial joint left middle finger. Necrosis and caries component bones. Removed finger and excised upper half of metacarpal. |
| 107 | Suka | Hæmorrhoids | Ligature | „ | Severe case of internal piles. Several ligatures required. |

LIST OF OPERATIONS PERFORMED—*continued.*

| No. | Name. | Diseases. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| | | | | 1886. | |
| 108 | Galdi | Leucoma | Iridectomy | „ | Central opacity. Superior external artificial pupil. |
| 109 | Mubammad Jan | Ptyrigium | Excision | „ | Both eyes, internal. |
| 110 | Noti | Leucoma | Iridectomy | 6th August | Central opacity. Made interior artificial pupil. |
| 111 | Ramzan | Laceration of hand | Trimming stump | 6th „ | Cartridge exploded in left hand, badly cutting and burning it. It was necessary to remove a portion of index and to splint for fractures of small bones. |
| 112 | Runjit | Cataract | Extraction | 6th „ | Senile cataract, both eyes, of eighteen months' duration. Has good perception of light. Transfixion 2m. above equator. Wound healed first intention. Will have fair sight. |
| 113 | Runga | Phymosis | Slitting prepuce | 7th „ | Hindu sepoy of Maharaja's regiment. Case as No. 19. |
| 114 | Data Ram | Lymph in pupil | Extraction and iridectomy. | 7th „ | Patient received a blow on the eye eight years ago. Some pain and redness of eye followed, and sight lost from time of injury. The pupil was occupied by a curtain of lymph, taking the place of the lens. This vibrated distinctly when the head was sharply moved, and was adherent to iris at one small point on the inside. I first tried to tear away the lymph with two needles. The sides of the tear, however, always fell together. Failing this, I made an infero-external iridectomy, but found whole space behind iris occupied by the lymph. I then with the iris forceps caught hold of the lymph and drew it out of the eye, leaving a black pupil. The instant the instrument was withdrawn the man exclaimed—"I can see with it." The wound healed by first intention, the man retaining good useful vision. The lens appear to have been dislocated and absorbed, for I could make out no trace of it. The whole of the lymph was not removed, an irregularly-shaped central pupil only being torn out from it. |

| No. | Name. | Disease. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| | | | | 1886. | |
| 115 | Muhammad - | Sympathetic ophthalmitis. | Enucleation of eyeball and iridectomy. | 7th „ - | This patient's right eye was completely disorganized from old panophthalmitis. The left eye inflamed sympathetically. Enucleated right eye, and did an iridectomy behind clearest portion of cornea of left eye. The latter eye was in a fair way to recovery when I left Astor. |
| 116 | Natu Malik - - | Leucoma - - | Iridectomy - | 7th „ - | Central corneal opacity; made infero-external artificial pupil. |
| 117 | Fulad Khan - | Ptyrigium - - | Excision - - | 7th August - | Both eyes, internal. |
| 118 | Firoz Khan - - | Ditto - - | Ditto - - | 7th „ - | Both eyes, internal. |
| 119 | Salam - - | Clubbed hand - - | Plastic - - | 7th „ - | Hand much contracted from burns. Thumb bound across the palm. Freed the thumb and excised a ragged nail from stump of middle finger, which interfered with grasping power. |
| 120 | Ali Khan - - | Necrosis - - | Removal of sequestrum. | 7th „ - | Several sinuses over right scapula. Laid open sinuses and removed vertebral border of scapula, which was lying necrosed at bottom of sinuses. Patient, a young child, in which the ossification of vertebral border had not united with body of the bone. |
| 121 | Sohandi Malik - | Leucoma - - - | Iridectomy - - | 7th „ - | Opacity central. Made artificial pupil behind clearest portion of cornea. |
| 122 | Shukri - - | Lachrymal fistula - | Slitting canaliculus | 8th „ - | Lachrymal fistula on cheek. Nasal duct obstructed. Slit canaliculus. Probed the duct, and passed style, which was retained for a week. At first the fistula did not improve, but a few days after the operation a number of strips of birch bark were found in the sac. These having been removed, the case improved rapidly. |

LIST OF OPERATIONS PERFORMED—*continued.*

| No. | Name. | Diseases. | Operation. | Date. | Remarks. |
|---|---|---|---|---|---|
| | | | | 1886. | |
| 123 | Gulam Ali - | Hæmorrhoids - | Ligature - - | 10th „ - | An ordinary case of internal piles requiring several ligatures. |
| 124 | Shuker Ali - - | Necrosis - - - | Removal of sequestrum. | 10th „ - | Sinus on outer part of thigh just above knee, leading down to a sequestrum of part, surface of femur in poplitial space exactly as in the two previous cases, Nos. 30 and 59. The sequestrum was about 1½ inches long by ¾ inch wide, and was so completely covered with new bone of ivory hardness that great difficulty was met with in getting it out. No chisel I possessed would touch the new bone, and it took me nearly two hours to get the dead bone out by breaking it to pieces with an elevator and picking out the bits piecemeal with various kinds of forceps. |
| 125 | Fugli - - | Compound fracture radius and ulna. | Reduction - - | 14th August - | Patient, a young woman on whose arm a heavy stone had fallen nine days before. There was a large wound over back of wrist, through which an inch of the upper fragment of radius projected. Arm immensely swollen and wound full of maggots. The projecting part of radius was white and dead. I cut off pieces with bone forceps till a bleeding surface was obtained, made free incisions into the brawny parts of forearm, and put up the fracture on an internal angular splint, covered with water-proof sheeting. Three days after, when I left Astor, the wound was in a healthy condition and all swelling subsided. A relative was instructed how to dress the wounds. |
| 126 | Ranjit - - - | Cataract - - | Extraction - - | 16th „ - | Left eye of same patient as No. 112. Transfixion 2m. above equator. Operation satisfactory, but result unknown, as I left Astor before it could be ascertained. |

# APPENDIX.

## Remarks on the Transport of Medicines in Mountainous Country.

As already mentioned, the pair of "Field Panniers" rendered me excellent service. One or two slight modifications have been, I find, made in the details of their construction since these were issued. In the main, however, mine were of the present pattern.

No one can be impressed more than myself with the extreme ingenuity that has been displayed in their construction and the great excellence of the results. However, not unnaturally, after 15 months' experience with them, under circumstances closely assimilated to those of active service, a few modifications suggested themselves to me.

The present perfection of the pannier is the result of repeated small modifications by various officers, and I feel that, at any rate, no harm can result by bringing these suggestions to the notice of judges more competent than I to decide as to their desirability.

### *Pannier No.* 1.

It will be noticed that a considerable portion of the space in the miniature dispensary is taken up with the padded partitions, which are absolutely necessary for the transport of glass bottles.

This necessarily limits greatly the quantity of each drug that it is possible to carry.

Tin bottles if fitted with ordinary corks are never reliable, as, for some reason they nearly always leak, however carefully chosen the cork may be. If, however, they be fitted with solid India-rubber corks, such as are used in chemical laboratories, they never leak, and are practically unbreakable, and so may be packed in rows in contact with each other with only an unpadded division between the rows. Of the drugs carried, *e.g.*, Nos. (3) Spirits, (4) Sp. Ammon. aromat., (5) Tinct. camph. co., (6) Ipecac. pulv., (7) Acid. carbol. glaciale, (8) Sp. Etheris, (9) Tinct. opii, (12) Chlorodyne, (17) Ipecac. and opium pills, (18) Pulv. ipecac. co., (22) Acid gallic, (24) Camph. opium and capsicum pills, (26) Jalapine, (30) Opium pills, (31) Calomel and opium pills, (32) Quinine pills, (33) Acetate of lead opium, and calumba pills, (34) calomel rhubard and colocynth pills, (35) Liq. epispasticus, might be carried in such bottles.

I have heard objections made to the use of the tin receptacles for pills on account of the tendency the latter have to stick to the metal. There

is, however, a material in the market, which, from its fine surface, would I think, be free from this objection.

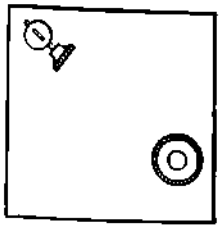
I allude to the thin sheet copper, coated with silver, used for making the reflector of carriage lamps. It is not expensive, and, if not exposed to much friction, wears for a very long time. Vessels made of it would have an outer copper and an inner silvered surface.

Oily materials, such as "Phenyle," cannot be carried on account of their action on the rubber corks, and acids obviously cannot, on account of their action on the metal. Chloroform also acts on the rubber. It is one of the most vitally important of the contents of the pannier, and the present bottles are rather small for field service, and, moreover, their glass caps were about the only glass items that got broken under the rough test to which mine were subjected.

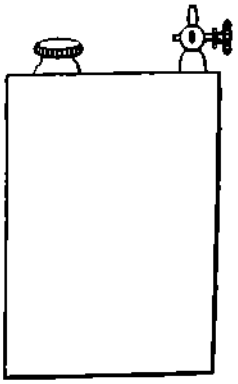
On this account I would suggest a metal vessel of the following description, one of which I have had in use for absolute alcohol for many years. It formed the spirit reservoir of a portable set of histological requisites that I contrived before leaving England, and, although it has had much rough usage, it has never leaked or allowed the least loss from evaporation.

The bottle is a rectangular vessel of thin sheet copper, and is provided at opposite corners with a small brass screw stopper for filling at the one, and at the other with a small tap. In use, the filling screw is loosened to admit air, and as much as is wanted is let out by the tap. Although it is nearly 40 oz. capacity, I can fill a watch glass from it without losing a drop, a property which would be of great use in measuring out small quantities of chloroform.

The figure explains itself.



Plan of top.



Elevation.

It might take the place of the bottle of water (No. 2), the necessity for which is met by a further suggestion below.

2. The ointment slab between the two sets of bottles.

Enamelled iron might, with advantage, be substituted for porcelain. This is lighter, and unbreakable.

3. The drawer containing the field operation case might be done away with as it is merely useless wood, and if the pannier gets wet becomes immovably jammed. The instrument case itself should form the drawer, the only modification required being a brass counter-sunk handle in front. This would admit of the case being made larger and the addition of one or two extra instruments which might be thought desirable, *e.g.*, Lion forceps are an instrument at least as likely to come into use, in modern military surgery, as the amputating instruments. One or two tooth forceps also are badly required, as violent toothache on the march often incapacitates a soldier.

The case, however, should still fit very loosely in the space into which the drawer at present slides, as it would be a great advantage to provide the case with an outside bag of waterproof sheeting, which, if made to fold over pretty widely, will often withstand even a temporary immersion.

If such a case be provided, the above-mentioned counter-sunk brass handle might be omitted, and a broad shallow groove should go round on all four sides of the box, which would have a transverse section, as below:—



A broad strap tightened round this would keep the fly of the waterproof case well closed, and would also serve as a handle for drawing out the case from its socket.

The splints might be packed with the instrument case in the waterproof bag.

*Pannier No. 2.*

4. The nest of dressing-trays are at present made of zinc. With their contents they fit rather tightly in their place, and are very apt to become leaky from getting strained in pulling out.

From their rough surface too it is almost impossible to keep them properly clean in the aseptic sense of the word.

Enamelled-iron can now be obtained of excellent quality, very thin, and would be a very clean and light material for such trays.

Vulcanite is another material that might be substituted, if preferred. It is extremely light, but has the disadvantage of being rather expensive and brittle.

5. The panniers contain no provision for holding a supply of water beyond one 16 oz. stoppered bottle, a great disadvantage in a field dispensary; so

that a stable bucket, or some other such vessel, none too clean, has often to be made to perform the duty.

This necessity might, I would suggest, be met by the addition to the equipment of a couple of "mushuks" made of waterproof sheeting. One should be sufficient capacity to hold from one to two gallons, and should be provided with a short India-rubber tube and stop-cock. Neck to be funnel-shaped for filling with brass screw to close, to be provided with a sling for carrying, and to suspend to tent pole. Tap to be made of vulcanite. Such an addition would be invaluable for dispensing and dressing, and would often be of great service for carrying water to wounded men. If water-proof sheeting be objected to as likely to deteriorate in this climate, the bag might be made of stout ship's canvas, which material practically holds water perfectly although the outside remains damp.

In the 5th Punjab Cavalry, every sowar is provided with a water bag of this material which is carried slung beneath the horse's belly. I was given to understand by Colonel Hammond that they found them very durable and that they answered their purpose admirably.

The smaller bag should be of a capacity of 40 ounces when quite filled, provided with a vulcanite tap and vulcanite neck cap, all metal being excluded from its construction, and with a short sling for hanging to tent pole. The tap to be immediately beneath the bag and two yards large soft rubber tubing attached to it. This latter to end in a vulcanite socket, as fig. 3, with the following nozzles made to fit the socket:—

(*a*) Ordinary irrigating nozzles - - Fig. 4
(*b*) Ear syringe nozzle - - - - „ 5
(*c*) Sinus nozzle - - - - „ 6
(*d*) Enema nozzle - - - - „ 7
(*g*) Stomach pump nozzle - - - „ 8
(*f*) Nozzle to fit mouth of No. 8 catheter.

This latter, if considered unnecessary, might be omitted, but would be a valuable addition in emergencies of poisoning.

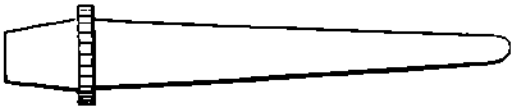


Fig. 4.
Irrigating nozzle.

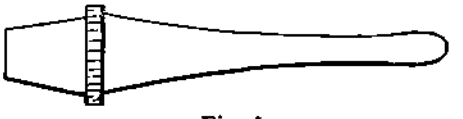


Fig. 5.
Ear syringe nozzle.



Fig. 6.
Sinus nozzle.

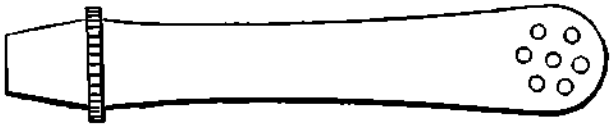


Fig. 7.
Enema nozzle.

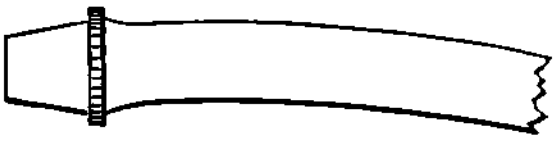


Fig. 8.
Stomach pump nozzle.
An ordinary stomach pump boujie with the upper end adapted to fit the conical socket.

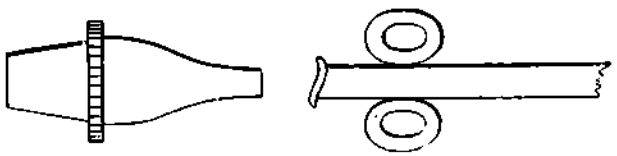


Fig. 9.
Nozzle to fit No. 8 catheter for washing out bladder.

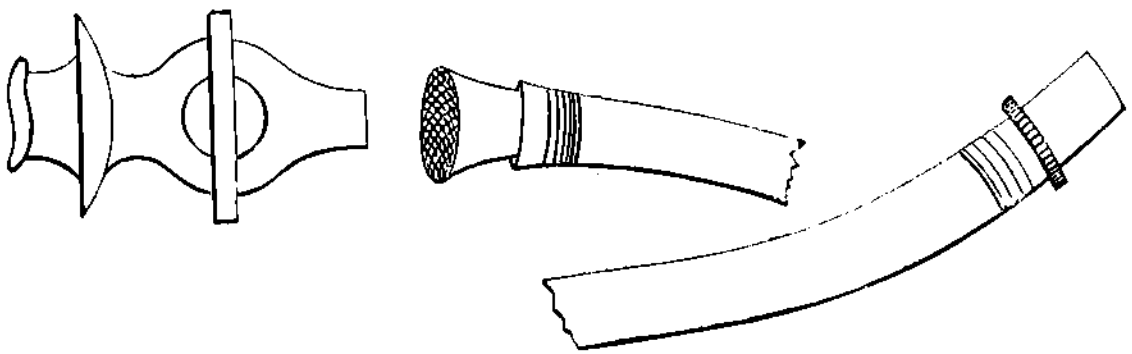


Fig. 10.
Fittings of irrigator, and its tube.

The purposes I design for this smaller bag are that it may serve as an irrigator ear syringe, enema apparatus, and stomach pump in one, as well as for washing out the bladder.

1. *As an irrigator.*—Powders ready weighed out of grs. x Hydrarj. perchlor. and of grs. viii Potassæ Permang. To make a supply of antiseptic lotion all that is required is to drop contents of two powders of Hydrarj. bichlor. into the bag filled with water, close screw and shake well.

The Potassæ Permang (for rapidly cleansing neglected wounds) would have to be dissolved in a measure glass in a couple of ounces of water, and added to the nearly filled bag as it is possible that the pure crystals might injure the bag where they rested, during solution. In the same way carbolic lotion might be made.

The "Sinous nozzle" is invaluable for washing out the track of bullet or bayonet wounds or ordinary fistulous channels.

2. *As an Ear Syringe.*—The bag is hung up to the top of a tent pole, so as to get a good pressure, the nozzle adjusted, and then the tap turned. I have long used an irrigator for this purpose, whenever obtainable, as the continuous stream is far more efficient in dislodging foreign bodies, &c. than the intermittent and unsteady action of the syringe.

3. *As an Enema Apparatus.*—Fill the bag with warm soap and water or nutrient material, as the case may be, turn the tap, and let a little run from the nozzle of enema, so as to expel air. Then introduce the nozzle, turn tap, and raise the bag gently, regulating the height according to sensations of the patient. It will be found possible to introduce the fluid into the rectum so much more gradually than by the ordinary apparatus, that a much larger quantity can ultimately be injected, even into an irritable rectum.

4. *As a Stomach Pump.*—Introduce the stomach pump boujie, connect it with socket of the tube of the bag, already filled with the warm water, turn the tap, and by gently raising the bag fill the stomach, letting about 10 or 15 oz. flow in. Now pinch the rubber tube with finger and thumb, just below the end where it is stipped on to the tap of bag, slip the rubber tube off the tap, and without loosening one's pinch of the tube, place the end on the ground. Now relax the fingers, and the siphon action of the tube will rapidly empty the viscus. If necessary, slip the tube on to the tap of bag, again refill stomach with water, and repeat the process.

5. *To wash out Bladder.*—Add ½ oz. glycerole boracic acid or other antiseptic to the bag, filled with blood-warm water. Let a little flow out of tube to expel air, and close the tap. Introduce catheter, allow some, but not all, the urine to flow from it, adjust the nozzle, and let the antiseptic solution flow into the bladder.

I may say that I have actually used an irrigator for all the above purposes, and find it in every way superior to the clumsy and expensive syringes.

The irrigator was, of course, an ordinary tin one, but the nature of the receptacle is, so far as the action of the apparatus goes, a mere detail.

The two "mushuks" might be packed on top of the two baskets in the No. 2 pannier, and I think the stomach pump boujie, in its tin case might, by a slight modification of the form of the basket or lid, find a place here also strapping it to the lid close to the hinges.

6. For rough antiseptic dressing, a tin of iodoform would be a most desirable addition. A tin of this might occupy the space at present filled by one chloroform bottle; and a supply of that most portable of all antiseptics, perchloride of mercury, take the place of the other.

## II.

### Suggestion for Small Medicine Boxes for Mountain Warfare.

The conditions of mountain service in India often necessitate the employment of coolie-carriage in the place of animals.

The "field panniers" were, I believe, originally designed with the view of being, if necessary, on a pinch, carried in this way. Weighing, however, about 80 lbs. each, they are, over rough ground, over which alone such a necessity arises, beyond the strength of a single man to carry, so that two men have to be told off to each to take turns in carrying them. Thus the two men only carry 80 lbs., whereas, if properly weighed with 50–60 lbs. each, they could carry 100 to 120 lbs. with no more fatigue.

On this account I would represent that it would be a desirable precaution if a few panniers were made up of the above weight, to meet such exigencies.

With coolie transport, the elaborate packing precautions indispensable with mule carriage are unnecessary, and, with the exception of such as are needed for glass bottles, but few partitions are necessary.

For our march through Hunza, where no baggage animals could be taken, I made up a couple of rough boxes to meet this necessity, and I append a short description of their general plan, with such modifications as experience suggests. The boxes were constructed of thin pine wood, dovetailed, not much over ¼ inch in thickness, covered over with leather, but perhaps raw cow-hide, shrunk on with hairy side out, will be better.

Lids should be made to slip on and off like the lid of a "bonnet-box," as the lids then form very useful trays for dressings, instruments, &c. when engaged in work. The lids may be secured by a couple of straps encircling

the box completely, but secured at one or two places by copper studs to the box to avoid loss.

*General Dimensions.*

Internal dimensions, 1′ 1″ × 1′ × 1′ 10″. Box No. 1. Medicines, &c. This has a vertical transverse partition, occupying whole depth of the box; width, 3 inches.

Remainder of space undivided, but contains a tray 5 inches deep.

Tray and partition to be made of $\frac{3}{16}$-inch pine wood. Tray to be strengthened by glueing over it strong unbleached calico.

Leather tongues at each end, on inner surface of tray, to lift out by.

Vertical space—details.

This is intended to hold rectangular tin bottles and a tin irrigator, with its fittings, bottles to occupy whole depth of the partition, each bottle 3″ × 2·4″ transverse section, 10″ high with necks and corks, &c. to about 2″.

These are intended for remedies of which it is necessary to carry a large quantity. Opinions would necessarily differ as to what should be the particular drugs. My own preference would be—

No. 1. Brandy.

No. 2. Castor-oil.

No. 3. Dilute carbolic acid (carbolic acid 10 parts, glycerine and rectified spirits *a.a.* 2½ parts. This mixture is fluid at all temperatures, and mixes readily with water in all proportions.

No. 4. Sweet-oil.

Nos. 1 and 2 to be fitted with india-rubber "corks."

Nos. 3 and 4 with ground brass plunger with screw top.

*Irrigator.*

The irrigator consists of a rectangular tin 3″ × 3″ × 10″, with hinged wire handle on one side. Brass tap soldered into middle of the bottom, with conical nozzle to fit the socket attached to rubber tube; total length of tap not to exceed 2¼.

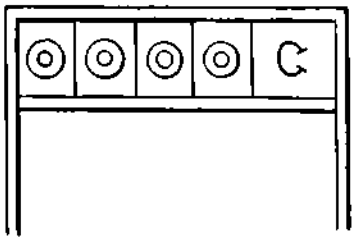
Into the irrigator fits a tin box, with hinged lid, just large enough to slide easily into the irrigator, its outside dimensions being about 2·9″ × 2·9″ × 9·9″. This box has a hinged wire loop at one end by which to draw it out of the irrigator. The interior is subdivided by a transverse partition 3″ from one end, and the larger portion first by a longitudinal partition one inch from the side.

The broader (2 inches) portion further subdivided into three parts to contain weighted-out papers of—

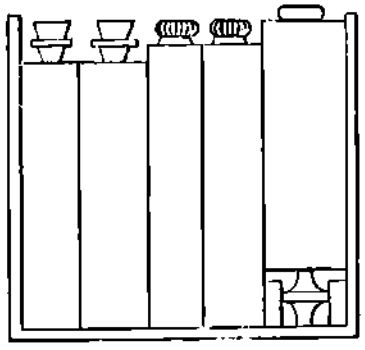
1. Perchloride of mercury.
2. Permanganate of potash (gutta-percha tissue to be used for wrapping in place of paper).
3. Boracid acid (or sulphate of zinc), &c.

The weights of drugs in each paper being that necessary to make an irrigator full of lotion.

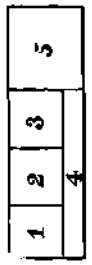
*See* figures—



Plan of deep space.



Section deep space.




Plan of box contained in irrigation.

The spaces in the box are packed as follows:—

No. 1 space. Papers, perchloride of mercury.

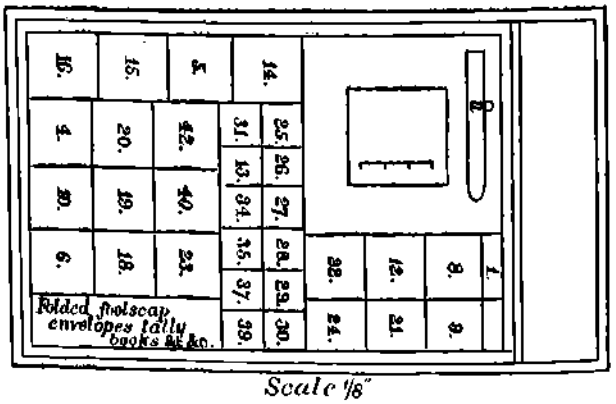
No. 2 space. Permang, potash.

No. 3 space. Boracic acid.

No. 4 space. Set of jets as before described, except stomach boujie.

No. 5 space. 1½ yard india-rubber tubing, with brass or vulcanite fittings at each end, to fit on one to the top of the integrator, and the other into the seats of nozzles and jets.

The available space in the tray is about 18″ × 12″ × 5″. This I would propose to occupy with the medicines, ointment, slab, &c., somewhat as in the figure below—

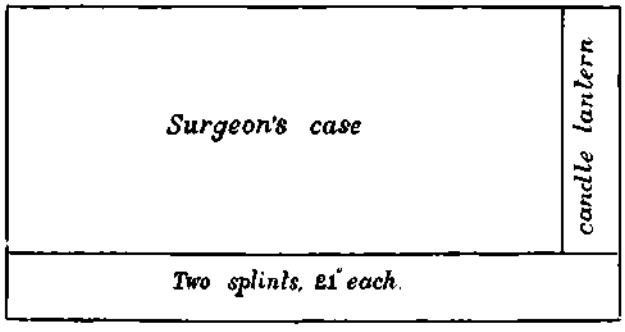



*Scale ⅛″*

The numbers refer to the same drugs as in the table on page 5 of Circular No. 7, Office of Surgeon-General, Her Majesty's Forces, dated 3rd May 1886.

The piece of wood in which the slab and spatulæ rest forms the lid of a space which might be occupied by the grain scales, measure glasses, pocket case, clinical thermometer, and portable stethoscope, hypodermic syringe, &c.

The second pannier might have two trays of 3 ins. deep, each resting on the other, and supported level with the top of the box by a couple of battens on its ends. The upper one might be divided as below—




The dressing materials, pestle, and mortar, nest of dressing, dressing-basins, &c., could be packed in the space below the tray in No. 1 box, and in the two remaining spaces of No. 2.

The space being even more limited than in the field panniers, it would be necessary to pack the articles in a less conveniently subdivided manner than is the case in them, but I believe that, by so saving space, most of the items of field pannier equipment might be included in the space.

I give the above description while well aware that it is extremely crude, and merely as an outline which would undoubtedly be much improved on as soon as the work was put in the hands of a practical operative.

The boxes that I constructed and used during our Hunza trip were ruder even than those suggested, as the country workmen were capable only of the roughest of work:—for example, old gunpowder tins were largely utilised for containing drugs (I happened to have brought with me a supply of india-rubber "corks"), and, although the necks of these tins are quite straight and very roughly soldered up, they retained tinctures, &c., perfectly. Had I not, however, made such an arrangement, the carriage of the necessary drugs would have been extremely difficult, as the panniers were too heavy to be taken, and I should otherwise have had to have taken all bottles, &c., separately packed in tow.

## CHAPTER VIII.

### Notes on the Collections of the Specimens of Natural History, by Surgeon Geo. M. Giles, M.B.

As I have already remarked in my other reports, the district over which the Mission worked is an extremely barren one. Lying well beyond the abundant rainfall of the outer ranges, the ground in general gets, as a rule, but one thorough wetting in the year, *viz.*, at the time of the melting of the snows. From this it follows that outside the limits of the irrigated cultivation, where hand of man has made oases, the flora is but a scanty one and is restricted to such hardy drought-resisting plants, such as *Artemisia Alsinthium*, &c.

The irrigated ground yields a flora entirely distinct from this, which can hardly be said to be truly indigenous, as nearly all its members have been introduced by the agency of man, either directly or indirectly.

A further exception exists in the narrow belt of hillside which lies just below the summer snow lines. Here continuous melting of the snows above produces a land of ever-moistened soil, which has a flora peculiarly its own, consisting mainly of Northern European forms, and which is quite distinct, alike from that of the dry and from the irrigated areæ.

Its bathymetric limits are from about 13,000 to 15,000 feet, and its character appears pretty uniform alike in the rainy regions of Kashmir and in the dry inner ranges.

On this account I made a practice of labelling plants, as a rule, with the words "dry," or "moist area," or "cultivated ground," as the case might be, in addition to the locality and the still more important datum of elevation. It is to be regretted that the list of the specimens identified at Kew, which have been returned to Saharanpur, consists merely of a bald list of plants, without in any way giving the information desirable from my labels as to locality, elevation, and soil. Had these additional particulars been added, the list would have become of interest, not alone to the systematic botanist, but to others whose interest in the science is attached to biological rather than to systematic questions.

The fauna of the district naturally partakes of the same characters as the flora in that it is scanty, and to a certain extent divisible into that of the dry

and that of the moist areæ. The region further is one from which it would be idle to expect any particular novelties amongst either animals or plants. Although a new ground to the geographer, it is but a small patch, the entire surroundings of which have been tolerably thoroughly explored; moreover, it so thoroughly resembles the Gilgit district throughout, a region which has long been open to the investigations of the naturalist, and has been pretty well worked out already by Dr. Scully and Major Biddulph, that it was hardly to be expected that anything particularly new or striking would reward my labours. Nor, indeed, have my expectations in this respect proved incorrect, and I believe one might write the fauna and flora of Dardistan as fully from Gilgit as from Chitral, and that anything which is found to be true of the one will ultimately be found to be so of both, and I shall be rather surprised than otherwise should anything more than a stray new species be found when the collection comes to be entirely worked out.

## I.—Botanical Collections.

For the purposes of botanical collecting I was provided with an efficient collector from the Saharanpur Gardens, so that with his aid I was able to obtain a tolerably complete record of the flora of the district. Collecting was commenced from the date of our leaving Bandipur, *i.e.*, the Kashmir Valley, and continued uninterruptedly until our return to Srinagar.

The specimens were collected in series of sets :—

(1.) From Bandipur to Gakuch, the Kashmir Frontier Post.

(2.) Specimens collected in Chitral territory, up to Chitral.

(3.) Specimens collected in Chitral territory during our visit to the elevated regions of the Dorah Pass and its neigbourhood.

(4.) From Gilgit through Hunza and Wakhan to the Dorah Pass.

(5.) The return route through Chitral

(6.) The return route through Kashmir.

Each set of specimens was ticketed with its distinguishing number in the series, its locality, elevation, and, as a rule, with the characters of the soil and any further remarks that might appear desirable. It was arranged that all botanical specimens should be sent in the first place to Dr. Duthie of the Saharanpur Botanical Gardens, to be then repacked for transmission to the authorities at Kew for identification and disposal.

During the next phase of the expedition about 350 species were collected, which, with the exception of those collected in the neighbourhood of the Dorah Pass, have already reached their destination and been worked out;

a list of these is appended, numbering 228 in all. During the second phase, between 700 and 800 sets were obtained, and have, doubtless, ere now reached England.

Necessarily the series contains a large number of duplicates, for, seeing that the main scientific result of the collection would be the light it might throw on questions of distribution, I collected afresh everything that came to hand in recognisable condition in each of the series named. Luckily we were blessed with a peculiarly dry climate, so that the drying of specimens, while continuously on the march, was possible. In a damper region it would have been impossible to have given them sufficient attention to ensure their arriving in good condition.

However, like the zoological and photographic collections, more than one valuable consignment was lost from damage by water during the transit to India. It was, indeed, with considerable misgivings that I let these things start on their way alone to India, but transport considerations made it imperative to despatch the things collected whenever the opportunity arose, and, once out of my hands, they could, of course, receive no further attention until they reached Saharanpur.

On the whole, however, I may say that my luck in this respect was good, as more than one parcel turned up safely which I had grave doubts of ever seeing again.

From a natural history point of view it is an unfortunate circumstance that our visit to the Pamir took place at the period of the year that it did. Coming, as we did, just after the snow had melted, but before the revival of vegetation, the collection was disappointingly small from the most interesting region of all we visited. Probably, too, the flora is a comparatively rich one, for the natives all agree in describing the ground as in summer literally carpetted with flowers.

A month later we should, no doubt, have reaped a rich harvest, not only of botanical but also of zoological material, but as it was, one could only look enviously at the apparently dead roots, the variety of which attested the beauty of what was shortly to come.

In May but few plants had even sprouted, and had it not been for a peculiar circumstance, my Pamir collection might have been numbered on the fingers. This was that a very large number of the plants are provided with inflorescences of a peculiarly permanent character. This character, which no doubt serves the object of preserving the seed during the long period for which the plants are buried under the snow, is especially marked on the higher parts of the Pamir at about 14,000 feet, and is the common characteristic of a large number of the plants of the region of widely different natural orders.

In one or two instances the preservation extended to the whole of the floral whorls, the andrœcium excepted, but in the majority of cases it extended to the calyx and gynœcium alone. Many of the plants were thus in a fairly recognisable condition, and collecting these naturally preserved herbarium specimens I was able to avoid the annoyance of coming away quite empty handed. Judging from experience of other parts of the range at the same level, I should say that August would be the best time of the year for a naturalist to visit the steppe.

Most of the other parts of our route were visited at two different periods of the year, *i.e.*, from August to November during the first phase, and from May to July in the second; and thus the collections from Chitrál probably represent the flora of this portion of Dardistan with tolerable completeness. In Hunza, as already mentioned, owing to the earliness of the season, practically nothing could be obtained, but the general physical characters of the district are so entirely identical with those of Gilgit and Chitrál, that it is in the last degree improbable that either its fauna or flora should be in any way different from theirs.

*List of Plants collected during the first phase of the Expedition, the identification of which have been returned from Kew.*

Clematis orientalis.—*L.*
Anemone polyanthes.—*Don.*
„ obtusiloba.—*Don.*
„ „ var. ?
Callianthemum cachemirianum.—*Camb.*
Caltha palustris.—*L.*
Trollius acaulis.—*Lind.*
„ sp.
„ sp.
Aquilegia vulgaris.—*L.* var.
„ „ var. pubiflora.
Podophyllum emodi.—*Wall.*
Corydalis rutæfolia.—*Sibth.*
„ Govaniana.—*Wall.*
Barbarea ? (No fruit.)
Nasturtium palustre.—*D. C.*
Arabis alpina.—*L.* ? (No fruit.)
Conringia planisiliqua.—*Fisch and Mey.*
Sisymbrium Wallichi.—*Hkf. and T.*
Erysimum altaicum.—*C. A. Mey.* ? (No fruit.)

Megacarpœa bifida.—*Bth.*
Thlaspi alpestre.—*L.*
Isatis costata.—*C. A. Mey.*
Chorispora sabulosa.—*Camp.*
Rhapanus sativus.—*L.*
Crucifer.—(Indeterminable.)
Capparis spinosa.—*L.*
Viola biflora.—*L.*
Dianthus anatolicus.—*Boiss.*
Silene inflata.—*Sm.*
„ conoidea.—*L.*
„ Moorcroftiana.—*Wall.*
„ afghanica.—*Rohrb.* ?
Arenaria kashmirica.—*Edgew.*
„ holosteoides.—*Edgew.*
Cerastium trigynum.—*Villars.*
Tamarix gallica.—*L.*
Myricaria germanica.—*Desv.*
Althæa, may be ficifolia (specimen inadequate).
Malva sp. n. ?
Gossypium herbaceum.—*L.*
Linum perenne.—*L.*
Tribulus terrestris.—*L.*
Geranium pratense.—*L.* var.
„ Grevilleanum.—*Wall.*
Oxalis corniculata.—*L.*
Peganum Harmala.—*L.*
Ruta tuberculata.—*Forsk.* ?
Pistacia integerrima.—*Stewart.*
Trigonella emodi.—*Bth.*
„ „ ?
Lotus corniculatus.—*L.*
Medicago lupulina.—*L.*
„ falcata.—*L.*
Trifolium pratense.—*L.*
„ repens.—*L.*
Colutea arborescens.—*L.*
Caragana nr. Gerardiana.—*Royle.*
Astragalus ciliolatus.—*Bth.*
„ Royleanus.—*Bge.*
„ sp.

Oxytropis Thomsoni.—*Bth.*
Alhagi maurorum.—*Desv.* var. ?
Hedysarum cachemirianum.—*Bth.*
„ astragaloides.—*Bth.*
Onobrychis laxiflora.—*Baker.*
Vicia mollis.—*Bth.*
„ tenuifolia.—*Roth.*
„ Faba.—*L.*
Lathyrus altaicus.—*Led.*
Cicer songaricum.—*Steph.*
Glycyrhiza glandulifera.—*W. and K.* ?
Lathyrus luteus.—*Baker.*
Fragaria vesca.—*L.*
Potentilla fragarioides.—*Led.*
Agrimonia pilosa.—*Led.*
Rosa Webbiana.—*Wall.* (Small form.)
„ „
Cotoneaster bacillaris.—*Lindl.*
Saxifraga sibirica.—*L.*
Parnassia ovata.—*Led.*
Ribes rubrum.—*Led.*
Datisca cannabina.—*L.*
Cotyledon Lievenii.—*Led.*
Sedum heterodontum.—*Hkf. and T.*
Epilobium angustifolium.—*L.*
Bupleurum falcatum.—*L.* var. ? (Without fruit.)
Carum Bulbocastanum.—*Koch* ?
Ferula Jœschkeana.—*Vatke.*
Sambucus Ebulus.—*L.*
Viburnum cotinifolium.—*Don.* var. *B.*
Lonicera quinquelocularis.—*Hardw.*
„ alpigena.—*L.* ? (*Specn. rotten.*)
Galium boreale.—*L.*
„ verum.—*L.*
Asperula cynanchica.—*L.*
Valeriana Wallachii.—*L.*
Morina Coulteriana.—*Royle.*
Scabiossa speciosa.—*Royle.*
Taraxacum officinale.—*Wigg.*
Erigeron alpinus.—*L.*
Leontopodium alpinum.—*Cass.*

Anaphalis contorta.—*Hkf.*
Inula obtusifolia.—*Kern.*
(I. Thomsoni, Clarke.)
Achillea millefolium.—*L.*
Chrysanthemum Richteria.—*Btl.*
Artemisia sp. nr. salsoloides and scoparia.
Senecio coronopifolius.—*Desf.*
„ chrysanthemoides.—*D. C.*
Echinops cornigerus.—*D. C.*
Arctium Lappa.—*L.*
Cnicus nr. argyracanthus.—*D. C.*
Cichorium Intybus.—*L.*
Lactuca dissecta.—*L.*
Scorzonera divaricata.—*Turcz.*
Codonopis ovata.—*Bth.*
Pyrola rotundifolia.—*L.*
Primula denticulata.—*Sm.*
„ rosea.—*Royle.*
„ Steuartii.—*Wall.* var. Purpurea.
Androsace Aizoon.—*Duby.*
„ rotundifolia.—*Hardw.*
Syringa emodi.—*Wall.*
Apocynum venetum.—*L.* (?) var. Foliis emarginatis.
Cynanchum glaucum.—*Wall.*
„ acutum.—*L.*
Erythræa Meyeri.—*Bge.*
Gentiana carinata.—*Grieseb.*
Jœschkea gentianoides.—*Kurz.*
Myosotis sylvatica.—*Hoffm.*
Paracaryum heliocarpum.—*A. Kern.* ? May be Cynoglossum macrostylum.—*Bge.*
Lindelofia spectabilis.—*Lehm.*
Solenanthus circinnatus.—*Ledeb.*
Arnebia tibetana.—*Kurz* ? ?
Mertensia echioides.—*Bth.*
Onosma „ —*L.*
Heliotropium luceum.—*Poir.* ?
Convolvulus arvensis.—*L.*
Solanum nigrum.—*L.*
Hyoscyamus niger.—*L.*
Physochlaina prælta.—*Hkf.*

Datura Stramonium.—*L.*
Verbascum Thapsus.—*L.*
Linaria ramosissima.—*Wall.*
Scrophularia lucida.—*L.*
Veronica Beccabunga.—*L.*
Euphrasia officinalis.—*L.*
Pedicularis pectinata.—*Wall.*
„ siphonantha.—*Don.*
„ pycnantha.—*Boiss.*
Orobanche cernua.—*Lœffl.*
Thymus serpyllum.—*L*
Mentha sylvestris.—*L.*
„ „
Calamintha Clinopodium.—*Bth.*
Scutellaria prostrata.—*Jacq.*
Dracocephalum Ruprechtii.—*Regel.*
„ nutans.—*L.*
Nepeta discolor.—*Bth.* ?
„ connata.—*Bth.*
„ nr. salviæfolia (calyx longer).
„ ? *Cf.* glutinosa.
Phlomis bracteosa.—*Royle.*
Plantago lanceolata.—*L.*
Chenopodium Botrys.—*L.*
„ virgatum.—*L.*
Kochia prostata.—*Schräd.* ?
Salsola collina.—*C. A. May.*
Atriplex *cf.* laciniata.—*L.* (No flower nor fruit.)
(?) Perhaps Chenopodiaciæ (Indeterm.)
Polygonum paronychioides.—*C. A. May.*
„ hydropiper.—*L.*
„ rumicifolium.—*Royle.*
„ alpinum.—*L.*
„ Brunonis.—*Wall.*
Fagopyrum esculentum.—*Mœnch.*
Rumex hastatus.—*Don.*
„ *sp.* (specimen inadequate).
Rheum *cf.* Webbianum.—*Royle.*
Daphne oleoides.—*L.*
Euphorbia Chamœsyce.—*L.* ?
„ *sp.*

Euphorbia Thomsoniana.—*Boiss.*
„ *sp.*
Cannabis sativa.—*L.*
Salix *sp.*
„ *cf.* elegans.—*Wall.*
„ pycnostachys.—*Anders.* ?
Ephedra vulgaris.—*Rich.*
Spiranthes australis.—*Lindl.*
Orchis latifolia.—*L.*
Iris kumaonensis.— *Wall.*
Polygonatum verticillatum.—*All* ? (too young).
„ „ var. gracile.
Fritillaria Roylei.—*Hook.*
Gagea lutea.—*Ker.*
Tulipa stellata.—*Hook.* var.
Eremurus himalaicus.—*Baker.*
Allium blandum.—*Wall.*
„ Semenovii.—*Regel.*
„ Griffithianum.—*Boiss.*
Juncus bufonius.—*L.*
Cyperus stoloniferus.—*Retz.*
Carex cruenta.—*Nees.*
„ hirtella.—*Dreyer* ? (very young).
„ nr. sanguinea.—*Booth* (very young).
Setaria viridis.—*Beauv.*
Pennisetum flaccidum.—*Giesb.*
Saccharum spontaneum.—*L.*
Andropogon (Cymbopogon laniger.—*Desf.*).
„ Ischœmum.—*L.*
Chrysopogon echinatus.—*Nees.*
Stipa pennata.—*L.*
capillata.—*L.*
„ *L.*
Calamagrostis nepalensis.—*Nees* ?
Avena fatua.—*L.*
Cynodon dactylon.—*Pers.*
Phragmites communis.—*L.*
Eragrostis pilosa.—*Beauv* (E. verticillata.—*Beauv*).
Melica Jacquemonti.—*Done.*
Kœleria cristata.—*Pers.*
Poa soongarica.—*Gris.*

Poa trivialis.—*L.*
„ laxa.—*Hœnke.*
Festuca ovina.—*L.*
Bromus arvensis.—*L.*
„ inermis.—*Less.*
„ confinis.—*Nees?* (= Jacquem 317).
Bromus racemosa.—*L.*
„ sp. ?
„ sp. ?
Agropyrum (Triticum repens.—*L.*)
Dactylis glomerata.—*L.*
Elymus nr. pseudœgropyrum.
Cystopteris fragilis.—*Bernh.*
Adiantum capillus-Veneris.—*L.*
Asplenium septentrionale.—*Hoffm.*
Equisetum palustre.—*L.*
„ elongatum.—*Willd.*

## II.—Zoology.

The collecting of animals is a very different business from that of plants. Once a herb has reached the haven of a couple of sheets of botanical paper, it is safe until the next day at least, and in a dry climate for even a day or two more, if circumstances should conspire to prevent one from giving it the amount of changing desirable. An animal, however, has either to be skinned or placed with careful packing in spirit processes, which take so much time that it is often impossible to undertake them in the short remnant of the day left after a march. Thus, while botanical collecting can go on uninterruptedly, it is far otherwise in the case of zoological work, which can only be efficiently carried on during a halt; moreover, my stock of spirit, necessarily very small to commence with owing to transport consideration, was further much diminished by the breakages which were inevitable on such rough roads, so that I had to exercise the strictest economy of this article, employing it only for small animals such as could not otherwise be preserved.

I laboured too under the disadvantage of having no taxidermist, beyond a rude mountaineer whom I employed at my own expense to shoot for me, and whom I ultimately taught to be a pretty fair skinner. From these combined causes the collection is not a large one, although all my preservative material was utilized to the last drop.

The collection consists of about 300 specimens of birds, about 20 of mammalia, and a few reptiles, batrachians, and fishes, besides a number of bottles containing many hundreds of specimens of insects, arachnida, and crustacea, and a small, but, I believe, tolerably complete, collection of lepidoptera preserved in the dry state. With exception of the reptiles and amphibians, which present certain doubtful characters that make it desirable that they should be examined by some specialist in these branches, I have been able, during the two months allotted to me, to work up the vertebrate collection, and I append herewith the results. The determinations have been confirmed in nearly all cases by comparison with the large collections of the Indian Museum, and, in the few instances where no companion specimens were available, by reference to the excellent library of that institution.

The collection of Lepidoptera has already been determined by Mr. L. de Niceville, F.E.S., one of the best authorities on the subject in India, and whose list I also append.

The remaining entomological collection, as well as the Arachnida and Crustacea, will, by the advice of Mr. Wood-Mason, the Superintendent of the Indian Museum, and through his agency, be referred for determination to European specialists in their several branches. In particular, I may mention that the Arachnida are to be sent to M. Eugene Simon, the celebrated French arachnologist, for determination and description.

*Mammalia.*

1. Vesperugo pipistrellus.—*Schreber.*
2. Vulpes montanus.—*Pearson.*
3. Vulpes rufescens.
4. Martes abietum.—*Ray.*
5. Arctomys caudatus.—*Jacquemont.*
6. Pteromys oral.—*Tichell.*
7. Eupelaurus cinereus.—*Thomas*, g. et sp. nov. This specimen was brought in alive at Gilgit, and appeared to answer best to the description of Pteromys melanopterus. A. M. Edwards thought it differed in several points. Dr. Scully on seeing it thought the specimen to be new, and accordingly brought it with me to England and submitted it to Mr. Oldfield Thomas at the British Museum. After comparing the shell with those of P. melanopterus in the Museum, Mr. Thomas has come to the conclusion that the specimen represents not merely a new species, but



HAWK

(PRESENTED TO COL. LOCKHART BY AMÁN-UL-MULK.)

presents differences of generic value. The main characteristics of the new genus are the peculiarly high-crowned teeth and the bluntness of the claws, which appear to show that the animal is rather a rock dweller than a tree climber.

8. Mus novoventer. *Hodgson.*
9. Mus arianus.—*Blanford.*
10. Lagomys ladacensis.—*Günther.*
11. Ovis poli.—*Blyth.*

*Aves.*

1. Falco peregrinus.—*Gmelin.*
2. Falco regulus.—*Pallas.*
3. Cerehneis tinnunculus.—(*Linn.*)
4. Astur palumbarius.—*Linn.*
5. Astur badius.—(*Gmel.*)
6. Accipiter virgatus.—(*Temm.*)
7. Aquila chryscetos.—*Linn.*
8. Buteo ferox.—(*Gmelin.*)
9. Circus cyaneus.—*Linn.*
10. Circus pygargus.—*Linn.*
11. Miloas govinda.—*Sykes.*
12. Syrnium Biddulphii.—*Scully.*
13. Scops qiu.—(*Scop.*)
14. Nyctea scandiaca.—(*Linn.* ?)
15. Hirundo rustica.—*Linn.*
16. Cotile rupestris.—(*Scop.*)
17. Coracias garrula.—*Linn.*
18. Picus himalayanus.—*Jard and Selby.*
19. Gecinus squamatus.—*Vigors.*
20. Cuculus canorus.—*Linn.*
21. Certhia himalayana.—*Vigors.*
22. Tichodroma muraria.—(*Linn.*)
23. Setta syriaca.—*Ehr.*
24. Setta cinnamomeoventris.—*Blyth.*
25. Upapa epops.—*Linn.*
26. Lanius cristatus.—*Linn.*
27. Lanius erythronotus.—*Vigors.*
28. Pericrocotus brevirostris.—(*Vigors.*)
29. Buchanga longicaudata.—(*A. Hay.*)

30. Buchanga atra.—(*Hermann.*)
31. Anothura neglecta.—(*Brooks.*)
32. Myiophoneus temminckii.—*Vigors.*
33. Cinclus asiaticus.—*Swains.*
34. Cinclus cashmeriensis.—*Gould.*
35. Cinclus leucogastu.—*Brandt.*
36. Monticola saxatilis.—(*Linn.*)
37. Monticola cyanus.—(*Linn.*)
38. Merula maxima.—*Siebohm.*
39. Merula atriqularis.—*Temm.*
40. Turdus viscivorus.—*Linn.*
41. Trochalopteron variegatum.—(*Vigors.*)
42. Trochalopteron lineatum.—(*Vigors.*)
43. Oriolus Kundoo.—*Sykes.*
44. Pratincola maura.—(*Pallas.*)
45. Saxicola œnanthi.—*Linn.*
46. Saxicola montana.—*Gould.*
47. Saxicola chrysopygia.—(*Dr. Filippi.*)
48. Saxicola morio.—*Hempr. et Erh.*
49. Saxicola albonigra.—*Hume.*
50. Saxicola picata.—*Blyth.*
51. Ruticilla erythrogastra.—(*Güld.*)
52. Ruticilla rufiventris.—(*Vieill.*)
53. Xanthopygia fuliginosa.—(*Vigors.*)
54. Clumarrhornis leucephala.—(*Vigors.*)
55. Tarsiger rufilatus.—(*Hodgs.*)
56. Erithacus cœruteculus.—(*Pallas.*)
57. Phylloscopus viridanus.—*Blyth.*
58. Acrocephalus agricola.—(*Jerd.*)
59. Microcichla scouleri.—(*Vigors.*)
60. Motacilla alba.—*Linn.*
61. Motacilla personata.—*Gould.*
62. Motacilla Melanope.—*Pall.*
63. Motacilla citrebla.—*Pall.*
64. Anthus maculatus.—*Hodg.*
65. Anthus spipoletta.—(*Linn.*)
66. Parus rufonuchalis.—*Blyth.*
67. Parus cinereus.—*Bonn et Viell.*
68. Acredula leucogenys.—*Moore.*
69. Leptopœcile sophiæ.—*Severtz.*
70. Accentor fulvescens.—*Severtz.*

71. Accentor rufilatus.—*Severtz.*
72. Trypanocorax frugilens.—(*Linn.*)
73. Colœus monedula.—*Linn.*
74. Corone cornix.—*Linn.*
75. Corone corone.—*Linn.*
76. Nucifraga multipunctata.—*Gould.*
77. Pica pica.—*Linn.*
78. Garrulus lanceolatus.—*Vigors.*
79. Graculus graculus.—*Linn.*
80. Pyrrhocorax pyrrhocorax.—*Linn.*
81. Sturnus vulgaris.—*Linn.*
82. Sturnus purpurescens.—*Gould.*
83. Acridotheres tristis.—(*Linn.*)
84. Temenuchius pagodarum.—(*Gmlin.*)
85. Pastor roseus.—(*Linn.*)
86. Passer hispaniolensis.—(*Temm.*)
87. Passer domesticus.—(*Linn.*)
88. Petronia petronia.—(*Linn.*)
89. Emberiga cia.—*Linn.*
90. Emberiga stracheyi.—*Moor.*
91. Emberiga buchanani.—*Blyth.*
92. Emberiga luteola.—*Sparrman.*
93. Pycnorhamphus carneipes.—(*Hodgs.*)
94. Carpodacus erythrinus.—(*Pallas.*)
95. Carpodacus grandis.—*Blyth.*
96. Carpodacus severtzovi.—*Sharpe.*
97. Rhodopechys sanguinea.—(*Gould.*)
98. Erythrospiza mongolica.—(*Swin.*)
99. Carduelis caniceps.—*Vigors.*
100. Serinus pusillus.—(*Pallas.*)
101. Fringilla montifungilla.—*Linn.*
102. Acanthis cannabina.—(*Linn.*)
103. Montifringilla alpicola.—(*Pall.*)
104. Montifringilla sordida.—(*Stolicsa.*)
105. Calandrella pispoletta.—(*Pall.*)
106. Otocoris penicillata.—(*Gould.*)
107. Alanda arvensis.—*Linn.*
108. Melanocorypha bimaculata.—*Viell.*
109. Turtur cambayensis.—(*Gmelin.*)
110. Turtur suratensis.—(*Gmelin.*)
111. Columba intermedia.—*Strickland.*

112. Pterocles arenarius.—(*Pall.*)
113. Lophophorus impeyanus.—(*Lath.*)
114. Tetraogallus himalayensis.—*Gray.*
115. Caccabis chukor.—(*Gray.*)
116. Ægralites phillipensis.—(*Scopoli.*)
117. Vanellus eristatus.—*Meyer.*
118. Anthropoilles virgo.—(*Linn.*)
119. Scolopax rusticola.—*Linn.*
120. Actites ochropus.—(*Linn.*)
121. Actites hypoleucus.—(*Linn.*)
122. Totanus fuscus.—(*Linn.*)
123. Totanus calidris.—(*Linn.*)
124. Himantopus candidus.—*Bonn.*
125. Gallinula chloropus.—(*Linn.*)
126. Fulica atra.—*Linn.*
127. Ciconia nigra.—*Linn.*
128. Ardea cinerea.—*Linn.*
129. Anser indicus.—*Gmel.*
130. Casarca rutila.—(*Pallas.*)
131. Spatula clypeata.—(*Linn.*)
132. Chaulelasmus striperus.—(*Linn.*)
133. Dafila acuta.—(*Linn.*)
134. Mareca penelope.—(*Linn.*)
135. Querquedula circia.—(*Linn.*)
136. Phalacrocorax Carbo.—(*Linn.*)

### *Reptilia.*

The only reptiles of the collection as yet worked out, are—

Tropidonotus hydrus. Chitral, 5,000 feet.

Periops.

Probably a new species. Chitral, 6,000 feet.

### *Fishes.*

Scarcity of spirit prevented my collecting either fishes or reptiles systematically, the little that I had being adequate only to the collection of insects and other small animals. Hence only such of the larger animals as presented special points of interest could be preserved in this way.

The most interesting fish brought down were some specimens of the trout that abound in the mountain streams of the northern declivity of the Hindú Kush.

These are, I am inclined to think, identical with the *Salmo Oxiana* (*S. Oxi.*, Günther) described by K. F. Kessler.

The detailed description is unfortunately in Russian, so that I am dependent on the figure and on a brief Latin description for the identification.

These trout were very plentiful in the Kokcha River at Zél ák, where I caught one weighing 3¼ lb., and small ones were excessively common in the upper waters of the Ab-i-Dúráh. In the smaller Dúráh Lake they positively swarmed, taking the fly with the utmost greediness.

In three-quarters of an hour I took 25 in this way with a single fly, while Colonel Woodthorpe, with a cast of three flies, took over 150 in three hours, all three flies being repeatedly taken the instant they reached the water. In the Dúráh lakes all the fish were very small, the catch weighing in the aggregate only 33 lb. Hence it is probable that this is the favourite spawning place of the fish, as lower down comparatively few small fish were taken, the average weight of those we caught at Zébák being from 1¼ to 1½ lb. They are delicious eating, the flesh being firm and of delicate pink colour, rather yellower and not quite so dark as that of the flesh of *S. salar*. Even very small specimens have this colour distinctly developed.

*Description.*

Deep slate above, pale grey below, plentifully but irregularly besprinkled with black and with scarlet spots.

Scales very small. 130–140 in longitudinal series along the lateral line; 28–30 transverse rows above lateral line.

Length of head, in middle line = $\frac{1}{5}$th entire length, exclusive of caudal.

Depth of body = $\frac{1}{4}$ entire length, also exclusive of caudal.

Dorsal fin 11 rays, arises nearer to root of caudal than to snout.

Pectorals rather small.

Ventrals arise at a point opposite to and a little behind the middle of the dorsal fin.

Anal 10-rayed, arising at a point in front of origin of adipose dorsal, the anterior limit of the former being but little in advance of the hinder limit of the latter.

Tail and caudal powerful (*see* figure 4).

Vertebræ 53. Pyloric appendages 42. Teeth strong, hooked, of medium size, extend far back on the maxillary, which, at its widest, has a breadth equal to about a quarter of its length (*see* figure 2). Vomerine teeth arranged rather irregularly, in single series on either side of the middle line, placed alternately with those of opposite side (*see* figure 3). Inter maxillaries well

provided with teeth. Pre-operculum with moderately rounded angle; its two limbs forming, in a specimen 7¾ inches long, an angle of about 100° (*see* figure 1).

*Measurements of a Specimen weighing 1¾ lb. taken while fresh.*

Length, total (exclusive of caudal), 16 inches.
Length of caudal 1·25 inches (at the level of lateral line).
Snout to root of first dorsal, 7 inches.
Length of origin of first dorsal, 2 inches.
Back of first dorsal to origin of adipose fin, 3·5 inches.
Adipose fin, length of origin, 0·5 inches.
Adipose fin to root of caudal, 2 inches.
Chin to pectoral fin, 4 inches.
Pectoral to pelvic fin, 4·5 inches.
Pelvic to origin of anal fin, 2·75 inches.
Length of origin of anal fin, 1·5 inches.
Anal to root of caudal, 2·25 inches.
Snout to angle of operculum, 4 inches.

The only other fish we took north of the Hindu-Kush was a species of *Schizothorax*, probably *S. chrysochlorus*, which is also very common in the tributaries of the Indus, south of the range.

The other fishes brought down were *Schizothorax micropogon* and *Nemacheilus stoliczkæ* from the Gilgit river at 6,000 feet.

No. 1, SUDDER STREET, 13th *December* 1886. (Sd.) G. M. GILES, M.B., *Surgeon, I.M.S., M. O. and Naturalist, C. K. Mission.*

## *Appendix.*

Lepidoptera collected during the work of the Mission.

*List of Lepidoptera Rhopalocera collected by Surgeon G. M. Giles, I.M.S., M.O. and Naturalist, Chitrál-Káfiristán Mission, by Lionel de Niceville F.E.S.*

In the following list I have given the exact locality and date of capture of those specimens which have this information indicated on the covers; and I have indicated with a star (*) the species which are known to occur only in the verdant and copiously-watered region appertaining to Kashmir and the outer ranges of the Himalayas, in contradistinction to the arid and rainless (comparatively) region beyond towards Central Asia.

both of which I have visited and collected over, the species that are common to the two regions being distinguished by a double dagger (‡).

## Family NYMPHALIDÆ.

### Sub-family DANAINÆ.

1. DANAIS (*Limnas*) CARYSIPPUS, Linnæus, Syst. Nat., ed. X, p. 471, n. 81 (1758).
   Bunji 5,000 feet, 24th July 1885. Gilgit, 4,900 feet.

### Sub-family SATYRINÆ.

*2. HIPPARCHIA PARYSATIS, Kollar, Denkschr, Akad. Wien. Math.-Nat, Cl. vol. i, p. 52 n. 7 (1850).
   Astor Valley, 7—8,000 feet, 21st July 1885.

3. HIPPARCHIA ANTHE, var. HANIFA, Herrich-Schäffer. Schmett Eur. vol. i. figs. 477, 478 (1850 ?).

4. HIPPARCHIA THELEPHASSA, Hübner, Samml. Ex. Schmett, vol. ii, pl. XXXV, figs. 1–4 (1816–1824).
   Pringul, 8,000 feet, Dubanee, 8,000 feet, Pandar, 10,000 feet, Mastuj, 8,000 feet.

5. HIPPARCHIA BALDIVA, Moore, Ann. and Mag. of Nat. Hist., fifth series, vol. i, p. 227 (1878).

6. HIPPARCHIA DIGNA, Marshall, Journ. A. S. B., vol. li, pt. 2, p. 67 (1882).
   Nalti, Tin Valley, 9,000 feet, Astor Valley, 8,000--9,000 feet, 22nd July 1885.

7. HIPPARCHIA SHANDURA, Marshall, Journ. A. S. B., vol. li, pt. 2, p. 38, pl. iv, fig. 3 (1882).

8. HIPPARCHIA HUEBNERI, Felder, Reise Novara, Lep., vol. iii, p. 494, n. 855, pl. lxix, figs. 8, 9 (1866).

*9. AULOCERA PADMA, Kollar, in Hügel's Kaschmir, vol. iv, pt. 2, p. 445, n. 3, pl. xv, figs. 1, 2 (1848).

*10. AUCOLERA SWAHA, Kollar, in Hügel's Kaschmir, vol. iv, pt. 2, p. 444, n. 2, pl. xiv, figs. 1, 2 (1844).

11. EPINEPHELE ROXANE, Felder, Reise Novara, Lep., vol. iii, p. 491, n. 849, pl. lxix, figs. 12, 13 (1866).
   Malti, Tin Valley, 9,000 feet.

‡12. EPINEPHELE CHEENA, Moore, Proc. Zool. Soc., Lond., 1865, p. 501, n. 93, pl. xxx, fig. 6.

Astor Valley, 8,000–9,000 feet, 22nd July 1885. Astor, 7,808 feet, 19th July 1885. Mastui, 8,000 feet.

13. EPINEPHELE PULCHRA, Felder, Reise Novara, Lep., vol. iii., p. 491, n. 848 (1866).

## Sub-family NYMPHALINÆ.

*14. MELITÆA BALBITA, Moore, Proc. Zool. Soc. Lond., 1874, p. 268, n. 26, pl. xliii, fig. 5.

‡15. MELITÆ DIDYMA, var. PERSEA, Kollar, Denksch. Akad. Wien, Math Nat. Cl. vol. i, p. 52, n. 6, (1850).

*16. ARGYNNIS CHILDRENI, Gray, Zool. Misc., vol. i, p. 33 (1831).

17. ARGYNNIS PANDORA, Wein. Verz., p. 176, n. i (1776).

18. ARGYNNIS VITATHA, Moore, Proc. Zool. Soc. Lond., 1874, p. 568.

*19. ARGYNNIS LATHONIA, Linnæus, Faun. Suec., p. 282, n. 1068 (1761).

20. LIMENITIS TRIVENA, var. LEGYIS, Hewitoon, Trans. Ent. Soc. Lond., third series, vol. ii, pl. 246, n. 3, pl. xv, figs. 3, 4 (1864).

LIMENETIS TRIVENA, var. HYDASPES, Moore, Proc. Zool. Soc. Lond., 1874, p. 270, n. 49, pl. xliii, fig. 2.

‡21. PYRAMEIS CARDUI, Linnæus, Syst. Nat., ed. x. p. 475, n. 107 (1758).

Killa Panja, 9,000 feet, Wakhan, 27th May 1886. Zebak, 8,600 feet, Badaskhan, 8th June 1886.

‡22. VANESSA CASCHMIRENSIS, Kollar, in Hügel's Kaschmir, vol. iv, pt. 2, p. 442, n. 1, pl. xi, figs. 3, 4 (1848).

Benji, 5,000 feet, 24th July 1885.

*23. VANESSA (*Grapta*) C-ALBUM, Linnæus, Syst. Nat., ed. x, p. 477, n. 115 (1758).

## Family LYCÆNIDÆ.

‡24. CYANIRIS CŒLESTINA, Kollar, in Hügel's Kashmir, vol, iv, pt. 2, p. 423, n. 10, (1848).

Gilgit.

‡25. ZIZERA MAHA, Kollar, in Hügel's Kaschmir, vol. iv, pt. 2, p. 422, n. 9 (1848).

Bunji, 5,000 feet, 24th July 1885.

‡26. EVERES DIPORA, Moore, Proc. Zool. Soc. Lond., 1865, p. 506, n. 108, pl. xxxi, fig. 8.

Bunji, 5,000 feet, 24th July 1885. Ninowar, 5,000 feet, Gilgit River Valley, 28th July 1885.

‡27. Polyommatus BÆTICUS, LINNÆUS, Syst. Nat., ed. xii, vol i, pt. 2, p. 789, n. 226 (1767).

Astor Valley, 8,000—9,000 feet, 22nd July 1885.

*28. LYCÆNA ARIANA, Moore, Proc. Zool. Soc. Lond., 1865, p. 504, n. 103, pl. xxxi, fig. 2.

29. LYCÆNA YARKUNDENSIS, Moore, Ann. and Mag. of Nat. Hist., fifth series, vol. i, p. 229 (1878).

Mastúj, 8,000 feet.

30. LYCÆNA METALLICA, Felder. Reise Novara, Lep. vol. ii, p. 283, n. 361, pl. xxxv, figs. 7, 8 (1865).

Astor Valley, 8,000—9,000 feet, 12th and 22nd July 1885.

‡31. LYCÆNA VICRAMA, Moore, Proc. Zool. Soc. Lond., 1865, p. 505, n. 105, pl. xxxi, fig. 6.

Bunji, 5,000 feet, 24th July 1885.

32. LYCÆNA NAZIRA, Moore, Proc. Zool. Soc. Lond., 1865, p. 504, n. 102 pl. xxxi, fig. 4.

33. LYCÆNA, sp.

The specimens are too worn for identification.

Zebak, 8,500, Badakshan, 10th June 1886.

‡34. CHRYSOPHANUS PHLÆAS, Linnæus, Faun. Suec., p. 285, n. 1078 (1761).

Astor, 7,800 feet, 19th July 1885.

‡35. THECLA ODATA, Hewitson, Ill. Diurn. Lep., p. 66, n. 6, pl. xxx, figs. 13, 14 (1865).

Astor, 7,800 feet, 19th July 1885.

‡36. ILERDA SENA, Kollar, in Hügel's Kaschmir, vol. iv., pt. 2, p. 415, pl. v, figs. 3, 4 (1848).

Bunji, 5,000 feet, 24th July 1885.

## Family PAPILIONIDÆ.

### Sub-family PIERINÆ.

‡37. COLLIAS FIELDII, Ménétriés, Cat. Mus. Petr., Lep., vol. i., p. 79, n. 252, pl. i., fig. 5 (1855).

Astor, 7,800 feet, 19th July 1885.

‡38. COLIAS HYALE, var. ERATE, Esper, Schmett., vol. i., pt. 2, pl. cxix, fig. 3 (1806 ?).

Gilgit, 4,900 feet. Gazikistan, Badakshan, 11,500 feet, 19th June 1886. Zebak, Badakshan, 8,600 feet, 8th June 1886. Mastuj, 7,800 feet.

‡39. SYNCHLOË DAPLIDICE, Linnæus, Syst. Nat., ed. xii., vol. i., pt. 2, p. 760, n. 77 (1767).

Astor, 7,800 feet, 19th July 1885. Gilgit.

40. SYNCHLOË CALLIDICE, Esper, Schmett, vol. i, pt. 2, pl. cxv, figs. 2, 3 (1800 ?).

‡41. Belenois mesentina, Cramer, Pap. Ex, vol. iii, pl. cclxx, figs. A, B (1780).

Bunji, 5,000 feet, 24th July 1885.

‡42. Mandipium brassicæ, Linn., Faun. Suec., p. 269, n. 1035 (1761).

Astor, 7,800 feet, 19th July 1885, Zebak, 8,600 feet, Badakshan 8th June 1886.

43. Mancipium rapæ, Linnæus, Faun. Suec., p. 270, n. 1036 (1761).

Gilgit, Mastuj, 7,800 feet

*44. Mancipium canidia, Sparrman, Amœn. Acad., vol. vii p. 504, note *m* (1768).

*45. Aporia soracta, Moore, Horsfield, and Moore, Cat. Lep. Mus. E. I. C., vol. i, p. 83, n. 170 (1857).

## Sub-family Papilioninæ.

*46. Parfassius jacquemontii, Boisduval, Sp. Gen., vol. i, p. 400, n. 5 (1836).

‡47. Papilio machaon, var. asiatica, Ménétriés, Cat. Mus. Petr., Lep., vol. i, p. 70 (1855).

## List of Plants of Gilgit Expedition collected by Dr. Giles, 1885–86.

418. Clematis asplenifolia.—*Schrenk.*
519. „ graveolens.—*Lindl.*
219. „ orientalis.—*L.* var.*?*
402. Thalictrum minus.—*L.* var.
26. Anemone and Potentilla fragments.
30. „ sp. n.?
474. „ albana.—*Stev.*
698. „ obtusiloba.—*D. Don.*

Adonis æstivalis.—*L.*

183. Ranunculus aquatilis.—*L.*
53. „ falcatus.—*L.*
„ arvensis.—*L.*
74. „ Cymbalaria.—*Pursh.*
150. „ pulchellus.—*C. A. Mey.*
73. „ pulchellus.—*C. A. Mey.*
469. „ affinis.—*R. Br.*
52. „ Aucheri.—*Boiss.*
181. „ afghanicus.—*Aitch. et Hemsl.*
255. „ paucidentatus.—*Schrenk.*

372. Nigella sativa.—*L.*
640. Aquilegia fragrans.—*Benth.*
482. „ viridiflora.—*Pall.*
225. „ sp. aff. A. Moorcroftianæ.—*Wall.*
602 or 662. Aquilegia glauca.—*Lindl.* var. nivalis.
A 185. Delphinium Brunonianum.—*Royle.*
714. „ vestitum.—*Wall.*
341. „ saniculæfolium.—*Boiss.*
A 116. „ saniculæfolium.—*Boiss.*
637. Aconitum Napellus.—*L.*
590. „ rotundifolium.—*Kar. et Kir.*
209. „ rotundifalium.—*Kar. et Kir.*
664. „ heterophyllum.—*Wall.*
191. Fumaria parviflora.—*Lamk.* (F. Vaillantii.—*Lois.*).
467. Corydalis Govaniana.—*Wall.*
712. „ aff. C. ramosæ.
149. Hypecoun procumbens.—*L.*
143. „ pendulum.—*L.*
171. Rœmeria rhœadiflora.—*Boiss.*
163. Glaucium fimbrilligerum.—*Boiss.*
371. Papaver somniferum.—*L.*
4. Berberis Lycium.—*Royle.*
9. Matthiola sp.
88. „ „
452. „ „
79. Parrya?
41. „
253. „
44. Atelanthera perpusilla.—*Hk. f. et Th.*
307. Barbarea vulgaris.—*R. Br.*
103. „ „
19. „ „
586. Arabis?
577. Cardamine pratensis.—*L.*
„ hirsuta.—*L.*
462. Aubretia?
161. Alyssum calycinum.—*L.*
A 200. Draba fladnizensis.—*Wulf.* var.?
418. „ sp. nov.?
130. Tetracme quadricornis.—*Bunge.*
5. Malcolmia sp.

2. Sisymbrium Sophia.—*L.*
180. „ Columnæ.—*Jacq.*
140. „ sp.
127. „ ?
182. Conringia planisiliqua.—*F. et Mey.*
715. Erysimum strictum.—*Gœrtn.*
238. Christolea crassifolia.—*Camb.*
245. „ „ „
112. Leptaleum pygmæum.—*D. C.*
11. Brassica Napus.—*L.*
657. „ „ „
124. „ sp.
168. Eruca sativa.—*L.*
Capsella Bursa-pastoris.—*L.*
267. Lepidium latifolium.—*L.* var. ?
518. „ Draba.—*L.*
690. Megacarpœa polyandra.—*Benth.*
115. Hutchinsia perpusilla.—*Hemsl.* n. sp.
102. „ „ „
A 201. „ pectinata.—*Bunge.*
264. Heldreichia silaifolia.—*Hk. f. et Th.*
000. „ sp.
379. Raphanus sativus.—*L.*
706. Chorispora sabulosa.—*Camb.*
480. „ „ „
A 208. „ „ „
476. „ ?
100. Crucifera dubia.
69. „ „
496. Cleome quinquenervia.—*D. C.*
185. „ ornithopodioides.—*Willd.*, forma.
386. „ „ *Willd.*
A 166. „ „ „
365. Capparis spinosa.—*L.*
132. „ „
498. „ „
512. „ „
246. Viola kunawarensis.—*Royle.*
„ Patrinii.—*D. C.*
434. Frankenia lævis.—*L.*, var.
672. Dianthus anatolicus.—*Boiss.*

311. Dianthus fimbriatus.—*Bieb.*
A 213. „ aff. D. fimbriato.
560. „ sp.
289. Saponaria vaccaria.—*L.*
724. Gypsophila cerastoides.—*Don.*
186. Saponaria aff. S. orientali.
290. Silene conoidea.—*L.*
488. „ inflata.—*L.*
678. „ „
360. „ arenosa.—*C. K.*
670. „ kunawarensis.—*Benth.*
280. „ Griffithii.—*Boiss.*
595. „ Moorcroftiana.—*Wall.*
333. „ „
000. „ sp.
229. Lychnis himalayensis.—*Edgew.*
687. Cerastium dahuricum.—*Fisch.*
610. „ trigynum.—*Vill.*
326. Stellaria Kotschyana.—*Fisch.*
110. „ Webbiana.—*Wall.*
„ media.—*L.*
A. 196. Arenaria Griffithii.—*Boiss.*
263. „ „
448. „ „
301. „ holosteoides.—*Edgew.*
116. „ „
42. Caryophyllacea indeterminata.
331. Myricaria germanica.—*Desv.* var.
61. „ „ „
330. Tamarix gallica.—*L.*
500. „ „
392. Hypericum perforatum.—*L.*
647. „ „ „
716. Lavatera kashmiriana.—*Camb.*
568. Althæa rosea.—*Cav.*
567. „ „ „
336. „ „ „
544. Malva parviflora.—*L.*
526. Gossypium herbaceum.—*L.*
37. Linum perenne.—*L.*
278. „ usitatissimum.—*L.*

381. Tribulus terrestris.—*L.*
397. Geranium aconitifolium.—*L'Herit.* ?
458. „ „
561. „ sp.
208. „ nepalense.—*Sweet.* var. ?
626. „ collinum.—*Bieb.* ?
447. „ „
158. Eurodium cicutarium.—*L.*
131. „ sp.
636. Impatiens brachycentra.—*Kar. et Kir.*
720. „ laxiflora.—*Edgew.*
352. „ sp.
635. „ amphorata ? (too rotten).
„ sp.
486. Peganum Harmula.—*L.*
97. „ „ „
542. Ruta (Haplophytum) sp.
363. „ „ „
347. Sageretia Brandrethiana.—*Aitch.* var.
349. Vitis persica.—*Boiss.*
491. Pistacia Terebinthus.—*L.* var.
1. Astragalus polyacanthus.—*Royle.*
308. „ psilacanthus.—*Boiss.*
241. „ rhizanthus.—*Royle* var. villosior.
000. „ multiceps.—*Wall.*
573. „ bicuspis.—*Fisch.*
291. „ „ „
576. „ erionotus.—*Benth.*
136. „ polybotrys.—*Boiss.*
410. „ tibetanus.—*Benth.* var.
213. „ „ „
390. „ compactus.—*Willd.*
424. „ Falconeri.—*Bunge.*
708. „ Royleanus.—*Bunge.*
226. „ frigidus.—*Benth.*
„ tribuloides.—*Delile.*
254. „ sp.
438. „ sp. aff.—*A. macroptero.*
167. „ sp.
60. „ sp.
156. „ sp.

249 & 202. Astralagus sp. aff.—*A. tibetano.*
286. „ sp. ex affinitate.—*A. tricholobi.*
234 & 221. „ sp.
230 & 142. „ sp. ?
218. „ sp. ?
603. Oxytropis lapponica.—*Wahl.*
205 & 93. „ „ „ var.
435. „ tatarica.—*Camb.*
665. „ Thomsoni.—*Benth.*
436. „ glacialis.—*Benth.*
481. „ „ „ var.
18. „ microphylla.—*D. C.*
268. „ sp.
398. Ononis hircina.—*Jacq.*
501. „ „ „
401. Trigonella fœnum-græcum.—*L.*
506. Medicago sativa.—*L.*
327. „ „ „
217. „ „ „
653. „ falcata.—*L.*
556. „ „ „
520. Melilotus officinalis.—*Willd.*
549. „ alba.—*Willd.*
151. Trifolium repens.—*L.*
285. „ „ „
507. „ „ „
370. „ resupinatum.—*L.*
388. „ pratense.—*L.*
649. Lotus corniculatus.—*L.*
205. „ „ „
198. „ „ „
293. „ „ „
121. Trigonella emodi.—*Benth.*
361. Psoralea drupacea.—*Bunge.*
385. Calophaca (Chesneya) n. sp.
215. Colutea arborescens.—*L.*
525. „ „ „
531. Glycyrrhiza glabra.—*L.* var. glandulifera.
66. „ sp. aff. G. uralensi.—*Fisch.*
345. „ „ „ „
710. Hedysarum astragaloides.—*Benth.*

428. Hedysarum Falconeri.—*Baker.*
613. „ „ „
426. Onobrychis sp.
529. Alhagi maurorum.—*Desv.*
211. Cicer pungens.—*Boiss.* var. vel. sp. aff.
432. „ „ „ „
391. Cicer arietinum.—*L.*
686. Vicia mollis.—*Benth.*
404. Ervum lens.—*L.*
277. Vicia Faba.—*L.*
645. „ tenuifolia.—*Roth.*
298. „ „ „
325. Lathyrus pratensis.—*L.*
366. „ sativus.—*L.*
324. Sophora sp. aff. S. flavescenti.
2. „ mollis.—*Royle.*
344. Prunus prostrata.—*Labill.*
296. „ „ „
722. Spiræa vestita.—*Wall.*
329. „ sorbifolia.—*L.*
373. Geum urbanum.—*L.*
682. „ elatum.—*Wall.*
470. Potentilla fruticosa.—*L.* var.
144. „ bifurca.—*L.*
A 76. „ „ „
A 184. „ gelida.—*C.A.M.*
726. „ nepalensis.—*Hook.*
616. „ argyrophylla.—*Wall.*
598. „ perpusilla.—*Hook. f.*
A 197. „ monanthes.—*Lindl.* var.
76. „ anserina.—*L. et* P. anserina × ?
592. Alchemilla vulgaris.—*L.*
651. Agrimonia pilosa.—*Ledeb.*
218. Rosa Webbiana.—*Wall.*
Cotoneaster bacillaris.—*Wall.*
380. Cratægus Oxyacantha.—*L.*
703. Saxifraga sibirica.—*L.*
604. „ „ „
614. „ flagellaris.—*L.*
618. Saxifraga Stracheyi.—*Hk. f. et Th.*
652. Parnassia nubicola.—*Wall.* ?

45. Ribes sp.
68. Cotyledon sp.
271. „ „
83. „ „
50. „ sp. ?=83.
667. „ sp. near C. Aizoon.
411. „ (Sedum adenotrichum).
455. „ near C. Sempervivum
38. „ „ „
189. Sedum heterodontum.—*Hk. f. et Th.*
629. „ tibeticum.—*Hk. f. et Th.*
A. 179. „ Ewersii.—*Ledeb.*
615. „ „ „
56. „ crenulatum.—*Hk. f. et Th.*
57. „ „ „
684. „ asiaticum.—*D. C.*
713. „ „
479. „ „
223. „ „
465. „ „
A 188. „ „
256. „ sp.
257. „ sp.
357. Punica Granatum.—*L.*
487. Epilobium latifolium.—*L.*
612. „ „
558. „ angustifolium.—*L.*
533. „ hirsutum.—*L.* var. sericeum.
646. „ leiospermum.—*Hassk.*
619. „ himalayense.—*Hassk.?*
574. Datisca cannabina.—*L.*
563. Bupleurum linearifolium.—*Boiss?*
A 165. „ sp. aff. B. persico.—*Boiss.*
A 168. Pituranthos Thomsoni.—*Clarke.*
269. Prangos pabularia.—*Lindl.*
654. „ „ „
A 194. Lingusticum Thomsoni.—*Clarke.*
701. „ sp. ?
702. Pleurospermum Candollei.—*Benth.*
478. „ stylosum.—*Clarke.*
270. Corum Bulbocastanum.—*L.* var.

000. Corum copticum Benth.
179. „ Carui.—*L.*
356. „ (§ Ptychotis)?
571. Seseli sibiricum.—*Benth.* var.?
187. Ferula Narthex.—*Boiss.*
231. „ sp. cfr. F. Schair.—*Borszc.*
270. „ sp.
232. „ sp.
305. Heracleum candicans.—*Wall.*?
126. „ sp.
394. Coriandrum sativum.—*L.*
523. Daucus Carota.—*L.*
217. Zosimia sp.
84. Umbelliferæ leaves.
A 260. „ „
544. Aralia cachemiriana.—*Dcne.*
650. Sambucus adnata.—*Wall.*
77. Lonicera microphylla.—*Willd.* var.
199. „ cærulea.—*L.* var.
431. „ xylosteum.—*L.* var.
415. Gaillonia eriantha.—*Jaub. et Spach?*
546. Rubia cordifolia.—*L.*
681. Galium boreale.—*L.*
94. Galium pauciflorum.—*Bunge.*
675. „ verum.—*L.*
660. Asperula cynanchica.—*L.*
164. Crucianella glomerata.—*Bieb.*
473. Valeriana dioica.—*L.* var.
725. „ Harwickii.—*Wall.*
727. Morina persica.—*L.*
671. Dipsacus inermis.—*Wall.*
591. Scabiosa speciosa.—*Royle.*
644. Solidago Virga-aurea.—*L.*
683. Aster diplostephioides.—*Benth.*
585. „ tibeticus.—*Hook. f.*
543. „ altaicus.—*Willd.*
165. Erigeron andryaloides.—*Clarke.*
248. „ „
446. „ „
A 21. „ „
265. „ „

588. Erigeron acris.—*L.*
667. „ alpinus.—*L.* var.
408. „ linifolio aff.
605. Leontopodium alpinum.—*Cass.*
628. Anaphalis nubigena.—*D.C.* Var. intermedia.
A 220. „ „ „
555. Antennaria contorta.—*D.C.*
631. „ virgata.—*Thoms.*
422. „ contortæ var.
466. „ ?
Lasiopogon lanatum.—*Cass.*
430. Inula rhizocephala.—*Schrenk.*
718. „ racemosa.—*Hook. fil.*
460. „ Falconeri.—*Hook. fil.*
580. „ Thomsoni.—*Clarke.*
554. Inula obtusifolia.—*Kerner.*
449. „ „ } varieties diversæ?
362. „ „
383. Pulicaria gnaphalodes.—*Boiss.*
86. „ ?
91. Artemisia persica.—*Boiss.* ? (not in fl.).
„ Tournefortiana.—*Reichb.*
228. „ Absinthium.—*L.*
413. „ Falconeri.—*Clarke.*
540. „ scoparia.—*Waldst. et Kit.*
108. „ sp. aff. A. parvifoliæ.
395. Chrysanthemum coronarium.—*L.*
166. „ Richteriæ.—*Benth.*
437. „ „ „ var. pappo dimidiato
638. „ „ „ var. villosius.
302. „ „ „
Tussilago Farfara.—L.
577. Achillea Millefolium.—*L.*
A 177. Cotula ?
503. Tanacetum artemisioides.—*Schz. Bip.*
608. „ longifolium.—*Wall.*
219. Allardia glabra.—*Dcne.*
705. Doronicum Roylei.—*D.C.*
472. Senecio laciniosus.—*Wall.* var.
587. „ sp. aff. S. nudicauli.
694. „ Jacquemontianus.—*Dcne.*

630. Senecio pedunculatus.—*Edgew.*
139. „ coronopifolius.—*Desf.*
316. „ „ „ var.
224. „ „ sp. n.? aff. S. amphibolo.
508. Echinops cornigerus.—*D.C.* (*E. coriaria, Clarke*).
134. „ sp.
310. Cousinia buphthalmoides.—*Regel?*
206. „ sp. aff. preced.
380. „ sp.
A 193. „ sp.
668. Carduus crispus.—*L?*
176. „ nutans.—*L.*
322. Carduus sp.
492. Cirsium arvense.—*L.*
695. Saussurea candolleana.—*Dcne.*
689. „ Roylei.—*Clarke.*
723. „ Atkinsoni.—*Clarke.*
464. „ sp. aff. S. glanduliferæ.
272. „ „ „
A 192. „ sp.
A 176. „ sp.
565. „ sp. S. albescenti aff.
190. Jurinea modesta.—*Boiss.*
350. Centaurea Calcitrapa.—*L.*
389. „ Picris.—*Pall.*
154. „ pulchella.—*Ledeb.*
553. Arctium Lappa.—*L.*
419. Tricholepis spartioides.—*Clarke.*
550. „ tibetica.—*Hook. f. et Th.*
104. Kælpinia linearis.—*Pall.* var.?
160. Taraxacum officinale.—*Wigg*, var. foliis linearibus.
12. „ „ „ var. } diversæ.
299. „ „ „ „ }
594. „ „ „ „ }
641. Hieracium crocatum.—*Fries.*
284. Tragopogon gracile.—*Don.*
A 181. Scorzonera divaricata.—*Turcz.*
113. „ sp.
78. „ sp.
510. „ tortuosissima.—*Boiss.*
499. Cichorium Intybus.—*L.*

483. Crepis glauca.—*Benth.*
„ ?
387. „ ?
633. Chondrilla graminea.—*Bieb.*
547. Picris hieracioides.—*L.*
425. Lactuca tatarica.—*C. A. M.*
691. „ Lissertiana.—*Clarke.*
609. „ „ „ forma humilior.
600. „ sp.
294. Codonopsis ovata.—*Benth.*
450. „ „ „
355. Campanula Griffithii.—*Hook. f. et Th.*
376. „ colorata.—*Wall.* var.
676. „ latifolia.—*L.*
22. Acantholimon diapensioides.—*Boiss.*
23. „ lycopodioides.—*Boiss.*
323. „ cephalotes.—*Boiss.*
421. „ sp. near A. Munroanum.
348. Statice Gilesii.—*Hemsl.* n. sp.
43. Pyrola rotundifolia.—*L.* var.
145. Glaux maritima.—*L.*
81. „ „ „
688. Primula denticulata.—*Sm.*
148. „ elliptica.—*Royle.*
201. „ sibirica.—*Jacq.*
A 186. „ Stuartii var. Moorcroftiana.—*Hook. f.*
A 189. „ „ „ „
251. „ „ var. purpurea.—*Hook. f.*
564. Androsace Aizoon.—*Duby.*
15. „ rotundifolia.—*Hardw.* var. *Thomsoni, Watt.*
358. Fraxinus xanthoxyloides.—*Wall.*
406. Apocynum venetum.—*L.*
530. „ „
534. Cynanchum acutum.—*L.*
499. „ „
584. „ „
114. Gentiana squarrosa.—*Ledeb.*
162. „ „ „
607. „ marginata.—*Griseb.*
666. „ decumbens.—*L. f.*
625. „ „ „

152. Gentiana detonsa, Fries var. Stracheyi.—*Clarke.*
579. Jœschkea gentianoides.—*Kurz.*
692. Swertia lahulensis.—*Kerner.*
A 211. „ petiolata.—*Royle.*
227. „ „ „ ?
578. Ophelia cordata.—*Don var.*
729. Limnanthemum nymphæoides.—*Link.*
662. Polemonium cœruleum.—*L.*
292. Convolvulus arvensis.—*L.*
504. „ „ var. foliis angustioribus.
338. Cuscuta brevistyla.—*A. Braun.*
99. Hyoscyamus pusillus.—*Linn.*
282. „ niger.—*L.*
528. Sesamum indicum.—*L.*
122. Plantago tibetica.—*Hook. f. et Th.*
516. „ lanceolata.—*L.*
364. „ „ „
378. Heliotropium Eichwaldi.—*Steud.*
493. „ sp. n.?
188. Caccinia glauca.—*Savi.*
680. Cynoglossum near C. petiolatum.
295. „ „ „
700. Lindelofia spectabilis.—*Lehm. var.*
259 & 244. Solenanthus sp.
304. „ circinnatus.—*Ledeb.*
47. „ „ „
423. Paracaryum heliocarpum.—*Kerner.*
212. „ „ „
75. „ „ „
262. Echinosperorum Lappula.—*L.*
138. „ barbatum.—*Lehm?*
521. Anchusa arvensis.—*L.*
155. Nonnea pulla.—*D. C.*
728. Mertensia elongata.—*Benth.*
595. „ echioides.—*Benth.*
621. Eritrichium sp. aff. E. stricto.—*Dene.*
135. „ sp.
375. Onosma echioides.—*L.*
260. Macrotomia perennis.—*Boiss.*
477. „ „ „



GILGIT.

Arnebia sp.
403. „ tibetica.—*C. B. Clarke.*
456. „ „ „
85. „ Griffithii.—*Boiss.*
121. „ sp.
Veronica agrestis.—*L.*
106. „ bilobla.—*L.*
287. „ Beccabunga.—*L. var.*
674. „ deltigera.—*Wall.*
611. „ capitata.—*Royle.*
412. „ Anagallis.—*L.*
596, 203. Euphrasia officinalis.—*L.*
67. Scrophularia variegata.—*Bieb.*
175. „ „ „
273. Pedicularis sp.
209. „ sp.
A 212. „ sp.
622. „ pectinata.—*Wall.* var.? vel. sp. distincta.
484. „ pycnantha.—*Boiss.*
247. „ „ „
214. „ bicornuta.—*Kl.*
699. „ „
624. „ „
582. „ Hookeriana.—*Benth.*
575. „ „ „
707. „ „ „
679. „ pyramidata.—*Royle.*
673. „ tenuirostris.—*Benth.*
176. Linaria odora.—*Bieb.?*
332. „ „ ?
281. Verbascum Thapsus.—*L.*
517. „ sp.
663. Stachys sericea.—*Wall.*
632. „ „ „
312. Nepeta ruderalis.—*Buch-Ham.*
589. „ supina.—*Stev.?*
A 183. „ sp. aff. N. campestri.
459. „ sp.
489. „ tibetica.—*Vatke.*
A 198. Nepeta Clarkei.—*Hook. f.* var.
639. „ „ „ „

65. Nepeta rotundifolia.—*Benth.?*
570. „ salviæfolia.—*Royle.*
351. „ Cataria.—*L.*
532. „ „
236. „ glutinosa.—*Benth.*
A 203. „ „ „
584. „ linearis.—*Royle.*
696. „ „ „
634. „ connata.—*Royle.*
693. „ „ „
184. „ ?
509. „ ?
461. sp.
A 199. sp.
337. „ sp.
379. Origanum sp.
537. „ Majorana.—*L.*
80. Lagochilus, an L. occultiflorus.—*Rupr.?*
505. Salvia glutinosa.—*L.*
396. „ nubicola.—*Wall.*
685. „ hians.—*Royle.*
A 167. Micromeria sp. aff. M. punctatæ.
A 215. Ziziphora canescens.—*Benth.*
427. „ „ „
269. Perowskia atriplicifolia.—*Benth.*
513. „ abrotanoides.—*Karel.*
342. Prunella vulgaris.—*L.*
616, 485, 557. Thymus Serpyllum.—*L.* vars.
502. Mentha sylvestris.—*L.* var.
648. „ „ „
146. Lallemantia Royleana.—*Benth.*
538. Dracocephalum moldavicum.—*L.*
463, 709. „ sp.
222. Eremostachys speciosa.—*Rupr.*
192. „ „ „
279. „ „ „ var.?
711. Phlomis simplex.—*Royle.*
313. Leucas sp.
454, 220. Scutellaria Heydei.—*Hook. f.*
A 182, 282. „ multicaulis.—*Boiss.*
651. „ prostrata.—*Jacq.*

355. Teucrium serratum var. ? vel. sp. distincta.
A 169. „ „
522, 314. Chenopodium Botrys.—*L.*
A 178. Blitum virgatum.—*L.*
548. Atriplex laciniata.—*L.*
552. Kochia prostrata.—*Schrad.* ?
475. Salsola ?
98. Kochia sp.
551. Eurotia ceratoides.—*C.A.M.* ♂
90. Atraphaxis spinosa.—*L.* ?
172. „ sp.
623, 451. Oxyria digyna.—*Hill.*
457, 237, 40. Polygonum paronychioides.—*C.A.M.*
207. Polygonum viviparum.—*L.*
617. „ affine.—*Don* var.
377. „ Persicaria.—*L.*
125. „ sibiricum.—*Laxm.*
599. „ rumicifolium.—*Royle.*
643. „ aff. P. molli.
339. „ Gilesii.—*Hemsl.* sp. n.
620. Fagopyrum tataricum.—*Gærton.*
583. „ cymosum.—*Meissn.*
511. Rumex hastatus.—*Don.*
318. „ „ „
656, 319. Rumex orientalis.—*Bernh.*
167. Rheum sp.
407. 17. Hippophæ rhamnoides.—*L.*
328. Daphne oleoides.—*L.*
368. Croton tinctoria.—*Juss.*
541, 164, 374. Euphorbia Emodi.—*Hook. f.*
10. „ osyridea.—*Boiss.*
72, 194. „ sp. aff E. cæladeniæ.
300, 137. „ sp. aff E. subcordatæ.
254. „ sp.
334. Parietaria debilis.—*Forst.*
572. „ officinalis.—*L.*
Urtica dioica. *L.* var.
70. Salix acmophylla.—*Anders.* var.
6. „ angustifolia.—*Willd.*
7. „ Wallichiana α grisea.—*Anders.*
„ hastata.—*L.*

191. Silax sp.
21. „ daphnoides.—*Vill.* var.
240. „ sp.
258. „ sp.
20. Populus balsamifera.—*Willd.?*
52. Ephedra sp.
68. „ sp.
429. „ vulgaris.—*L.*
566. Pinus Gerardiana.—*Wall.*
346. Juniperus excelsa.—*Wall.*
48, 14 „ „ „
627. „ communis.—*L.*
433. Epipactis Royleana.—*Lindl.*
536. Spiranthes australis.—*Lindl.*
405. Orchis latifolia.—*L.*
275, 200. „ „
Iris ensata.—*Thbg.*
141. Ixiolirion montanum.—*Herb.* var. longiscapum.
„ „ „ var.
119. Tynsiphon crociflorus.—*Regel.*
274. Tulipa crysantha.—*Boiss.*
A 190, 471. Allium Semenovii.—*Regel.*
239, 704. „ „ „
315. „ Jacquemontii.—*Regel.*
717. „ consanguineum.—*Kunth.*
210. „ sp.
266. „ sp.
178. „ aff. A. Griffithiano.
276, 193, 223. Eremurus aurantiacus.—*Baker.*
54. Gagea sp.
250. „ setifolia.—*Baker.*
601. „ elegans.—*Wall.*
354. Arun Griffithii.—*Schott.*
539. Alisma Plantago.—*L.*
119. Typha minima.—*L.?*
353. Juncus glauca.—*Ehrh.*
655. „ membranaceus.—*Royle?*
559. „ himalensis.—*Klotzsch.*
64. Scirpus pumilus.—*Vahl.*
197. Carex vulgaris.—*L.*
87. „ „ „ var.

475. Carex Griffithii.—*Boott.*
96, 55. „ stenophylla.—*Wahlb.*
569. Panicum miliaceum.—*L.*
520. Setaria viridis.—*Beauv.*
515. Saccharum spontaneum.—*L.*
514. Andropogon Ischœmum.—*L.*
545. „ Gidarba.—*Ham.*
367. „ laniger.—*Desf.*
335. Vossia an var. V. speciosæ.
417. Stipa pennata.—*L.*
27. „ tortilis.—*Desf.* ?
174. „ „ „
630. Calamagrostis lanceolata.—*Roth.*
416. Lasiagrostis robusta.—*Munro.*
306. Alopecurus pratensis.—*L.*
420. Avena sativa.—*L.*
719. Orthoraphium Roylei.—*Nees.*
490. Pappophorum Aucheri.—*Jaub. et Spach.*
163. Phragmites communis.—*L.*
169. Melica Jacquemontii.—*Dene.*
Poa annua.—*L.*
89. Poa pratensis.—*L.*
92. Sp. aff.—*P. songaricæ.*
A 206. Brachypodium scaberrimum.—*Nees.*
661. Bromus confinis.—*Nees.*
317, 95. „ tectorum.—*L.*
117, 153. Festuca sp. ?
157. Agropyrum piliferum.—*Benth. et Hk. f.*
409. Triticum repens.—*L.*

*Mosses.*

Funaria hygrometrica.—*Hedw.*
„ calvescens.—*Schwägr.*
188. Mnium sp.

*Fungi.*

Squamaria melanophthalma.—*D.C.*
Placodium sp.

## Dr. Giles' Gilgit Expedition, 1885-86.

### Species Described and Figured in Hook. Icones Plantarum.

115, 102. Hutchinsia perpusilla.—*Hemsl.* sp. n. in Hook. Ic. Pl. 1599.
430. Inula rhizocephala.—*Schrenk.* Ic. Pl. 1730.
A 176. Saussurea leptophylla.—*Hemsl.* sp. n. in Ic. Pl. 1734.
565. „ decurrens. „ „ „ 1735.
464, 272, A 192. Saussurea Gilessii „ „ „ 1736.
550. Tricholepis tibetica.—*Hk. f. & T.* Ic. Pl. 1732.
419. „ spartioides.—*Clarke.* „ 1733.
348. Statice Gilesii.—*Hemsl.* sp. n. in Ic. Pl. 1737.
493. Heliotropium gymnostomum.—*Hemsl.* sp. n. in Ic. Pl. 1755.
339. Polygonum Gilesii.—*Hemsl.* sp. n. in Ic. Pl. 1756.

# CHAPTER IX.

## Note on Chitrál.

*Races and Languages.*—It would require a great deal of study and a good fundamental knowledge of the original races comprising the Chitrál State, and of their languages, to be able to classify the component parts of what is now a small and isolated nation. Broadly speaking, the Ko race, identical with the Kalásh Káfirs, is confined to the provinces of Mastúj and Chitrál; the Dangarik element is in occupation of the Ghizar valley between Hapar and Dahimal; north of the Dangarik are the Wershik, said to be identical with the people of Hunza, who occupy the Yásín province, known generally as Wershik-gum; the valleys of Rumbur, Bumburet, Berír, Shishi-ku (as far up as Madalasht) and the right bank of the Chitrál river between Kala Drósh and Mír Kaní are occupied by Kalásh, either Káfir by religion still, or recent converts to a bastard Muhammadanism; below Mír Kaní are the Narsatís, wherever these may have emigrated from. Besides the above there are colonists from north of the Hindú Kush. Between Koghazí and Prét, on both banks of the Chitrál river, are settlements of people originally from Shighnán, who have been so long in Chitrál that they have altogether lost their own language and speak nothing but Kowár; at Madalasht there is a colony of Persian-speaking Tájiks from Roshán, and in the Lutkó district there is a large colony from Munján.

"Wár," as a termination, denotes language. The different tongues or dialects are therefore styled Ko-wár, Dangarik-wár, Wershik-wár, Kalásh-wár, Narsatí-wár, &c. As a rule every one throughout the country understands Ko-wár, whilst the Ko people understand no dialect but their own. From Drushp up to the Dúráh Pass the language is apparently distinct from any other dialect, and is known as Lutko-wár.

*Religions.*—From Prét to the Asmár border the orthodox Sunní faith prevails on both banks of the river, except at Madalasht, where the people are Ráfizís. From Prét, up the right bank of the Chitrál river to the Hindú Kush, the Ráfizí element prevails, but the Sunní is also represented. The country east of the river, including the provinces of Mastúj and Yásín, is almost exclusively Ráfizí, the principal exception being in the Ghizar valley, where the Dangarik population are Sunnís from Pringal downwards

The Ujhur, Arkári and Lutko valleys are entirely Ráfizí. It is thus seen that the last-named sect is by far the most numerous in the Mehtar's dominions.

*Classes of Society.*—The people of the Chitrál State are divided into three classes, *viz.*, the nobles (Ádamzáda), the middle class (Arbábzáda), the peasantry (Fakr Maskín). In this classification the distinction is social not racial. A Fakr Maskín can acquire wealth and become an Arbábzáda, and both Fakr Maskín and Arbábzáda can be admitted into the Ádamzáda class by the display of two virtues, bravery and generosity. That is to say, the poorest Fakr Maskín, if he distinguish himself in the field, can at once be raised to Ádamzáda rank by decree of the Mehtar, who at the same time gives him sufficient land to support the dignity; and a well-to-do Arbábzáda, by the display of lavish hospitality to rich and poor alike, can in that manner become an Ádamzáda by the Mehtar's favour. On the other hand, an Ádamzáda can, by losing wealth descend the social scale and be merged in the Fakr Maskín class. The Ádamzáda are untaxed, but both Arbábzáda and Fakr Maskín pay a tenth of their field produce to the Mehtar, besides a fixed number of sheep or goats and either *choghas* or blankets. The Fakr Maskín and Arbábzáda class intermarry, whilst the Ádamzáda do not give their daughters out of their own class, but take wives from each of the inferior grades.

*The Ruling Family.*—The legitimate brothers and all the sons of the reigning Mehtar are styled *Mehtar bák;* his legitimate sisters and all his daughters are styled *Khunzajhúri;* his illegitimate brothers are styled *Lál;* his illegitimate sisters *Kai.* Thus the Mehtar's natural brother Bahádur Khán was, during his father's life, styled Bahádur Khán Mehtar-bák, but when Amán-ul-Mulk succeeded he became Bahádur Khán Lál. The familiar term, however, for all the Mehtar's sons and brothers is *Mehtarjhao* ("Mehtar's son") except in the case of the heir-apparent, who is styled *Sardár,* and his younger brother Afzal-ul-Mulk, who has had the title of *Tsik Mehtar* ("little Mehtar") bestowed on him by his father. The ruling family, although of foreign origin, is now thoroughly of the nation. Amán-ul-Mulk's mother was of the Ádamzáda class.

*Administration.*—The Mehtar himself rewards and punishes his subjects; none of his sons have anything beyond the power of inflicting corporal punishment, and they must refer for orders to Chitrál. This applies only to free men; owners of slaves can kill, torture, or otherwise punish the latter at pleasure. There is a Kází at Chitrál, but he is never referred to, and

Amán ul-Mulk dispenses punishment according to his own light. The following are the penalties and the offences for which they are awarded:—

| | | |
|---|---|---|
| Treason | | Death by the sword (*i.e.*, cut to pieces) (*Konghordik*). |
| Murder | | |
| Adultery | | Stoning to death (*Sangasar*). |
| Cheating and theft | | Tearing flesh off face and limbs with red-hot pincers (*Amborchkik*). |
| Petty theft | | Confinement in the stocks for varying periods, weeks or months. (*Krot-dik*). |

The wives and families of men executed are sold as slaves. This sale is called *Bezimik*.

Revenues and tolls are collected by officials bearing different titles in different districts. In Chitrál there is an *Áksakál*, and under him *Chárwélós*. In Yásin the chief official is the *Atálikh*, under whom are a *Hákim* and *Chárwélós*. In Mastúj there are a *Hákim* and *Áksakáls*; in Lutkó a *Chárwélo*. In Turikó there is a *Baramósh* and under him *Chárwélós* and *Atálikhs*. In Murikó an *Atálikh* is the head official, and under him are *Charwélós* and *Aksakáls*. In Arkárí there is one *Chárweló*—

| | | |
|---|---|---|
| In Kala Drósh | *Hákim* and | *Chárweló*, |
| „ Ghizar | ditto | ditto, |
| „ Láspúr | ditto | ditto. |

*Cherbo* is the actual collector. Each district has its *Cherbos*.

The Mehtar has two *Díwán Bégis* at Chitrál, who manage his household and keep his treasure and accounts.

There are no physicians or surgeons in the country, and the Mehtar himself has to depend upon the services of *hakims* passing through from Kábal, Peshawar, or the Pathan States.

*Agriculture.*—The terms *ábí* and *lalamí* are used in Chitrál, as in Afghánistán, to denote land watered by artificial means and by rain respectively. The lands of Yásin, Mastúj, and Chitrál are all *ábí*, except in the following districts of Chitrál where rain crops are also raised—

| | | |
|---|---|---|
| Jughúr, | Aián, | Darósh. |
| Bróz, | Khairábád, | |

The cereals are divided into two classes—I. *Lutjhao*, which only includes wheat and barley; II. *Krizijhao*, which comprises rice, Indian-corn, millet and vetches. The most productive districts are, in order of merit, I. Lutkó; II. Darósh, Aián, Bróz; III. Yásin. Chitrál proper is celebrated for its rice, which is certainly superior to the rice of India. In Chitrál barley and wheat are harvested in May and June respectively, and rice is cut in September.

The whole of the Mehtar's dominions produce sufficient grain for the inhabitants, but there is not much surplus.*

The country is a wonderful one for the production of fruit. Grapes and water-melons are especially of fine quality. So productive is it in this respect that a man is considered a churl who fences in his vines and fruit-trees, but on the other hand it is thought fair that he should protect his melons (water or other) from passers-by.

*Domestic animals.*—Sheep and goats, small but good, are plentiful everywhere. A good class of pony is produced here and there, but the country depends for its horses and ponies on the markets north of the Hindú Kush. The horned cattle are numerous in certain districts. The breed is good, small and sturdy, with a hardly perceptible hump.

*Wild animals.*—Red and black bears are said to be plentiful, and in winter leopards commit great havoc amongst the flocks. *Márkhór*, ibex, *uriál* are abundant. The hawks of Chitrál are renowned, and are exported in great numbers. *Chikór* overrun the entire country. Wild-duck do not remain for any time on their downward and upward flight, and snipe seem to dislike settling. The Shandúr lake, 12,000 feet above sea, is the breeding place of numerous wild-geese (bar-headed variety).

*Manufactures.*—There is no industry in the country worth mentioning except agriculture. At Madalasht matchlocks are made by the Tájik colony there; Dánin produces good knives. Sword-hilts are made in Yásin, but the blades all come from foreign countries. The women make woollen *choghas*, *tsadars* (light blankets, half cotton and half wool), *kálins* (coarse woollen and cotton carpets), and they knit the *jharábs* or high woollen stockings worn by both sexes.

People make in their own families, as a rule, whatever they require in the way of wearing apparel, from their rolled-up cloth hats to their soft leather boots worn over the high stockings.

*Revenue.*—The Mehtar of Chitrál derives his income from the following sources:—

1. The sale of timber and orpiment to foreign traders.
2. The sale of lead to Bájaorí traders, and of lead and gold-dust in the country.
3. Slave-trade.

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* No rice is said to be grown east of Áv.



GROUP OF BOYS AT RÉSHUN.

4. Toll on horses and all pack animals passing through from Badakhshán to Dír, Bájaor, and Pesháwar, and *vice versâ*.
5. A fixed contribution of sheep, goats and grain, rugs, *choghas* and *tsadars* from each province.
6. Tribute from Káfiristán, and fines imposed on the subject Kalásh Káfirs, &c.
7. The Kashmír subsidy.

He also barters English piece-goods and other merchandise from Pesháwar, such as tea in Badakhshán for *Yambús*, or Yárkand ingots of silver. He further takes his pick of the horses brought from the north for the southern markets. The traders consequently have taken to hogging the manes of their best ponies, which disfigures them in Chitrál, but does not interfere with their sale in Pesháwar.

*Timber.*—Deodar is the only wood exported. It is cut in the Aián and Shíshí-Kúh valleys, and on the hills above Urghach and Bakamak, and floated down to the Kábal river and on to British territory. Ráhat Sháh, Khákakhél, who has married one of the Mehtar's daughters,* has at present the monopoly of this trade. His agents arrange annually for the amount required, which varies in value from 7,000 to 12,000 Kábal rupees. The sum realised for the year 1885 is said to have reached 40,000 Kábal rupees. Two-thirds are taken in cash, the balance being paid in Pesháwar goods.

*Orpiment.*—This is found only in the Tirich district of the Mastúj province. It is bartered with traders from India and Badakhshán for cloth, leather-work, fire-arms, swords, shields, felts and salt. The average annual value is said to be about 20,000 Kábal rupees.

*Lead.*—Is found in many parts of Chitrál, and is dug from the surface and sold in the country, a little going also to Bájáor. The amount realised is insignificant, as the art of mining is unknown.

[On the crest of the Zidik Pass we found some pieces of rich lead ore at the mouth of a small excavation.]

*Gold dust.*—A small amount of gold is obtained annually by washing the river-sand in the neighbourhood of Dánín, Kárí, and Broz.

*Slaves.*—A good many find their way into Badakhshán, a few also are said to find their way down to India (women only), but the most regular customers are the independent Pathán States—Dír, Asmár, Bájaor, &c. Good-

* By a concubine.

looking young men and women fetch Rs. 200 and Rs. 300 respectively on an average, whilst boys and girls fetch from Rs. 100 up to Rs. 300, according to looks.

*Tolls.*—These are numerous and vexatious to the traders passing through the Mehtar's territory. He himself takes the proceeds of a few stations, but his sons and favoured officials are allowed to take toll at many others. The rates fixed at Chitrál for horses, &c., laden or unladen, passing through from foreign countries and returning, are as follows:—

| | | |
|---|---|---|
| Per 1 horse | - | 2 Kábal rupees. |
| „ 1 mule | - | 1 „ „ |
| „ 3 asses | - | 1 „ „ |

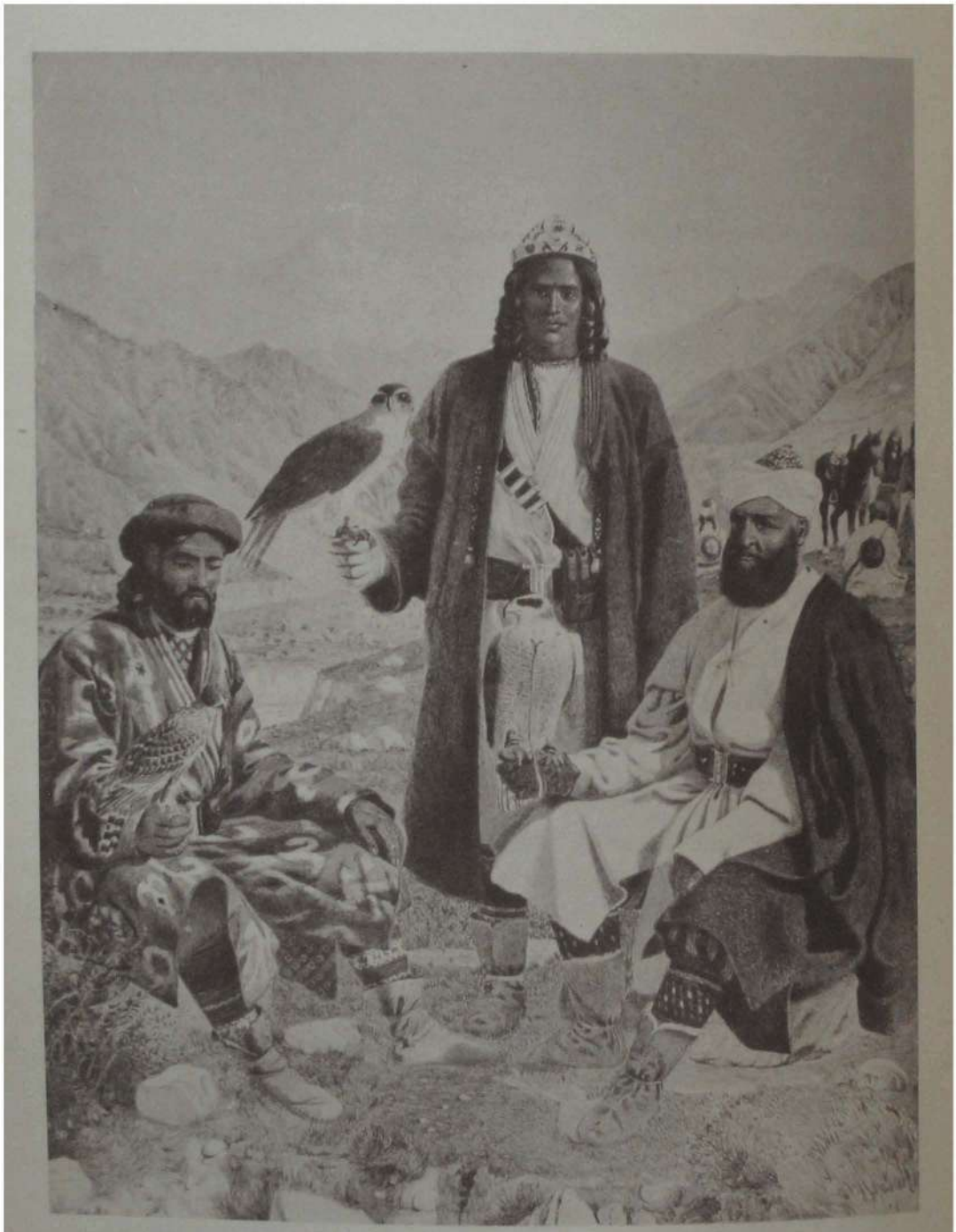
*Sheep, grain, &c.*—Each district has to yield twice a year so many sheep or goats, or both, to its immediate ruler, who must send one-half to the Mehtar. Darósh is an exception, for there Sháh-ul-Mulk is permitted to appropriate the whole number taken. Horned cattle are exempt. The Mehtar is said to receive in this manner over 6,000 sheep and several hundred goats annually.

The Mullás formerly took a tenth of all field produce, but some years ago Amán-ul-Mulk seized the tithes for himself, and the priesthood is now supported by voluntary subscriptions from the upper classes. North of the capital each district has to send to the Mehtar a certain number of woollen *choghas* yearly. In Chitrál itself, and south of it, this contribution takes the form of *tsadars* (*chadars*), which are narrow strips of cotton cloth interwoven with woollen embroidery.

*Tribute and Fines.*—Both Virran and Bashgal Káfirs pay tribute to the Mehtar. As far as the field and dairy produce portion of it goes, this tribute is a nominal one, but the Bashgal Káfirs have in addition to send a few children of both sexes as slaves. Fines are imposed for certain offences in Chitrál, and go to the Mehtar. Among the subject Kalásh Káfirs, for instance, the male offender in an adultery case has to pay a fine of cattle or sheep to the injured husband, and has also to send to Chitrál the same fine over again.

*Kashmír Subsidy.*—The Mehtar is said to have re-allotted the annua sum received from Kashmír. It is now distributed as under:—

| | | |
|---|---|---|
| Sardár Nizám-ul-Mulk | - | K. Rs. 1,000 |
| Tsik Mehtar Afzal-ul-Mulk | - | „ 1,200 |
| Mehtar-Jao Murid Dastgír | - | „ 500 |
| Mehtar Jao Ghulám | - | „ 200 |



AZIZ BEG. AMÁN UL MULK.

AFZAL UL MULK.

(A CHITRAL HAWKING PARTY.)

and to each of the other sons K. Rs. 100 per annum. Afzal-ul-Mulk receives the largest sum as he is obliged to keep up the largest number of armed retainers.

The balance left is generally invested by the Mehtar in English and other goods, which he disposes of at a good profit across the Hindú Kush.

*Currency.*—The country has no coinage of its own, and any foreign gold or silver money passes current. Gold *tillas* from Turkistán, English rupees (known as "dabalí" from our word *double*), Kashmír and Kábal rupees are all used, but copper money is unknown. There is no money to speak of in the country except in the Mehtar's own possession. Property changes hands by barter, and when money is obtained it is melted down and made into ornaments. The Mehtar is credited with having a hoard of gold and silver ingots, which, in times of danger, he distributes amongst his most trusted subjects for safe custody.

*Amán-ul-Mulk.*—The Mehtar is 65 years of age, and, as he is healthy and of regular habits, may be expected to live for many more years. He is big limbed and deep-chested, height 5 feet 9 inches or 5 feet 10 inches, and weight at least 14 stone. His head is large, the massive features are aquiline, and the expression is stern and thoughtful. A dozen years ago he was the most renowned polo-player in Chitrál, but he has long since given up the game, and his favourite amusements now are hawking and shooting. He has always been fond of women, but is free from any suspicion of unnatural depravity, and attributes his successes over the house of Khushwakt and over his own kinsmen to the fact that his opponents in both cases have offended the Almightly by their bestial vices.

It is unnecessary here to repeat the history of the Mehtar's rise; how from petty chief he became supreme ruler not only in the territory of the Khatúria family to which he belongs, but also over the whole of the Khushwaktia dominions. He is, without doubt, shrewd, brave, and unscrupulous. He has on his hands the blood of his nearest relations, and merciless acts of repression amongst all classes of his subjects have made him feared and obeyed. He is particular about his prayers, but is no friend of the priests, whom he has despoiled of their tithes. He is suspicious by nature, and has about him men who, to increase their own importance, excite his suspicions by suggesting that there is something hidden under the surface in the most ordinary affairs.

He is always more or less under feminine influence. The mother of Nizám-ul-Mulk (daughter of the late Ghazan Khán of Dír) used to be paramount, but her influence is said to have departed, and the mother of Sháh-ul-Mulk is believed to be all powerful at present.

Amán-ul-Mulk has married several times, and a good many concubines have always supplemented his wives. His first marriage was with a daughter of Mulk Amán of Yásín, sister of Gahuar Amán. She died childless. His wives now living are—

I. Daughter of the late Ghazan Kháu of Dír, and consequently aunt of the present Muhammad Sharíf Khán of that State. By her he has had—

(1.) Nizám-ul-Mulk.

(2.) Afzal-ul-Mulk,

and three daughters—(*a.*) One n Darél, married forcibly to the nephew of her late husband, Pahlwán Bahádur. Her father has in vain tried to recover her, but her youthful son by Pahlwán is now in Chitrál. (*b.*) The second is married to her first cousin (son of the Mehtar's sister.) His name is *Mehtar*, and he occupies Kala Naghar above Mír Kaní. (*c.*) The third is unmarried.

II. Daughter of a Saiyid of Turikó, by name Shams, who is the head of the Ráfizí sect in Chitrál. By her he has had—

(1.) Sháh-ul-Mulk.

(2.) Bahrám.

(3.) Wazír.

(4.) Abdur Rahmán Khán.

(5.) Khushnazar.

III. Daughter of the late Abdulla Kháu of Asmár, and consequently sister of the present Khán. By her he has had two sons, one Amír-ul-Mulk, a boy of eight, and another, name not known, younger.

IV. Daughter of Rustam of Turikó. By her he has had—

Murid Dastgír.

It is unnecessary to notice more than five of the sons, *viz.* (1) Nizám-ul-Mulk, (2) Afzal-ul-Mulk, (3) Sháh-ul-Mulk, (4) Bahrám, (5) Murid Dastgír.

(1.) *Nizám-ul-Mulk*—Age 25, married first a daughter of the late Rahmatulla Khán of Dír; secondly a daughter of Shér Afzal, the Mehtar's brother, now a refugee in the Bashkár country. *No issue.* Is Governor of Yásín. The Mehtar has given him the Turikó valley as his private estate.

(2.) *Afzal-ul-Mulk.*—Age 18, married daughter of ex-Mír of Shighnán, who is now kept in captivity by the Amír of Kábal. *No issue.* Is Governor of Mastúj. Has the Murikó valley as his private estate.



NIZAM-UL-MULK AND ATTENDANTS.



AFZAL UL MULK

(AND ATTENDANTS).

(3.) *Sháh-ul-Mulk.*—Age 25, married a daughter of the late Rahmatulla Khán of Dír, by whom he has a son, aged 5, betrothed to a daughter of the Khán of Asmár. Is Governor of Darósh, of which he draws for himself the whole revenue.

(4.) *Bahrám.*—Age 17, married niece of Sháh Abdur Rahím of Wakhán, now a refugee in Arkárí with his family. No issue. Bahrám is Governor of the Arkárí valley from Andartí "dubájha" (confluence) up to the crest of the Hindú Kush between the Khartinza and Agram passes. No private estate. Takes half the sheep levied from the people, and a share of the crops and tolls.

(5.) *Murid Dastgír.*—Age 28, married daughter of Sháh Abdur Rahím of Wakhán. Has two sons and two daughters, all very young. Is Governor of Lutkó, from the Andartí *dúbájha* up to the Dúráh pass. No private estate. Takes half the sheep levied and a share of the crops and tolls.

Murid Dastgír, although the eldest son, is not treated with any consideration, owing to his mother's rank being inferior. He seems a good-natured, harmless man, devoting all his time to shooting.

Bahrám is said to be a debauched lad and looks sickly; of no account.

*Nizám-ul-Mulk*, who has the title of Sardár, as his father's acknowledged heir, is a young man of good looks and manners and excellent physique; a good mountaineer, and fond of shooting, but said to be debauched. He is generally surrounded by musicians and dancing boys. Has friends among the people of Darél and Tangír.

*Afzal-ul-Mulk* has the title of Tsik Mehtar ("little Mehtar"). Short, plain, and very wiry; a great horseman; has as yet developed no dissipated tastes, and is devoted to his young wife from Shighnán. Studious, thoughtful, and ambitious. Severe as a Governor, but beloved for his generosity and courage.

*Sháh-ul-Mulk*, a handsome dignified man of excellent physique. Is far better educated than almost any of his countrymen. Fond of riding with hawks and hounds. He claims to be as well born as Nizám and Afzal, and chafes at being rated below those two. Has many friends amongst the independent Pathán tribes, whose caravans he escorts through his district, which is peculiarly subject to Káfir raids.

Nizám, Afzal and Sháh-ul-Mulk will probably fight for the succession on their father's death, and the result will not unlikely be the dismember-

ment of the State and its eventual re-consolidation under the most able or fortunate of the brothers.

*Ko-wár language.* Biddulph (tribes of the Hindú Kush) says that Chitrál is constantly pronounced Chitrár, owing to an apparent inability on the part of the inhabitants to distinguish between the letters *l* and *r*. Amán-ul Mulk and anybody else I asked about this assured me that the true name of the country was *Chatrár*, and that Chitrál was an Afghán corruption. So generally, however, has the Afghán version been adopted by foreigners that it is now accepted in Chitrál itself in official correspondence with other countries. In like manner the pass leading into Dír is always pronounced *Raolí* by Chitrálís, never *Laori* or *Lahori*, whatever the Pathán tribes may call it.

There is a great similarity between certain words in the language of Chitrál, and it requires much attention to recognise their different values. For instance, the word *ko*, as applied to the race inhabiting Chitrál, is almost identical with another *ko* signifying a people generally, and with a third *ko* meaning a valley. Thus *Kohăko* means the *ko* race, *Turíko* and *Murúko* the upper and lower people, whilst *Lutko* means the great valley! The absence or presence of a very delicate final aspirate, and the blending of "o" into "u" and "ao" are here the difficulty, which is enhanced by the habit of emphasising the first part of a word and slurring the last. The test word for foreigners is the Ko-wár for the word "grape." This a monosyllable, the first three letters of which are d, r, o, and the remaining consonants are a blending of the English *th* and *ch*.

The following vocabulary is given of words likely to occur in maps and reports. Where *jh* occurs it is to be pronounced as the French *j*, and *gh* and *kh* are both guttural:—

| | |
|---|---|
| Án - - | Mountain range. |
| Ánopón - | Pass over a range. |
| Bíabán - | Uncultivated place. |
| Biróghan - | Broad. |
| Bort - - | Rock. |
| Bratz - | Short. |
| Chat - - | Lake. |
| Chatrúr - | Field. |
| Chumor - | Iron. |
| Dih - - | Village. |
| Dok - | Hill. |
| Dor - - | Home, a man's own particular birth-place. |

| | | |
|---|---|---|
| | Drukham | - Silver. |
| | Drum | - Long. |
| | Dúbájh | - Confluence of streams. |
| | Gol - | - Valley. |
| | Gum | - Valley. |
| | Had | - Boundary. |
| | Haziz | - Lead. |
| | Hiin | - Snow. |
| | Hón - | - Landslip. |
| | Jash | - Grass. |
| | Jangal | - Forest. |
| | Jawán | - Youthful. |
| | Jazír | - Ruined house or village. |
| An almost imperceptible difference in pronunciation | *Jh*ao | - Crop. |
| | *Jh*ao | - Son. |
| | Kán | - Tree. |
| As above. | Ko - | - People. |
| | Ko | - Race inhabiting Chitrál proper. |
| | Ko - | - Valley. |
| | Krizi*jh*ao | - All cereals except wheat and barley. |
| | Krui - | - Red. |
| | Lasht | - Plain (noun). |
| | Lut - | - Great. |
| | Lut*jh*ao | - Wheat and barley crops. |
| | Murí - | - Lower. |
| | Nogh | - New. |
| | Ogh | - Water. |
| | Ot - | - Blue. |
| | Pet*kh* | - Hot. |
| | Pón - | - Road. |
| | Poránu | - Old. |
| | Resht | - Avalanche. |
| | Rísht | - Narrow path across the face of a precipice. |
| | Ro*gh* | - Deodar. |
| | Saoz - | - Green. |
| * As opposed to Ko. | Sarhad* | - Highland. |
| | Sha - | - Black. |
| | Shakh | - Garden produce. |
| | Shayoz | - Permanent ice. |
| | Shperú | - White. |

| | | |
|---|---|---|
| Sín | - | River. |
| Sowórum | - | Gold. |
| Takht | - | Cultivated tract. |
| Trang | - | Narrow. |
| Tsik | - | Small. |
| Turí | - | Upper. |
| Ushak | - | Cold. |
| Walát | - | Kingdom, country. |
| Watan | - | Do. do. |
| Yoz | - | Ice. |
| Zarú | - | Aged. |
| Zerch | - | Yellow. |
| Zom | - | Mountain. |

*Population.*—The people of Chitrál are a short-sized, well-built race of Aryan type, generally fair complexioned, often blue-eyed and brown-haired (some have actual yellow hair). They are as a rule slight, (a corpulent man is almost unknown) but they are wiry and muscular, and superb mountaineers. In disposition they are gay, careless, and independent, fond of hunting, hawking, and music, their songs often possessing true melody. They are generally well fed and warmly clad in woollen cap (or turban), cotton under-coat, woollen trousers, very loose high stockings, and soft leather boots coming up to the calf; over all they wear a woollen chogha, or on great occasions a gown made of gaudy Bokhára silk.

They are devoted servants, but, as before said, very independent, and only the name of the Lut Mehtar has any awe-inspiring effect.

They are good-natured and kindly amongst themselves, and probably as honest as their neighbours. No soldier could wish for better partizans in hill warfare, and, as every man rides or plays polo when he has the chance of a mount, they would make excellent light cavalry or mounted infantry. They seem to be impervious to cold or fatigue, and after going 40 miles at high speed over the mountains, a man will be ready either to dance, or to sit down by the fire and sing throughout the night. Life is held of no account. They do not pretend to be even outwardly religious as a rule. It is difficult to guess at the numbers of the population. They could always turn out 10,000 excellent soldiers, which is probably all that one wants to know.*

* The Mehtar has offered 8,000 men, when wanted, to hold the passes, but 10,000 men could probably be raised in all, at the lowest computation. Colonel Lockhart has been accused of exaggerating the martial qualities of this people in the above memorandum. Of course, until they shall have been tried in the field, under proper leading, it is impossible to estimate their value accurately. Since the memorandum was written, however, Chitrál has succeeded in defeating the Pathán of Dír—at least so it is said.



CHITRALIS.

## CHAPTER X.

### Military Deductions.

One of the main objects of the Gilgit Mission was to determine to what extent India is vulnerable through the Hindú Kush range, on the section lying between the Killik pass and Káfiristán. The result of the exploration is, in this respect, satisfactory. The Dúráh is the only pass on the section which need be taken into account at all, as it alone offers a practicable route for the march of troops across its crest, with a train of pack-animals. But the Dúráh, in common with all passes to the east of it, presents great difficulties on the southern side (in the case of the Dúráh, that is to say, between the crest and Chitrál, and between Chitrál and Gilgit). The river, or torrent bed is everywhere the easiest route, the paths on a higher level being, as a rule, unfit for pack animals. Those high paths could no doubt be improved, but not without much time and labour could they be converted into serviceable military roads. As regards the low-level roads, these are only available during two short periods in the year. One period is the fortnight or three weeks in spring, between the time when the snow has sufficiently diminished to give a passage over the crest, and the time when the melting process has become so general that every water-course is full, and the low-level paths are covered by raging torrents. The other period is the fortnight or three weeks in autumn, when the waters have run off, and the heavy snow has not yet fallen and blocked the crest.

Although it is certain that no army could penetrate this portion of the range until a military road had been engineered for it, it is nevertheless manifest that, after winning over local chiefs, an enemy could throw lightly equipped bands across the passes into Chitrál, and even into Hunza, and thence kindle a flame that would touch a considerable portion of our north-western frontier, while the real attack took place further west.

This is the only danger to be anticipated, and it could be met if the Indian Government were to acquire Gilgit, and there establish a post of observation on the lines suggested in the following memorandum, or on any other lines that might be preferred by the Government's military advisers. Under Kashmír rule Gilgit does not pay its expenses, so perhaps there would be no great obstacle to overcome in transferring it to direct British control.

Although the philanthropic side of the question is hardly in place here, it may nevertheless be added that the occupation of Gilgit by the English would free an oppressed people (for the Kashmír yoke is a tyrannical one), and, if proper means were used, could be made to kill slave trade in Chitrál, Hunza, Nagar, and eventually in Káfiristán also.

With Gilgit a British post, access to Káfiristán would soon be gained, and, in spite of the empty pretensions of Afghánistán, the people would be brought under English influence and Christianised. If English missionaries, or, better still, German missionaries engaged by the Indian Government, are not to Christianise the Káfirs, then Russian missionary enterprise may one day find a field there, or a Muhammadan *ghaza* may force Islám upon them, and make the people as fanatical Mussulmáns as the rest of our neighbours on the north-western frontier.

## Memorandum on the question of acquiring Gilgit, and erecting there a British Cantonment.

*Main objects.*—The acquisition of Gilgit would secure for us the continued loyalty of Chitrál, carrying with it our right of way through the Mehtar's dominions, and his active co-operation in time of need. In my opinion it would ensure the safety of the Hindú Kush.

It would also have a very wholesome effect in the Indus Kóhistán, and would give us a *pied à terre* in a fresh quarter from which the latter could be threatened on the tribes becoming troublesome, or on their complete subjugation ever becoming necessary.

*Neighbours.*—The surrounding countries are peopled by Dárd tribes, who, although devoid of religious fanaticism, would prefer Christian to Hindú contact and control. The management of the district and of our relations with its neighbours would be an easy task, and I cannot see that any complications would be likely to attend it.

*Garrison.*—The garrison I would so constitute as to derive from its elements both political gain and military efficiency, and my scheme would be on the following lines:—

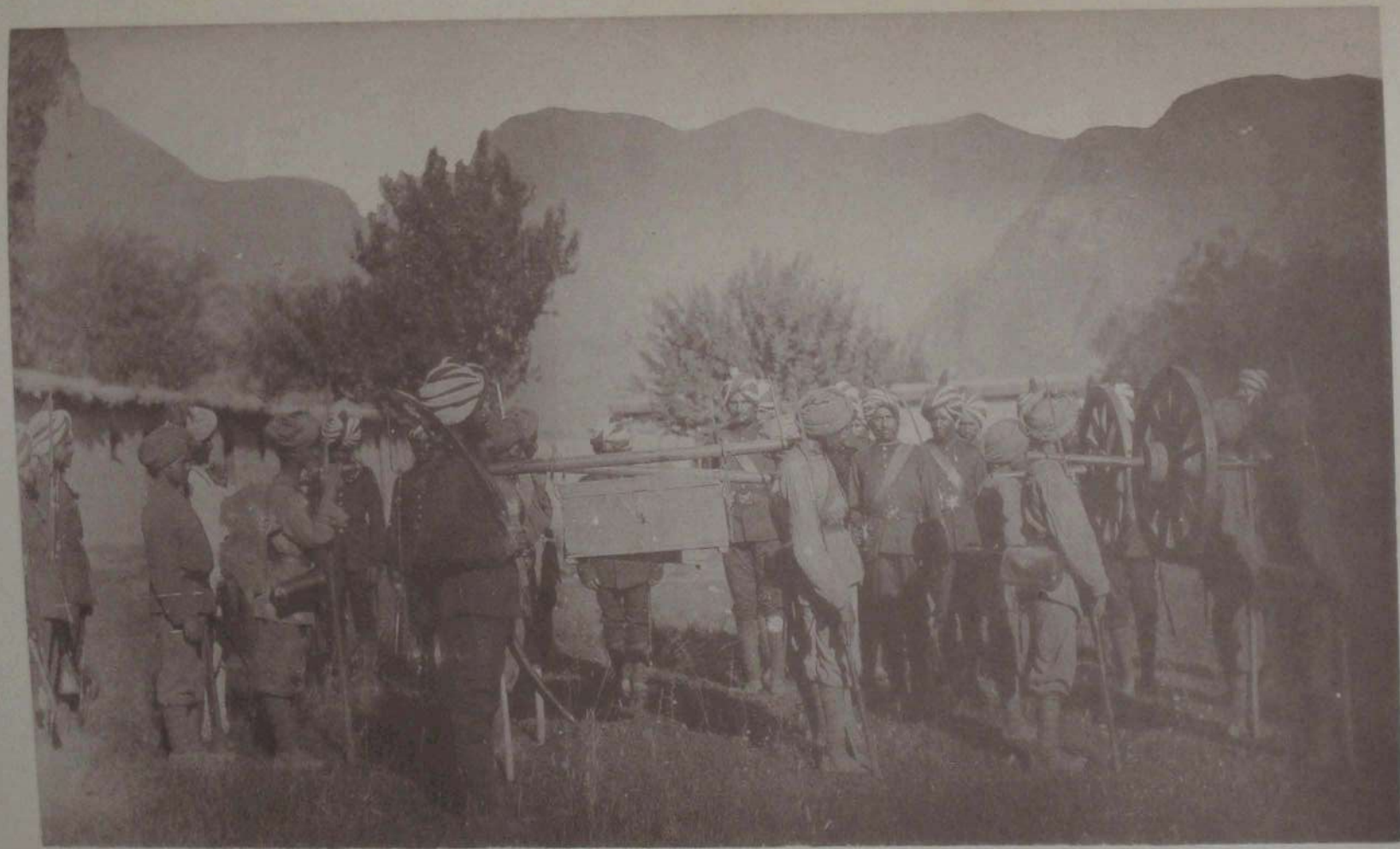
*Composition.*—The composition of the force would be as under—

I.

*Artillery.*—A carrier-battery, *i.e.*, a battery of mountain guns carried by men, on the principle of the Kashmír 'Kahár' batteries. Carriers to the Baltís, gunners to be Mussulmáns, from the Salt Range, or from some other good man-producing part of the Panjáb.



THE KAHAR BATTERY, GILGIT.



THE KAHAR BATTERY, GILGIT.



THE KAHAR BATTERY, GILGIT

(GUN BEARERS.)

II.

*Infantry.*—(*a*) Four companies of infantry drawn from the same class as the battery.

(*b*) Eight companies of infantry raised as follows:—

| | |
|---|---|
| In Gilgit | 1 |
| „ Chitrál and Yásin | 2 |
| „ Hunza | 1 |
| „ Nagar | 1 |
| „ Darél | 1 |
| „ Tangír | 1 |
| „ Independent Káfiristán | 1 |
| | 8 |

Each company to be ninety strong, including two officers of its own people. The strength of the garrison would thus be 1,200 of all ranks.

In the Panjábí battery and companies I would have nothing but young blood, native officers and non-commissioned officers included. They should all come from the same neighbourhood, and should be trained in their own district before being sent up. In the meantime their huts might be built.

The Mehtar of Chitrál would nominate his own officers, and the Thams of Hunza and Nagar would do the same. The Darél, Tangír, and Káfir representatives would probably be elected by the people, as the latter possess no absolute rulers. At Gilgit, the selection would rest with the British officer entrusted with the organisation of the entire body. This officer would have the power of rejecting the nominees of the others. The strict exclusion of Patháns would have to be insisted on. Men might endeavour to join the force from colonies of that race in Tangír.

*British Officers.*—The Commandant ought to be chief political and civil officer as well, the district work being performed by himself and his officers without civil aid. At least, this should be the system at starting, whatever might be developed afterwards. The Commandant should have powers of life and death; at any rate over men of the force. As a rule, he would probably punish serious offences by ignominious discharge, the offender being sent home to be dealt with by the chief or elders of his tribe, if not a British subject, and to be handed over to the civil power if he were one: to be, at any rate, placed under police surveillance. In selecting the British officers, none should be taken unless strong, active, and good tempered. They would be called on to deal with races of different temperaments, speaking several

dialects, not one of which is known to any Englishman. I should therefore be inclined to waive the *Hindústání* test, and to take likely officers from the British service, regardless of their not having passed an examination in that language, as well as officers from the staff corps.

*Supplies.*—The present garrison of Gilgit, with its detachment at Chérkala, amounts to 1,200 men (1,050 here, 150 at Chérkala), and supplies are derived entirely from the valley, except in the case of rice and condiments which are brought from Kashmír. Under our *régime* the people of Darél would be encouraged to bring in wheat and barley, of which they are said to have a large super-abundance. Rice would not be required. Sheep are produced all over this region in vast numbers, and horned cattle are also plentiful (the Kashmír authorities prohibit their slaughter); so that there would be no difficulty in provisioning the force. Salt, tea, sugar, tobacco, and spice would have to be imported from India. Eighteen months' supply of Indian necessaries should be sent up on the formation of the force, and renewed annually, so as to keep six months' reserve always in hand. Fuel would at first be scarce, but Eucalyptus seed has now been sown in several places, and if the tree thrives, it may very likely solve the difficulty.* At any rate, the difficulty would not be much greater under our *régime* than under the present one. The new force would be stronger than the Kashmír garrison by only 150 men if all were present, but this would hardly ever be the case, were liberality shown, as it should be, in the matter of leave. The tribesmen would be allowed to go home, in as large numbers as possible, for their sowing and reaping, and a good proportion of the Panjábís might be away for the greater part of the year.

*Chérkala.*—I do not see the use of holding Chérkala Fort. The two Rájas of Payál might be given 200 Enfield rifles, with ammunition, and left to take care of themselves. They are excellent, well-disposed men, and some of their people would, of course, be enrolled in the Gilgit company.

*Pay, Rations and Equipment.*—The rate of pay should be the highest possible, and each man should have a free flour ration, and salt. As a set-off against this, I would dispense with tents, which are unknown here, and substitute for them the free issue, on enlistment, of two rough Kashmír or Darél blankets per man. The Panjábís would soon learn to shelter themselves, and a system would have to be worked out for this. I would let the Dárd companies wear their own dress, which consists of chógha, woollen

* The seed sent up from India was damaged *en route*, and did not germinate.

drawers, leather socks, and round woollen cap. Some distinctive badge might be stuck in the latter; and the Panjábís might profitably adopt a similar costume. The Káfirs I would leave to their own devices, *i.e.*, to their bare heads and blanket cloaks, with a badge wherever it could be fixed.

*Arms.*—A light gun would have to be selected, and the Kashmír carrying gear could probably be improved on without adding weight. For the infantry, I would recommend the short Martini rifle. The idea of mounted infantry is attractive, especially in a country where men ride ponies over perhaps the worst riding ground in the world, but the grain and grass difficulty puts this arm out of the question.

*Transport.*—A transport corps of Baltís would have to be engaged, but very few of them need be kept at Gilgit, the rest remaining at home, retained by a small half-yearly payment. Chiefs would be made to guarantee the appearance of the men when wanted. This corps, it is obvious, need not be numerically strong. The details connected with its formation could easily be worked out without aid from any department, and the result would be a service combining efficiency with economy.

*Saráis and Hospital.*—It would be advisable to build a large *saráis*, with separate apartments allotted to each of the tribes likely to be in communication with us at Gilgit, and to arrange for feeding the guests. But the most important institution of all in the new cantonment would be a good hospital. The latter ought to be commodious and well found, so that its doors might be open to all comers. It would be essential to attach at least two medical officers (with a subordinate staff) to the garrison, and they would have to be carefully chosen for skill in surgery, as well as for physical fitness, patience, and good temper.

The establishment of the *saráis* and hospital, combined with the Gilgit tribal contingents, would, I believe, in time produce such good results that we should be allowed to travel freely in Darél, Tangír and Chilás.

That accomplished, the day would not be far off when such pressure could be brought to bear on the independent Pathán tribes as to render feasible an arrangement similar to that now obtaining in the Khaibar, by which a military road would be run from Pesháwar to Chitrál and the Dúráh Pass, by way of Swát and Dír. The feeling that they were hemmed in and isolated by ourselves and our allies would, I think, with the love of gain, soon combine to pacify permanently a region which has, for so many years, been a standing menace to our border.

I find I have omitted to note the number of officers to be attached to the Gilgit Guide Corps, as it might be termed. One British officer should, in my

opinion, be associated and altogether identified with each tribal division, *i.e.*, with each company (for Chitrálís and Yásínís would be separate). Two junior officers would be required for the four Panjábí companies. Royal Artillery officers on the scale of the Panjáb frontier force batteries. A junior Royal Engineer officer for defences, and to superintend road-making. The staff to consist of the Commandant, an adjutant, a quartermaster, and two medical officers. There would therefore be 19 British officers; not an excessive number, when it is considered that they would have political, revenue, and other work to perform in addition to their military duty.

It may be useful to add a rough table of distances from Gilgit.

| | Marches. |
|---|---|
| To Murree by Kamrí Pass and Srínagar | 30 |
| „ Murree* by Skardo and Srínagar | 42 |
| „ Skardo | 16 |
| „ Nagar | 5 |
| „ Hunza | 5 |
| „ Yásín | 9 |
| „ Mastúj | 15 |
| „ Chitrál | 21 |
| „ Darél | 6 |
| „ Sarhad-i-Wakhán by Killik Pass | 19 |
| „ Sarhad-i-Wakhán by Baróghal Pass | 14 |
| „ Dúráh Pass by Chitrál | 26 |

Gilgit,
27th February 1886.

W. S. A. LOCKHART,
Colonel.

REPORT of a SECRET COMMITTEE convened by Colonel W. S. A. LOCKHART, C.B., in January and February 1886, to determine the BEST SITE for the ERECTION of a CANTONMENT at GILGIT in the event of the latter becoming a BRITISH POST.

Dated Gilgit, 25th February 1886.

President:
Colonel W. S. A. LOCKHART, C.B., 24th Panjáb Infantry.

Members:
Colonel R. G. WOODTHORPE, R.E.
Captain E. G. BARROW, Deputy Assistant Quartermaster General.

Attending Committee:
Surgeon G. M. GILES, I.M.D.

* Always open for foot traffic.



MOUTH OF THE HUNZA RIVER

(FROM JUTIAL).

PEASANT WOMEN CLEANING COTTON



PROPOSED SITE FOR CANTONMENT AT THE MOUTH OF THE KHOMAR RAVINE.

The Committee, after examining the whole of the surrounding country, choose a site at the mouth of the Khomar ravine for the following reasons:—

The ground (5,200 feet above sea) is the highest on the floor of the valley, and in summer gets every breeze (no strong winds appear to prevail), whilst in winter it receives, through the opening of the Khomar, more sun than any other spot on the right bank of the river.

It has a light sandy soil, and there is plenty of sandstone for building material, as well as granite, on the spot.

The water-supply is absolutely pure, from the Khomar, in which there are no habitations, and it is sufficient for a large force.

There are plenty of trees in the Jutiál and Khomar villages, which escaped the axe when the Dogras, many years ago, laid bare the rest of the valley.

It is the best military position available, for it commands the valley secures the Kashmír road, and, facing west as it naturally would, its right would be protected by the river, whilst its left could be made safe from Darél raiders by a small post in the Khomar, which would block the thoroughfare, and for which several good sites exist.

A permanent bridge, suspension or other, could easily be thrown across the river, either opposite the present fort, where the width between the crests of the banks is 400 feet, or at any other suitable place in the immediate neighbourhood. The fort would then form a bridge-head, and under its wall would be erected the bázár.

Bridging material need only be telegraph-wire and planks, sufficiently strong to cross a mountain battery, for wheeled traffic is unknown, and would be unsuitable in this country.

W. S. A. LOCKHART, Colonel, President.

R. G. WOODTHORPE, Major, R.E., and Colonel,
E. G. BARROW, Captain,
Deputy Assistant Quartermaster General,
} Members.

GEO. M. GILES, Surgeon, I.M.D., Attending Committee.

(*See plan at the end of the Book.*)

## NOTE ON THE BRIDGES AT GILGIT.

In the cold weather, the suspension bridge used by the Gilgitís is erected close under the walls of the Fort, where the span required at this season is only 72 yards. The permanent bank on the other side is however distant from that pier of the bridge 130 yards, and this space is nearly covered with

water when the river is in flood. There would therefore be a difficulty in erecting a permanent bridge there. At a point 600 yards above the fort is the site of the summer bridge. The northern pier of the bridge is in the permanent bank, the southern pier being 65 yards away from its permanent bank, the span of the bridge being 114 yards. The river sometimes rises so as to cover 37 yards out of the 65 between the pier and its bank; but this rise rarely takes place, and it is seldom that the rush of water is sufficiently great to sweep away the rudely constructed stone pier, even in full flood, when the river occasionally rises as much as 4 feet in 24 hours. According to the statement of the Gilgitís themselves, a suspension bridge might therefore be put up in the site of the Gilgit summer bridge, the piers being erected where the present ones are, and the causeway carried out over the 65 yards above mentioned. A light suspension bridge of telegraph wire, or wire rope, would, I should think, be sufficient.

The suspension bridges of this country are made of nine plaits of twigs bound together in threes. One triple plait forms the footway about 6 inches wide, the other two form the suspension ropes and hand rails, at a height of from 2 to 3 feet above the footway, and are kept apart at intervals by forked sticks. The footway is connected with the upper ropes by further plaits at intervals of about 6 feet. These bridges are capable of bearing from 12 to 20 men on them at once, though, as a rule, 12 is considered the limit of safety. The bridge at Chérkala has a span of 120 yards. They last at least a year. If the footway, instead of consisting of one triple plait only, was formed of two triple plaits kept about 1½ or 2 feet apart and lightly planked, and the construction of the bridge slightly altered and strengthened, I imagine the country bridges would answer all purposes, at any rate as a temporary measure, and till such time as the requirements of the new cantonment were fully ascertained, the best site for a bridge decided on, and the necessary materials for a permanent structure obtained.

The materials for a twig bridge having been collected by the villagers from the hills above Gilgit, the ropes are plaited in four days, and the bridge is put up in one or two.

(Sd.) R. G. WOODTHORPE, Major, R.E., and Colonel,
Survey of India

## CHAPTER XI.

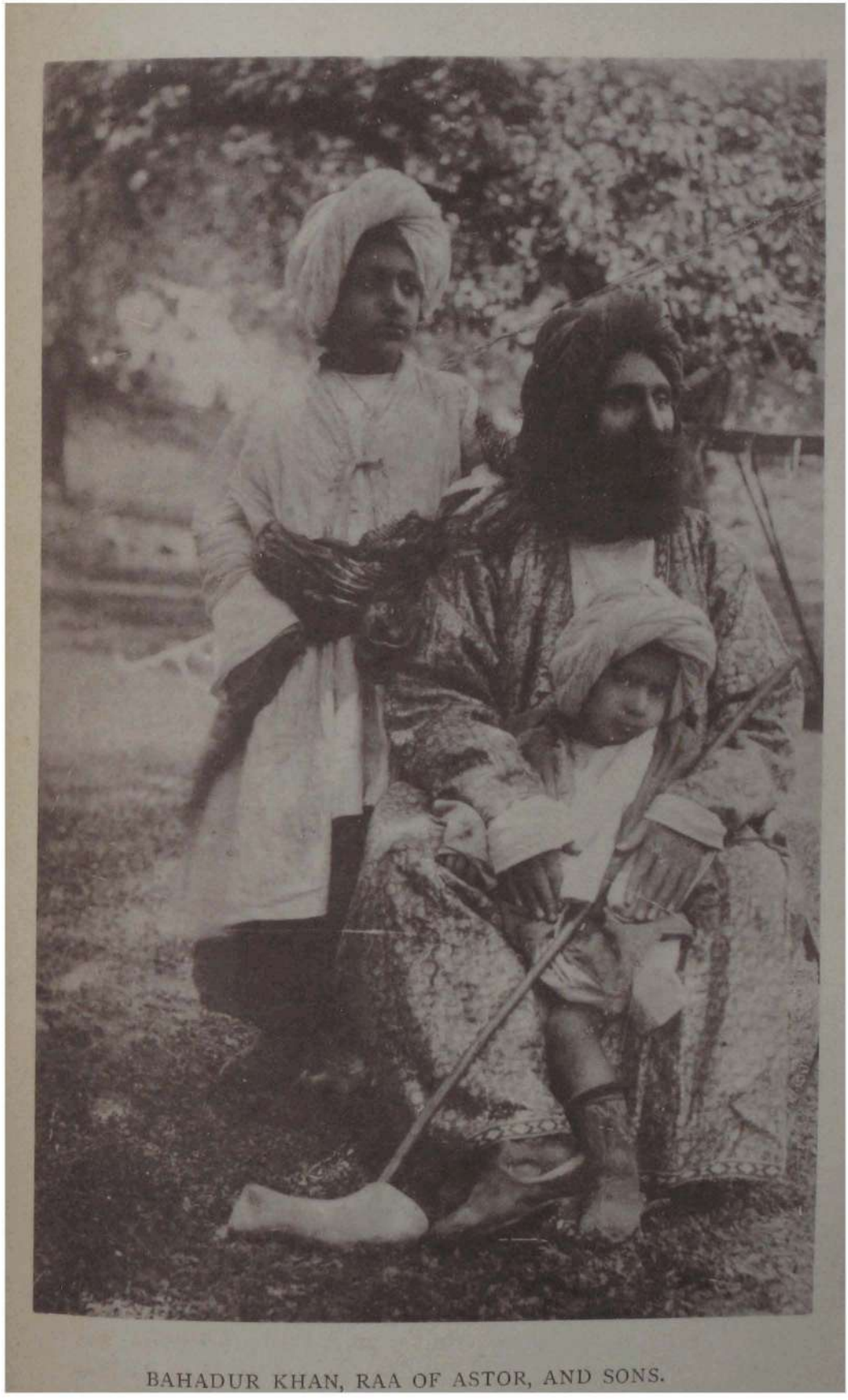
### General Narrative.

On June 12th, Colonel Lockhart's party entered Kashmír territory from Marí, and was met on the border (at the Kohála bridge) by officials of the Maharájah's Government. On the 21st Báramulla was reached. Here state-boats awaited the officers, who at once embarked, the men and baggage being directed to march on the following day towards Bandípúr, under the senior N. C. O. On the 22nd the officers reached Srínagar, and remained as guests of the Resident, Colonel Sir Oliver St. John, until the evening of the 25th, when they again embarked, reaching Bandípúr and rejoining their escort and baggage train on the following morning. At Srínagar Colonel Lockhart had been visited by Ináyat Khán, a *vazír* of the Chitrál ruler, and that official reappeared at Bandípúr to accompany the party as the Mehtar's agent, whilst Lálá Rám Kishen, Díwán-i-Mál of Srínagar, was to go with it as far as Gilgit, and to arrange for supplies. A word about those two officials. Lálá Rám Kishen was a shrewd little Brahmin of good manners, untiring activity, and possessed of a great desire to be of use. His services were invaluable, and he gave the officers much useful information about the country they were going to visit. He had once been Governor of Gilgit, and it was found afterwards that his rule had been one, on the whole, liked by the unfortunate Gilgitís. Ináyat Khán was a Chitrálí of some influence, and, from having been his master's representative at Srínagar for several years, had gained some knowledge of the outer world. His age was perhaps 45, his person portly, and his expression good. He was, from beginning to end, a trusty friend. He spoke Persian fluently. At his request Colonel Lockhart wrote from Bandípúr on the 27th June to Mehtar Amán-ul-Mulk. The following is a translation of the letter, which was in Persian. After compliments—

"I have arrived, by order of the Government (Sarkár-i-Anglézí), on a mission of friendship, to pay you a visit. I write briefly because I know that my Government has already communicated with you on this subject in a letter sent by the direct road from Pesháwar through Dír. I intend to take the Shandúr route, and, by the favour of God, to reach Chitrál at the end of next month" [*i.e.*, Muhammadan month, about the second week in August], "and to enjoy the pleasure of seeing you. One point I have

to bring to your notice, namely, that several bridges are said to be broken down on the road. Will you kindly order some one to see them repaired. I have been made happy by meeting Vazír Ináyat Khán. This gentleman will accompany me to your capital."

The snow lay very late in 1885, and the Kamrí Pass, which was the first serious obstacle to be overcome, was reported impassable on the arrival of the mission at Bandípúr. Kashmír sappers and miners were hard at work on the approaches to the Kamrí, but there was nothing for it but to halt in the meantime. This halt was spent in readjusting loads, and in generally preparing for rough work, and some shooting excursions were also made to fill up the time. The baggage train was a formidable one, chiefly owing to presents (including 200 Snider rifles and ammunition) for the different people to be dealt with; whilst warm clothing, tents, hospital requirements, treasure, escort ammunition, and certain commissariat supplies had to be carried. The train consisted of 200 mules. Each officer had one riding pony, and the native surveyor and native doctor had also one apiece. On the 13th July the Kamrí Pass was crossed. For many miles the road ran through snow, and, as the sun came out, the path behind the leading baggage animals was churned into deep black mud. Luckily, Lálá Rám Kishen had previously collected a body of Baltí coolies as carriers, and a drove of stout Kashmír ponies, so that the mules were driven across unladen. This march was 13 measured miles. Camp at Jarjú (11,174 feet above sea) was left at 9.45 a.m., and the rearguard reached Kála Páni (10,600) at 7.30 p.m. The height above sea of the Kamrí Pass was determined by Colonel Woodthorpe at 13,100 feet. A late start from Jarjú was rendered necessary by heavy rain having fallen from 2 to 5 a.m., saturating the tents, which had to be left standing to dry a little and lose some of their extra weight in the sunshine. In spite of the labour expended on it, the road was found to be very bad, and the march could not have been accomplished if the party had had to trust to its own mule train. On July 18th the party reached Astór (7,700), and halted 19th and 20th. Here the Rá of Astór was introduced, who was afterwards to be of service. A handsome old man of 70, the Rá, by name Bahádur Khán, was very cordial to the British officers, but was outspoken as regarded his dislike of Kashmír rule. He did all he could to entertain his visitors, and collected the young men of the neighbourhood for a great polo match, in which he himself rode harder and played better than anyone else. On the 21st the party marched to Dashkin (7,900 feet), distance 15 miles. Before leaving, Colonel Lockhart inspected the garrison of Astór Fort, being received with a salute of nine guns. On the 22nd, Dúain (8,500 feet) was reached, distance 9 miles. On the 23rd the party crossed the Hatú Pír Pass



BAHADUR KHAN, RAA OF ASTOR, AND SONS.



GURAIS FORT, IN KASHMIR

(BETWEEN BANDIPUR AND THE KARUZI PASS).



BUNGALOW AT GILGIT.



COLONEL NIHÁL SING.
(COMDG. THE KAIDUR REGT.)

BAKSHI MULRAJ.
(GOVERNOR OF GILGIT.)

(10,050 feet), and encamped at Dachkat (4,200 feet), distance 9 miles. On the 24th the Indus was crossed at Bunjí by half of the party, which encamped at Darót (4,250 feet), 9 miles from Dachkat. On the 25th the remainder of the party had crossed over by the afternoon.

On the 26th Chakarkót (or Chikarkót) (4,950 feet), distance five miles, was reached. On the 27th camp was at Parí Bhup Singh (4,330 feet), five miles. On the 28th the party marched to Mináwar (5,050 feet), fourteen miles, and was met by Bakhshí Mulráj, Governor of Gilgit. With him came Rájah Alídád, son of the Nagar Chief, and, through his mother, hereditary chief of Gilgit. Under Kashmír rule this young man is nobody, but he was much liked by the officers of the mission, who afterwards showed him what civility they could, although his movements were jealously marked and his visits restricted by the Bakhshí. On the 29th July, at 8 a.m., Gilgit (4,890 feet), distance eight miles, was reached under a salute of 11 guns. Between the fort and residency a carrier (Kahár) battery and regiment of infantry were paraded for inspection, and afterwards went through some manœuvres, under General Indar Singh, very well indeed. The party was accommodated in the residency, built some years before for Captain Biddulph by the Kashmír Government. A capital house, it just accommodated the officers, whilst a guard-house sheltered their escort, and all followers were well provided with huts in the grounds. No sooner had Colonel Lockhart entered the house than a messenger presented himself from the ruler of Hunza, Mír Ghazan Khán, with a letter of greeting from the latter. This messenger called himself *Vazír* Rajab Khán, but it turned out that he was really a person of no rank or position, and he afterwards did mischief, as will appear when the visit to Hunza is described. As an offering from his master this Rajab Khán brought a fine pair of Ovis Poli horns. Colonel Lockhart wrote a suitable reply to the Mír, stating that he was en route for Chitrál, but hoped to correspond with him later on. Rajab Khán was told verbally that some of the party would like to visit Hunza on returning from Chitrál, and was requested to inform Ghazan Khán of this. He was then dismissed with a present for his master of two Umritsur turbans, two percussion revolvers, and 200 rounds of ammunition. For himself he was given 100 rupees, which, of course, was done under a misapprehension as regarded his rank. It was just ten times too great a present and created unpleasantness afterwards from the expectations it raised in others. It was found advisable to halt at Gilgit until the 8th August, by which time it was hoped that the streams on the Chitrál route, swollen by melting snow, might have subsided. This halt was spent in making considerable alterations in the baggage train, and in acquiring some knowledge of the surrounding

country and of the rulers of its various petty states. Jáfir Khán, ruler of Nagar, sent his son, Uzar Khán, with a suitable following, to pay his respects; Mulk Amán, the fugitive son of Gauhar Amán, of Yásín, wrote from his retreat in Tangír, and the two Payál Rájahs (of the Chitrál Khushwaktia family), viz., Akbar Khán, of Cherkala, and Áfiat Khán, of Gákuch, came themselves. The two latter are Kashmír subjects and receive a small monthly subsidy. A great friendship sprang up between the British officers and those two very manly and hospitable chiefs. Although of the same stock they profess different tenets of the Mussulmán faith, Akbar Khán being a Sunní, and Áfiat Khán a Shíah Muhammadan, but they are on the best of terms.

Whilst halting at Gilgit, Surgeon Giles did a great deal of excellent work, patients coming in to be treated from all quarters. The operations he performed were chiefly eye cases, but amongst those of other kinds, the reconstruction of noses (by a flap from the forehead) excited the greatest interest amongst the people. A very common punishment in all that region is the cutting off of noses, and Surgeon Giles gave an artificial nose to a Gilgiti who had suffered mutilation at the hands of Bakhshí Mulráj's father, when the latter ruled over Gilgit a dozen or more years before. Previously to leaving Gilgit the party was visited by Sháh Jahán, a young nephew of the Chitrál ruler, who promised that the onward road should be put into good repair without delay.

Two most important matters were satisfactorily arranged before the departure of the mission from Gilgit. The first was the shaking off of the company of Kashmír infantry, which the Maharájah had ordered to escort the party to Chitrál. It would have been a great mistake to enter the Mehtar's dominions with this guard. He was, under any circumstances, suspicious, and would have thrown every difficulty in the way of the Kashmír guard. He had, moreover, complained of the size of the mission party alone, as being in excess of what the country could conveniently support. Colonel Lockhart, after private interviews with Ináyat Khán (the Mehtar's Vazír) and with Díwán Lálá Rám Kishen, and then with the two together, made eventually the following compromise. The company of infantry was to return to Srínagar from the Chitrál border, but a major of the Kashmír army and four sepoys were to go on with the mission in plain clothes. This officer, Major Hassan Sháh, belonged to the Kashmír irregular troops. According to his own statement he was of Pathán descent, but his features did not bear this out. According to his own statement also he was a man of immense courage and physical endurance, but subsequent experience did not bear this out either. He was, however, a good Persian scholar, and, although it was unpleasant to have to trust him in



UZAR, KHAN OF NAGAR, AND ATTENDANTS.



A BIT OF ROAD FIVE MILES BEYOND HANZIL

(WHERE THE BOX CONTAINING 4,000 RUPEES WAS LOST).

delicate matters, he nevertheless was useful occasionally, as will appear. The other matter was a re-arrangement of the transport, so as to reduce the grain required en route. Díwán Lálá Rám Kishen had provided a corps of Baltí carriers, to be paid at the rate of six annas per diem, and this enabled the party to dispense with the greater part of their mule carriage, the total number of animals, including riding ponies, being reduced to sixty.

The weather had been getting steadily warmer, and the following were the thermometer readings at the Gilgit Residency from the 2nd:

| | | | |
|---|---|---|---|
| 2nd August, | max. in shade | - | 94° |
| 3rd | „ | „ | 95° |
| 4th | „ | „ | 96° |
| 5th | „ | „ | 96° |
| 6th | „ | „ | 97° |
| 7th | „ | „ | 98° |

8th August, Hanzil. Elev. 5,130, 8 miles.—Baggage was sent off in the forenoon and the officers left Gilgit at 4 p.m., the entire garrison being turned out in review order to salute them as they rode out of the place. Díwán Lálá Rám Kishen accompanied them a few miles and then took leave. His return to Srínagar had been ordered, the Maharájah having directed Bakhshí Mulráj to go with the mission as far as the Chitrál frontier post of Róshan. Colonel Lockhart gave Lálá Rám Kishen, at his own request, a letter to H. H. the Maharájah, another to Lachman Dás, Governor of Kashmír, and a certificate for himself, in all of which the Díwán's excellent services were acknowledged.

At two miles from Gilgit the small village of Naupúr was passed; halt a mile further the Kargáh Nálá was crossed by a frail wooden bridge, where some delay was caused by a pony falling over and being carried down stream to a considerable distance. Hanzil is a hamlet of only ten houses and is without trees. Here camp was pitched for the night.

9th August, Sharót. Elev. 6,080 feet, 9 miles.—The party marched at 5 a.m., and the rearguard did not get in until 7 p.m This was the worst road yet seen by the mission. At about six miles out, the path ran across a nearly perpendicular cliff, at a height of 300 feet above the Gilgit river. Here several mules fell, a good deal of damage was done to their loads, and, amongst others, a box containing 4,000 rupees in silver was dashed into the stream. A guard of the Maharájah's men was placed over the spot. At Sharót, where camp was pitched in a pleasant grove, Bol Khán, foster-brother (shír-brádar) to Nizám-ul-Mulk, arrived with a letter from the latter. Nizám-ul-Mulk is heir-apparent to Chitrál, and

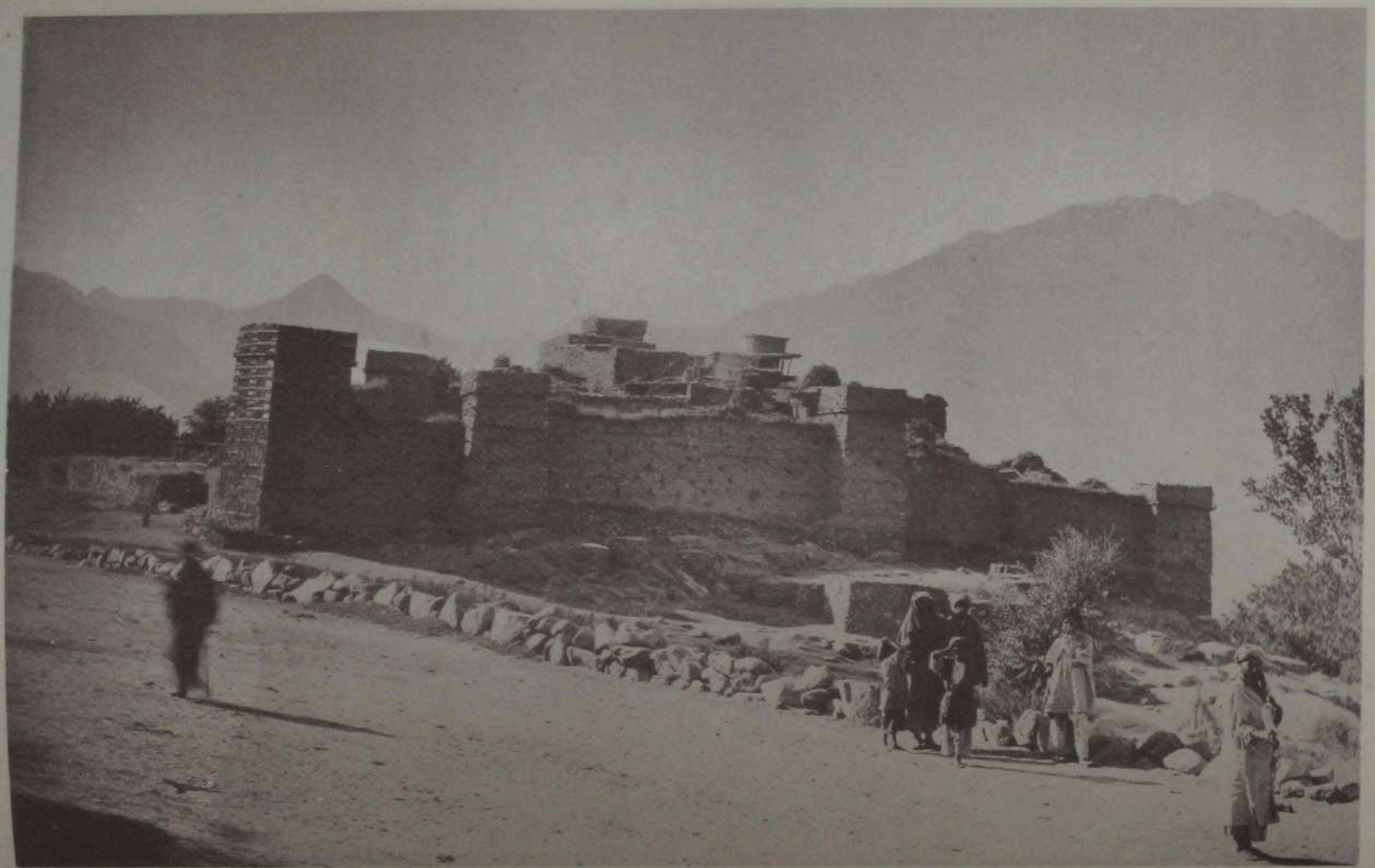
rules over the province of Yásín, in which stands the frontier fort of Róshan. His letter was one of greeting.

10th August, Sharót.—The party halted in order to try to recover the treasure chest. A drag was made, furnished with large, strong fish-hooks, and a great portion of the day was spent in fruitless endeavours. The spot, immediately under the cliff, could not be reached except by a raft. The Bakhshí placed a permanent guard on the bank, and wrote to Bunjí for *mashak* men to be sent up, who should seriously undertake the recovery with inflated buffalo hides. As the money could not be spared, Bakhshí Mulráj sent an order to Gilgit for another 5,000 rupees to be sent after the party, the sum to be adjusted by the British Resident in Kashmír.

11th August, Dalnatí. Elev. 5,800 feet, 6½ miles.—An easy march, except just at the end, where a corniced path led across a precipitous cliff overhanging the river. At half way Gulpara was passed, a hamlet and fine grove belonging to Rájah Akbar Khán, of Chérkala, who joined the party during the march. His fort and usual residence, Chérkala, stands opposite Dalnatí, with which it is connected by a rope bridge 120 yards long, and 50 feet high above the river. In anything like a high wind this bridge sways to such an extent as to be impassable. The village consists of 140 houses, surrounded by lofty walls, with towers at the angles and on each face. The houses are mostly three-storied, the basement being occupied by cattle. Here there is a garrison of 100 Kashmír infantry.

12th August, Singal. Elev. 5,800 feet, 7 miles.—A very difficult march. The road had an eccentric course. At two miles from Singal it rose by a trying zig-zag for over 1,000 feet, descending to the river bank in the same way, simply to avoid a cliff which was practicable for men with loads, and which laden mules could have passed across had a moderate working party spent a day's labour on it. The Kashmír officials credited Major Biddulph with this piece of engineering, but of course it must have been their own, done with the object of increasing the bill for road-making. At Singal Colonel Lockhart received a letter of welcome from Afzal-ul-Mulk, full brother to Nizám-ul-Mulk. This youth of 18 rules over the province of Mastúj, which borders his elder brother's province of Yásín on the west.

13th August, Gákúch. Elev. 7,200 feet, 9 miles.—An easy march, except for two or three steep, rocky bits, known in Kashmír phraseology



GAKÚCH FORT

(FROM THE POLO GROUNDS).



FORT AT GAKUCH.

as *parís*. Here another letter arrived from Nizám-ul-Mulk, expressing joy at the prospect of meeting the mission, but warning Colonel Lockhart that attacks should be looked for from the Tangír and Darél borders. A similar warning had been received in the morning, before the party marched from Singal, through Ináyat Khán, who reported that a man from Darél had come to him in the night and had said that Mulk Amán might give trouble at either Hupar, Róshan, or Dahimal. In the evening the officers were taken over Gákúch Fort by Rájah Áfiat Khán, to whom it belongs, Gákúch being the capital of the petty chieftainship. The fort is a small, cramped enclosure of rough stone, with bastions and keep, and, when the mission visited the place, so great was the dread of Darél raiders, that the whole of the inhabitants passed their nights within its walls, together with their sheep and cattle. Áfiat Khán sent over-night 100 armed men to hold the dangerous part of the morrow's road towards Hupur, in consequence of the warning received at Singal.

Camp at Gákúch was pitched on the village polo ground, beside an apricot orchard. Fruit was so plentiful that the poor Baltí carriers were permitted to shake the trees all day long, and thus helped out their usual fare of coarse barley-meal bannocks.

Colonel Lockhart's intention had been to divide the party at Jinjrót (the third march beyond Gákúch) by going himself with all the officers and some native surveyors, very lightly equipped, through Yásín to Mastúj, whilst the escort and train followed the right bank of the Ghizar river It now, however, became apparent that Ináyat Khán really dreaded the responsibility of conducting the baggage by the Ghizar route, owing to the reported activity of Mulk Amán among the Darél and Tangír tribesmen. Colonel Lockhart therefore set his mind at rest by agreeing to go with the main body, taking Surgeon Giles with him, whilst Colonel Woodthorpe and Captain Barrow diverged at Jinjrót.

14th August, Hupur. Elev. 6,450 feet, 9 miles.—A very hot and trying march, with several difficult "*parís;*" the road carried to an unnecessary height here and there. A bad camping ground, cramped and without any shade.

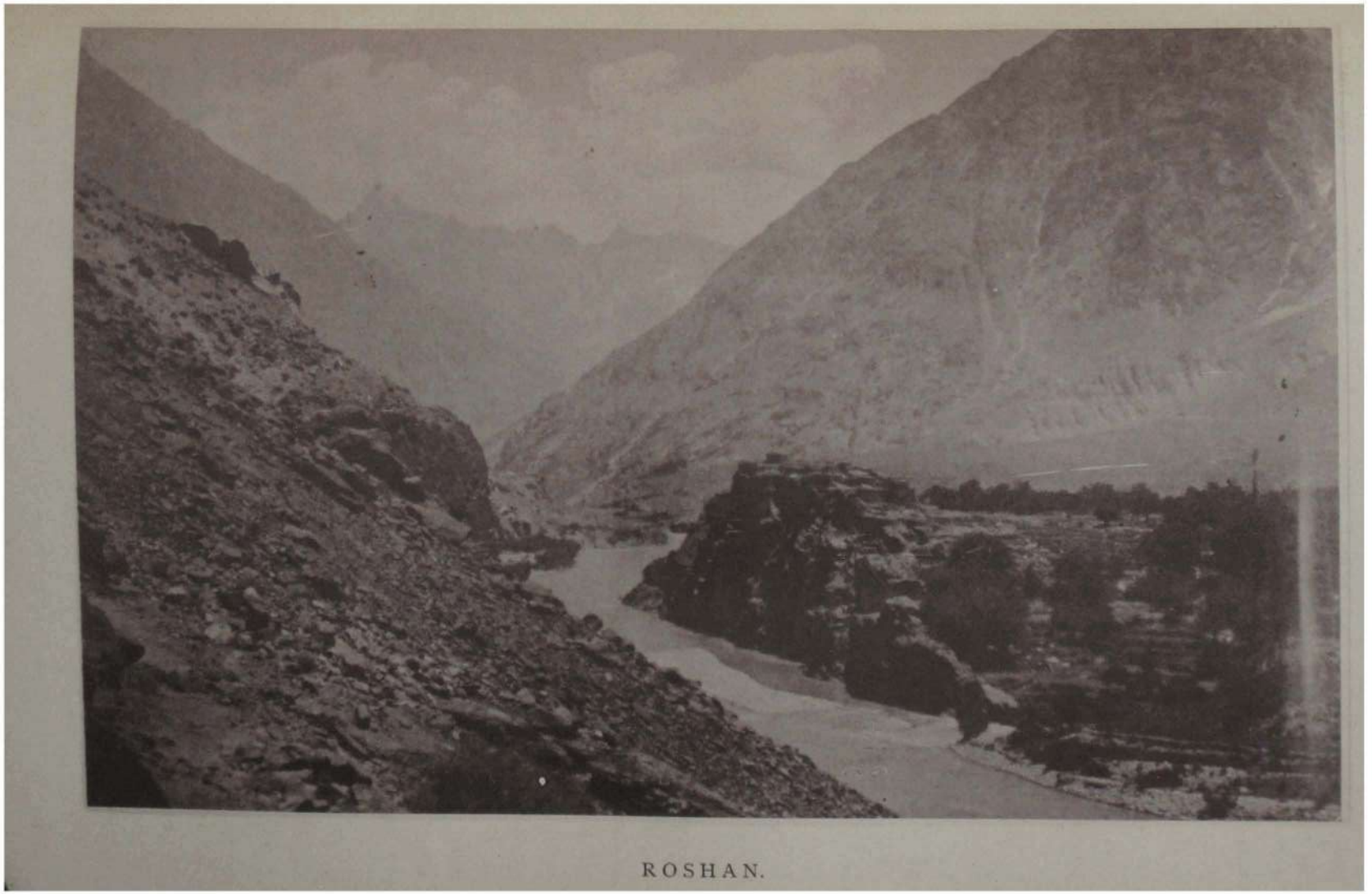
15th August, Róshan. Elev. 7,050 feet, 11¾ miles.—A very difficult, rocky road in some places. At half way Pínan Beg, Vazír of Yásín, and other notables of Nizám-ul-Mulk's province, met the mission. Dismounting, they bade the officers welcome, and professed their desire to render service.

At sunset Nizám-ul-Mulk arrived in camp at Róshan, and was received with all honour. His first appearance was prepossessing. Above the

usual height of his countrymen, and well-built, his complexion was fair and rosy, his eyes good; he had not yet shaved his head (the sign of entering on serious manhood), but still wore his luxuriant brown hair, with no beard, only a slight moustache. He was provided with a tent, camp furniture, tea, candles, &c., and passed the night in watching the performances of his dancing boys, and listening to his band of shrill wind instruments and drums, which made sleep impossible for any of the British party until a very advanced hour. Their consolation was that Chitrál territory had been entered, and that work had begun.

16th August, Jinjrót. Elev. 7,830 feet, 7 miles.—At starting from Róshan there was a difference between the few Kashmír people still with the party and the Chitrálí officials. A number of Baltí coolies had run away in the night, and there were mutual recriminations in consequence. The bulk of the baggage was off the ground by 6 a.m., but a good deal had to be left behind under the care of Ináyat Khán, who pressed carriers from the neighbourhood and brought it on afterwards. Wafadár Khán, Ináyat Khán's younger brother, who joined the mission with Nizám-ul-Mulk (whose foster-brother he is) made a bad impression on the officers at first. A very young-looking man of 30, thin and active, this person afterwards became a favourite with the party. He showed on subsequent occasions a good deal of courage, and, when away from Nizám-ul-Mulk, improved in every way. With his foster-brother he at first supported the latter in all his foolish caprices, asking for anything that took Nizám-ul-Mulk's fancy, from a tent to a rifle, and refusing to be put down by even the greatest *brusquerie*. From having been a good deal in Kashmír and once in British India, Wafadár Khán had acquired some very broken Panjábí, which was his only means of communicating with the officers. He did not know a word of Persian. Nizám-ul Mulk again made sleep a difficulty by his music at night.

17th August, Jinjrót. Halt.—A letter of greeting from Alí Mardán Sháh, Ex-Mír of Wakhán, who had been expelled by the present Amír of Kábal, and had settled, with a large party of his followers and their families, at Barkultí, in Yásín, under the protection of the Chitrál Mehtar. Colonel Lockhart gave the messenger a present and verbal thanks for the good wishes of his master. In his then state of ignorance as regarded the whole question of the relations of Afghánistán with her foreign provinces, he did not think it prudent to send the Ex-Mír anything in writing. From the Mehtar of Chitrál there came also a letter, which was suitably replied to. Finally there came two messengers from Ishkasham to inquire, on behalf of the



ROSHAN.

Afghán Government, regarding the movements of the mission, especially towards Badakhshán. The reply given was to the effect that no intention was entertained of entering the Amír's territory, and that, in fact, any such intention was impossible without the Amír's consent having first been obtained by the British Government.

18th August, Jinjrót. Halt.—Nizám-ul-Mulk was presented with 16 Snider rifles and some boxes of ammunition, a turban and silk *chogha*, &c., his people receiving smaller gifts. Nizám-ul-Mulk was gratified; his people were *not*. Colonel Lockhart wrote to the Foreign Secretary announcing that the mission would reach Chitrál on the 9th September. The following is an extract from his letter:—

"It has struck me—now that we are on such excellent terms with the Amír—that perhaps my programme might be advantageously altered, so that we should cross the Hindú-Kush before settling down in Káfiristán for the winter, and make a trip from the Dúráh *viâ* Zebák, Ishkáshim, Sarhad, and Mastúj, back to Chitrál in 29 days. We shall arrive at Chitrál on September 9th, and, after a few days' halt, go on to the Dúráh, in which neighbourhood—somewhere near the head of the Lutkhó valley—we shall be till the end of the month. You will get this letter about the 2nd September. A letter from Simla might reach the Amír of Kábal about the 10th. The Amír could send me his permission direct through Chitrál by the 20th, or at all events before we had left the Lutkhó valley, and, after doing the grand circle of 29 days, we could count on entering Káfiristán by the 1st November, which would do very well. It would be necessary for the Amír to send me his permission direct, and for you to send me your instructions *viâ* Pesháwar and Dír to Chitrál by a Kháka Khél man, or they might be too late. * * * * We may not again have so good a chance of seeing and surveying everything in this region, and it does not seem reasonable that Abdur Rahmán Khán should object to our presence in the east, whilst he tolerates it, or likes it, in the west of his dominions. * * * * Our postal arrangements have been made, but whether they will stand remains to be seen. The people openly say that they will obey no one but the Mehtar himself, so this village-to-village post business is doubtful. I'll work the Mehtar about it when I see him. You work the Dír-Chitrál post if it can now be done."

19th August, Juljás. Elev. 8,250 feet, 9½ miles.—Soon after daylight Colonel Woodthorpe and Captain Barrow started for Yásín. Colonel Lockhart and Surgeon Giles marched to Juljás as soon as sufficient carriage could be collected, but villagers were loth to come, and there was trouble in starting.

The march was a very trying one, and a good deal of damage was done to baggage from being dashed either upon the ground or into the water. The intention had been to halt at Dahimal, some two miles short of Juljás, but, on arrival there, Colonel Lockhart found that supplies had been collected at the further point. The rear-guard got in at 9 p.m., having had to leave a few loads behind under the care of Ináyat Khán.

20th August, Pringal. Elev. 9,670 feet, 8 miles.—This was a fairly easy march, with one bad place a short distance out from Juljás. At half-way Colonel Lockhart and Surgeon Giles were met by Mehtar Amán-ul-Mulk's bastard brother, Bahádur Khán, Rahmat Ullah Khan, Governor of Ghizar, and other officials. Bahádur Khán was a merry-looking, plump little man of nearly 60, whereas Rahmat Ullah Khán was tall, dignified, and some 15 years younger. They were both most cordial in the welcome they gave the two English officers.

21st August, Chashí. Elev. 9,828 feet, 10 miles.—This also was a fairly easy march, but not so easy as had been expected from accounts received of it previously, and the "Pamir-like steppes" were conspicuous by their absence. Chashí stands at the confluence of three streams forming the Ghizar river. From the west runs the Áb-i-Haoz, or Shavír, from the south runs the Chashí (rising in Tangír), whilst the northern affluent is the Bahustar.

22nd August, Ghizar. Elev. 10,069 feet, 12½ miles.—Easy march. Encamped on wide plain traversed by the Ghizar river. A letter from Afzal-ul-Mulk was here received and answered. In the evening there was a polo match, in which Nizám-ul-Mulk played. His music went on all through the night. Surgeon Giles examined some people suffering from cataract and other eye disorders, and arranged for a few to be sent on to Mastúj, where their treatment during a halt would be more satisfactory.

23rd August, Shandúr Lake. Elev. 12,213, 19 miles.—The only hard thing about this march was its great length. A mile from the encamping ground Afzal-ul-Mulk met Colonel Lockhart and Surgeon Giles on a broad expanse of turf between the lake and the hill side. He rode in front of some 200 horsemen extended in loose order, those on the outer flank scrambling along the rocky steep, and all preserving a fairly level line. Colonel Lockhart wrote, after the meeting, the following remarks about Afzal-ul-Mulk:—

"He is said to be only 18 years of age; his tongue is too big for his mouth, and makes his speech difficult to understand; he is short and darker in



KAMDÈSH KÁFIRS

complexion than most of his countrymen; the mouth is coarse, and the overhanging eyebrows give a forbidding look to his face, which is full of power, and which lights up when he smiles."

The young chief's manner, when he dismounted and came forward, with hands crossed on his breast, to greet his guests, was very taking. Instead of asking for anything that struck his fancy, and forcing his presence on the visitors, as his elder brother had done, Afzal-ul-Mulk retired at once, after seeing that the party had everything they required. Having heard that the English officers wished to go to Káfiristán, Afzal-ul-Mulk had procured five Kamdésh Káfirs, and brought them with him. These were sent over to camp in the afternoon. They were short spare men with complexions as dark as a fair Hindú's, and light grey eyes. Their heads were shaved in front, and the side and back locks hung down uncared for. One of them had the features of a Jew, but the other four might have passed for Gújars of the Panjáb. Thinly clad in coarse cotton shirts and drawers, and grey woollen blankets, they did not seem to mind the cold, which was great at the elevation of the Shandúr. They were put into the guard tent for shelter and given food; they ate anything offered them. Their spokesman was a man who had picked up a few words of Pashtú. Through him they showed no diffidence in asking for whatever they desired. Tobacco was their first request. Rum they thought better stuff than the poor decoction of grapes they had brought in a leather bottle as an offering. There was a hard frost at night, but the Káfirs slept comfortably on the ground with no covering but that which they had been wearing all day.

24th August. Shandúr Lake. Halt.—As the previous day had been a severe one (the rear-guard under arms from 6 a.m. to 9 p.m.), a halt was necessary for man and beast. In early morning the officers went out shooting with Nizám-ul-Mulk. The lake is a breeding ground for many wild fowl, and bar-headed geese were swimming about with their young broods, but, as no boat was procurable, no bag was made, the birds keeping too far from the banks. On returning from this fruitless attempt, the two officers were invited by Afzal-ul-Mulk to witness a game of polo, in which the young men played recklessly. One of the bystanders remarked to Colonel Lockhart, "Afzal's men are often killed at polo. Quite 12 are killed every year, not "to mention horses; and besides there are many bones broken." The following is an extract from Colonel Lockhart's private letter to the Foreign Secretary written on this day:—

"Afzal-ul-Mulk gives away every penny he has to the people under him, by whom he is, quite apparently, worshipped. He devotes himself to

knowing all about his province, and is busy educating himself in other matters just now. * * * He is always thinking, and his friends say his thoughts are all for others—but he has an idea, I feel sure, and that is that he is the proper person to succeed Amán-ul-Mulk, which view he will not hesitate to support by depriving Nizám-ul-Mulk some fine day of his sleek, curly head. He openly shows his contempt for his elder brother. Yesterday he said he was going to have a long-distance horse race, and would ask me to accept the winner. Nizám-ul-Mulk said he would do the same, on which Afzal told him he might do the racing here himself, and afterwards sent word to me that he would give me a good race at Mastúj when his brother leaves us (to see one of his wives in that neighbourhood), and leaves us for good I am glad to say. Nizám-ul-Mulk is a greedy beast. He asked for our mess tent recently. He asked Giles yesterday for his Arab and retriever, and he asks for tea and food at all hours. As he and his followers take a great deal of sugar we have hardly any of the latter article left. Afzal, on the other hand, had excellent tea and bread awaiting us here; heaps of sheep for the men, and to-day a fat ox came down for the Mussulmáns of the escort, which I sent back with thanks, and asked for a sheep or goat instead, owing to the presence of my good, longsuffering Sikhs. * * * Of the Káfirs brought by Afzal, one is a perfect Jew, the others are like ordinary fair Hindús, but all have light blue or grey eyes. They say themselves (one of them can talk a little Pashtú) that other tribes of theirs have skin and hair like mine. Anyhow, here they are, and it is always a beginning. They eat everything put before them and I have given them some wooden pipes and black cavendish in the hopes of making them too sick to come to my tent door and sit watching my every movement; but the men of the escort say it is of no use, 'these people are made of iron and feel nothing.' They certainly don't seem to feel the cold. * * * They give out quite proudly that they are of the same race as the English, and say they expect to be treated as such, because Afzal has brought them thus far from their homes in order to meet us. Like other regions Chiltrál would be bearable but for its pleasures. Nizám-ul-Mulk pulled me out of bed at an unearthly hour to-day to shoot geese. I had just swallowed breakfast and begun this letter, when Afzal took me to see polo. Now I have said I must write to the Lord Sáhib, and that no one must come near me for some time, but the Káfirs are surely coming again. Patience is about the only quality one requires in a thing of this sort, and I sometimes feel that my stock, like our unfortunate sugar, is almost at an end. The last thing I have to contend with is a split between the brothers Ináyat and Wafadár Khán. It was bad last night, but matters have improved to-day, and I have supported Ináyat completely, as the elder."

Amongst other things asked for in this letter, Colonel Lockhart requested that a large quantity of American tobacco-seed might be sent, to enable him to introduce the plant into Káfiristán, and other parts of the Hindú-Kush region.

25th August, Harchín. Elev. 9,178 feet, 10½ miles.—A march of little difficulty, owing to the pains taken by Afzal-ul-Mulk to prepare a road for the mission. A good encamping ground in a grove on the river bank. Colonel Lockhart rode the march with Afzal-ul-Mulk and his regard for the youth was much increased. Afzal begged him to tell the Viceroy and the Queen (*Kaisar-i-Hind*) that although he, Afzal, was but a boy and of no high position, still, if they would only send for him on war breaking out with Russia or with any other enemy of Britannia (*sic*), he would bring every man of his with him, and, said he, "Then you will see that I shall never show my "back to the Kaisar-i-Hind's enemies, and that I am a real '*Shamshír-zan*' "(*sabreur*); but it is not proper to boast. You shall see some day." He talked of war, and his desire to see a great campaign; of his father with affection, and of his friends. "Nizám-ul-Mulk," he said, "has heaps of friends, "and I have only four, not counting my father, but then I would do any- "thing in the world for them, and they would each of them die for me." Those four friends were, he explained, Bahádur Khán, his *vazír* (his father's natural brother), Maimún Bég, Hazara Bég, and Ináyat Khán. Unlike an ordinary Muhammadan he talked of his female relations, mother, sisters, and wife. Regarding the latter, who is a daughter of the Ex-Mír of Shighnán, and 15 years of age, he said, "I am allowed four wives, but I am fond of this one, and she is enough for me."

26th August, Mastúj. Elev. 7,780 feet, 14 miles.—Except for crossing and recrossing the river by frail bridges, necessitating the unloading of mules, there were no difficulties in this march. There were some steep ascents and descents, but the road had been wonderfully well engineered and made, thanks to Afzal. On arrival at Mastúj the party was given a fine bit of turf to pitch camp on, abutting on the polo ground, about a mile from the fort, where the young chief lived. Supplies of all kinds had been collected, and, after these had been served out, Afzal brought 40 horsemen, before the tents were pitched, and there was a race of several miles. The winning horse, badly galled, was then presented to Colonel Lockhart. Then there was firing at a mark from horseback (at a gallop), and finally a dance—the usual kind of performance, lads and men moving in jerky advances, retirements, and whirls, to the music of clarionets and drums. Afterwards Afzal took off his turban and placed it under Colonel Lockhart's coat, which is the method employed in those parts

of solemnly claiming protection. In the afternoon a sudden squall came up from the west, and did some damage to camp, poles snapping and tents collapsing before the blast. Heavy rain fell throughout the night.

27th August, Mastúj.—At 8 a.m. Afzal called at camp and asked if the officers had all they required. At 10 a.m. his elder brother Nizám visited Colonel Lockhart to bid farewell. At this interview he impressed upon the Colonel the fact that he was the eldest recognised son, and begged that his father might be told to send him to India when the mission returned. This day came a letter from Captain Barrow, dated 22nd, reporting all well, and stating that Colonel Woodthorpe and he would rejoin on the 1st September. Captain Barrow enclosed a letter of greeting from Alí Mardán Sháh, Ex-Mír of Wakhán. A curious document also arrived from Amán-ul-Mulk, a metrical address, expressing joy, hope, admiration, &c. in jingling Persian rhyme.

28th August, Mastúj.—The escort was drilled for Afzal's benefit, and the men then fired at long ranges, to the astonishment of the natives. Then there was polo, in which Mirzá Bég, the head of Afzal's household, was seriously injured and carried off the ground.

29th August, Mastúj.—At 10 a.m. Colonel Lockhart and Surgeon Giles went to the fort in uniform with all the Muhammadans of the escort, and followed by all the Muhammadan servants of the party. A sumptuous breakfast was served for the two officers in a long double-poled tent, captured from Badakhshí invaders some years before. This tent was of green cotton outside, and inside was lined with embroidered Bokhára silk and Russian chintz. A horse and greyhound were presented to Colonel Lockhart, and a couple of *choghas* (fine woollen gowns) were given to Surgeon Giles. The latter then photographed the fort and its owner. The most striking thing at Mastúj is an immense *chinár* tree by the south face of the fort, which, as is usual with old trees near Chitrál habitations, has slate tablets, roughly inscribed with Persian couplets, names, and dates, let into the bark.

30th August.—Colonel Lockhart rode out with Afzal-ul-Mulk at 7 a.m., and looked up the Chumorkan pass; then went some way up the Yárkhún and returned at 12.30 p.m. In the evening Afzal visited camp by invitation, and was presented with the following gifts:—

Sixteen short Sniders, with four boxes of ammunition.
Two percussion revolvers, with 100 rounds.
One chogha, value 200 rupees.
One turban, value 40 rupees.
One turban, value 15 rupees.

In addition, Colonel Lockhart gave him his own Kábalí horse, which was at first objected to, as it seemed like a bartering transaction; but that difficulty was got over. During the morning's ride a servant of Afzal's called attention, with great pride, to a point on the river, two miles above the fort, whence his young master had swum down, with an inflated goatskin, to his own door. It was an impossible looking stretch of water, characterised throughout by shallows and rapids, sharp black rocks appearing above the surface here and there. When asked by the Colonel how he had managed to perform this feat, Afzal replied, "I can't give you the *nishán* of *how* I "did it. I escaped by the mercy of God. *Why* I did it was because "everyone said it was an impossibility." He discussed many matters unconnected with his own country, and seemed to have a great curiosity about the outer world, and a consciousness of his own utter ignorance. Talking of the massacre of Cavagnari's party at Kábal in September 1879, and the rôle played by Yákúb Khán on that occasion, the youth said he had discussed the matter with many Afgháns, and could arrive at nothing from them. "But surely," he added, "if the prince was close at hand "with his own soldiers and did not rescue the envoy, either he did not "wish to rescue him, or he was no prince at all, as he could not make his "men obey him."

In his letter, dated 4th September, to the Foreign Secretary, Colonel Lockhart wrote thus of the people:—

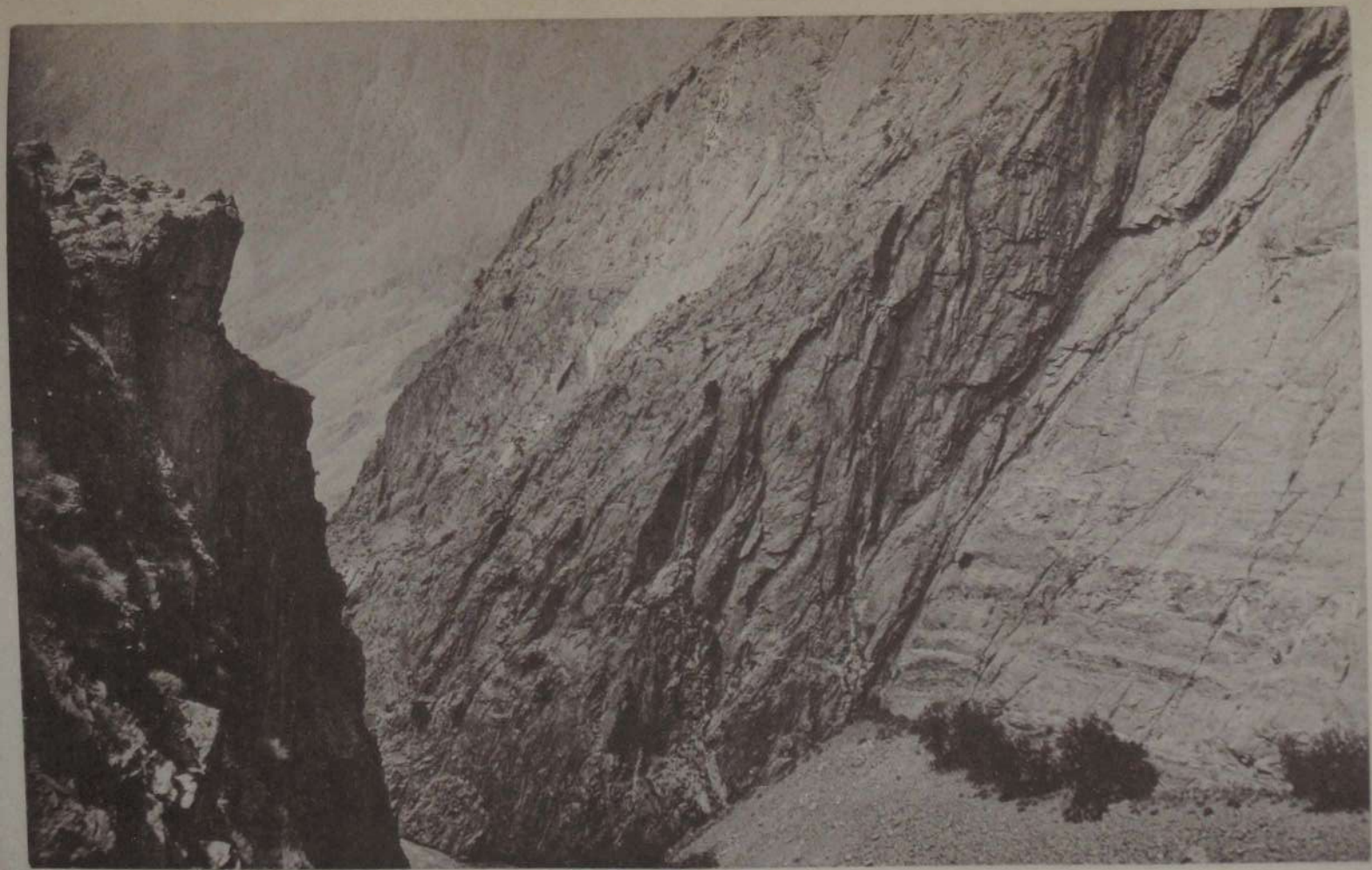
"My estimate of the Chitrálís—now that I have seen the good sort—is favourable. They are the best men, perhaps anywhere, on a hillside—say up or down a precipice. Middle-sized, light limbed (very good legs), well chested, fair complexion, often blue-eyed, gay, good natured, affectionate amongst themselves, intensely fond of a joke, rather hot tempered, and most independent, even of their own chiefs. I saw an old greybeard quietly refuse to obey the beloved Afzal the other day, and disappear over a hill, flogging his nag to escape the youth's wrath. They are great people to kiss and shake hands. The women and children come out to be kissed by their male belongings as we pass, and before mounting of a morning every Chitrálí in camp is sure to have kissed some male friend, or perhaps a dozen. Bahádur Khán, the Mehtar's brother, is a good specimen. An old gentleman with a shrewd, good-humoured face and sturdy form. When I make a joke (a very poor one answers if it conveys something personal) he rushes at me, bottling his mirth until he can seize my hand, which he shakes violently, laying back his head the while and bellowing with laughter."

31st August, Mastúj.—Nothing worthy of record.

1st September, Mastúj.—Najíf Khán, son of the Mír of Hunza, arrived, a pleasant-looking young man, fair, with rather Mongolian features. He had been deputed to Chitrál in connexion with some projected matrimonial alliance between the families of the two chiefs. The Sikhs of the escort were turned out in the afternoon to show Afzal and Najíf Khán some wrestling, running, and jumping, which gave the two young men a good deal of amusement—especially as a wrestler was badly hurt, and bled freely. Ináyat Khán left in the evening for Chitrál to prepare the way.

2nd September, Mastúj.—Colonel Woodthorpe and Captain Barrow arrived in the afternoon. The following is Colonel Woodthorpe's account of their trip:—

"On the 19th August Captain Barrow and I left Jinjrót to make a loopcast *vid* the Darkót Pass to Mastúj. We were accompanied by Pínau Bég and Bahádur Khán, who were to make all arrangements for our comfort and safety, and to supply the needs of our party, &c. As already explained it was impossible for the whole party to go by this route, which it was absolutely necessary to explore, and it seemed possible that another opportunity for exploring it might not, and indeed as it turned out, did not again occur. I sent Bábú Bápú Jádú with Colonel Lockhart's party to make a plane-table survey of the route and as much as he could of the country on either side of it, while I carried a subtense traverse and plane-table survey from Jinjrót round to Mastúj, where we connected our work again. As it was known that a heavily-equipped party would meet with difficulties, we travelled with very little baggage, Captain Barrow and I sharing a small tent between us, and the whole of the baggage was carried by coolies. Beyond a riding pony each we had no animals with us. Our ponies were swum across the river below the camp on the afternoon preceding our start, and we ourselves crossed the next day by a twig bridge at Khalta. Khalta is the last village on the way up the Ghizar, where fruit-trees are met with in profusion. It has an elevation of about 7,500 feet. The river just below this village flows through a deep and narrow gorge, and the precipitous cliffs on either side forbid any passage along the banks, and so, to reach the Yásín valley from Khalta, the path has to climb a thousand feet over a lofty spur running down from the main range to the junction of the Yásín and Gilgit rivers. This path is an exceedingly bad one, and at one place the ponies had to half step, half jump, across a gap in the narrow ledge doing duty for a path, and which at the best barely afforded foothold. The rocks were slippery, and an overhanging boulder liable to catch an animal's head while in the act of springing made the jump still worse for the ponies. A false step would



GORGE AT JANDRÓT, BELOW KHALTA.

have sent them rolling hopelessly and helplessly down into the foaming torrent below. Fortunately they got over all right, and mounting the ridge, a very steep and stony descent took us down to the river crossed by a rude plank bridge, and four miles of very hot and dreary travelling over stony fans and rough ravines led us into Gendai, where we rested thankfully in a pleasant little orchard, on soft turf in the shade of apricot trees, the delicious fruit of which fell around us in showers with every little gust of wind. The next morning we made a short march to Yásín and again camped under apricot trees. On the 21st we moved to Handúr, a tiring march of 13 miles, crossing at first a broad flat plateau, the Dasht-i-Táus, showing traces of former cultivation, with a ruined fort on it, beneath which we crossed to Sandi and continued along left bank for some distance, recrossing again at Mír Walí's fort at Barkultí. Mír Walí was the treacherous murderer of Hayward. The fort is a well-built one, and, standing out in the open, looks very imposing as we approach it from the south. The fort is rectangular, with walls 25 feet high, and square towers at each of the angles, with intermediate ones on three of the faces. On the river face there is no intermediate tower, but on this side is the entrance to the fort, which acts as a *tête de pont*, for the road, on leaving the bridge, passes through a covered way, or narrow court under the east wall of the fort. The walls are about 4 feet thick at the top, and are backed by double-storeyed rooms all round. They thus present spacious ramparts on every side, with parapets to protect the defenders. The inside of the fort is divided by a high wall into two parts, the northern portion being set apart for the women. In this portion is a large tank, which draws its supply of water through a covered channel from the river, and also by an underground passage from a spring in the mountains to the west. The southern half of the fort contains a *masjid*, and a smaller tank supplied from the larger one. The bridge is about 50 feet long and 4 feet wide."

"Passing from the fort and climbing over a few terraced fields, we found the Ex-Governor of Wakhán, Alí-Mardán-Sháh, and his followers awaiting us under some fruit trees. He is an exceedingly agreeable man, with gentle and courteous manners, of pleasing appearance, with delicate white hands, which seem to betray a certain weakness of character. In 1883, on the advent of the troops of Abdur Rahmán, Amír of Kábal, into Badakhshán, Alí-Mardán Sháh fled into Yásín with a large following. He now resides at Barkultí, which place he holds in *Jágír* from the Mehtar. He received us very well, and he promised to visit us in the course of the afternoon in our camp, to discuss arrangements for our journey onward over the Darkót. We then went on to Handúr, where we encamped on the usual sloping turf patch

under apricot trees. Alí Mardán Sháh arrived about 5 p.m., when we had settled down in camp and had had our frugal meal; and after a few general complimentary remarks we proceeded to business. He told us that the Darkót and its glacier were easy, but that the Chatiboi would prove trying to our ponies. He hardly knew how we should manage to get them over it, and many suggestions were made as to sending them, or going ourselves, by some other route, but this we explained was impossible, as we must see the Darkót. All this time a stately old gentleman in Alí Mardán's train was practising a young hawk in striking his prey, a small sparrow, and afterwards feeding it with the mangled remains; but this did not prevent him from taking an interest in the discussion and making his suggestions. The outcome of it all was that there were two men of Wakhán who could see us and our ponies over the glacier, if anyone could, and these men were fortunately in the neighbourhood: so Alí Mardán Sháh promised us their escort and assistance, and took his departure, having been presented with a pistol and some ammunition. Later in the evening, as we were thinking of dinner, one of his retainers came back with the pistol to ask how it was to be loaded. On proceeding to show him I found that the ammunition sent from the Pindí Arsenal did not fit the chambers, the bullets being for a larger bore, and they could only be got in after shaving them with a knife; we apologised for this, which was rather a *contretemps*, as we thought possibly Alí Mardán, or at least his followers, would look on it as a deep design on our part to prevent the pistol being of any use to him. However, I believe he quite understood that it was a mistake, and we were able to rectify it eventually.

"The next day we marched to Darkót, the last few miles lying through a flat portion of the valley, covered by a low forest of scrub, willow, and birch, intersected by the numerous shallow channels of the main stream, and its affluents. Camp was again pitched on delicious turf in the thick shade of some pollard willows and fruit trees. As I wanted a day on the hill above camp for work, and we found our provisions would allow of a halt, and the coolies also wished for a rest, we decided to remain here for one day; and next morning early we started for the hill. Our way lay up a steep and shaly slope, actually dangerous in parts, but with care we managed to reach the top safely. Going ahead I noticed a magnificent ibex on a ridge parallel to mine and 300 yards off. My rifle was a little behind, as usual in such cases, and although I popped down out of sight at once, he had gone when my rifle came up, having got wind of some of our party. From the point we had reached we got an admirable view of the country—the smiling little valley of Darkót lay far below at our feet, surrounded by an amphitheatre of lofty ranges and snow-capped peaks, from which large glaciers came down almost into the valley itself; on the east we looked up the Dadangbalsi valley to the



BALTI COOLIES IN CAMP.

pass in the Ashkúman, an easy route apparently. I was able to check and considerably to add to the work already done. On our way back we were shown where Hayward was murdered, and, as we afterwards met an eye-witness of the tragedy, I will give his account of it.

"It is just before dawn in the valley of Darkót. Not far from a grove of pollard willows stands a single tent, through the open door of which the light falls upon the ground in front. In this tent sits a solitary weary man; by his side on the table at which he is writing lie a rifle and a pistol loaded. He has been warned by one whose word he cannot doubt that Mír Walí is seeking his life that night, and he knows that from among those dark trees men are eagerly watching for a moment of unwariness on his part to rush forward across that patch of light-illumined ground and seize him. All night he had been writing to keep himself from a sleep, which he knows would be fatal; but as the first rays of dawn appear over the eternal snows, exhausted nature gives way and his eyes close and his head sinks—only for a moment, but in that moment his ever watchful and crafty enemies rush forward, and before he can seize his weapons and defend himself he is a prisoner and dragged forth to death. He makes one request—it is to be allowed to ascend a low mound and take one last glance at the earth and sky he will never look upon again. His prayer is granted; he is unbound, and, in the words of our informant, as he stands up there, 'tall against the 'morning sky, with the rising sun lighting up his fair hair as a glory, he is beautiful to look upon.' He glances at the sky, at those lofty snow-clad peaks and mighty glaciers reaching down into the very valley, at the valley itself, with its straggling hamlets half hidden among the willow groves, whence rises the smoke of newly-kindled fires, he hears the noise of life beginning again, the voices of women and the laugh of happy children, and then with firm step he comes down, back to his savage foes and calmly says: 'I am ready.' He is instantly cut down by one of Mír Walí's men, and as he falls he receives his death stroke from the sword of his treacherous friend, whose honoured guest he had so lately been." The story would be incomplete and unsatisfactory if I could not tell of retribution. When the British authorities bestirred themselves in the matter, after some delay, Amán-ul-Mulk sent men to capture Mír Walí. The brother of our informant was one of his pursuers, and one day met him face to face on a narrow path leading round a precipice high above a foaming mountain stream. Escape was impossible, and the two men engaged in deadly conflict. Mír Walí shot his adversary, but in the same moment the latter ran Mír Walí through the heart, and both fell together dead into the torrent below. It has been often said that Hayward owed his death principally to a quarrel he had with Mír Walí in which he lost his temper; that may have been, but it was not quite

the opinion of many of the natives of the country, who seemed to have liked Hayward for his pleasant manners and courteous ways with the poorer classes, and they put his death down entirely to Mír Walí's cupidity, which was excited by the valuable presents Hayward was taking with him over the Hindú-Kush. The quarrel was the pretext for gratifying his cupidity.

"On the 24th August we left Darkót, following up the course of the stream for a little way, and then crossing it, mounted a steep ascent to a plateau, on the edge of which is the Darband-i-Darkót, a very strong position indeed, the river flowing on the east through a very narrow gloomy gorge with precipitous sides. We climbed the hill beyond for a short distance, till we reached a pleasant little spot with wood and water, where we were advised to halt, and let every one have a good meal, as water and firewood were not procurable at the place we proposed to halt at, just below the pass. This we did, and went on in the afternoon, examining a hot sulphur spring which we passed *en route*. A very steep climb brought us to the edge of a glacier on the south of the Darkót Pass, and among the huge rocks of the lateral moraine of this glacier we bivouacked, as there was no space large enough to pitch even our small tent upon. It was a very cold evening, with a bitter wind, and we were 13,600 feet above the sea. It was a curious and novel sensation, towards morning, lying comfortably wrapped up, and peeping out from our blankets at a most glorious sunrise effect without having to get up in the cold and dress and go outside. From where we were lying we looked right across the Darkót valley to the lofty peaks of Daspúr 21,500 feet above the sea. These were the nearest, only 12 miles away in a straight line, and in the dim moonlight looked, with their mighty glaciers flowing down between steep spurs, like seated giants whose white garments had been gathered together and fell in folds between their knees to their feet. Beyond, to the east, rose range after range of similar snow-clad peaks, the summits of which caught the first flush of dawn, and glanced with an intense rosy light, while the sky above and around was still starlit, and showed no signs of the coming day; but as the sky gradually grew lighter and brighter, the deep flush on the snows faded to orange, pink, and cream, till, as the sun rose over the hill behind us, they burst forth in all their brilliant whiteness: and it was time to be up and away. We climbed 1,400 feet over the glacier, moraine, and snowfield, a fairly easy ascent, and found ourselves on the pass, a vast expanse of snow, 600 yards broad at the crest, and widening to a mile, bounded by crags rising abruptly 2,000 or 3,000 feet on either side. The descent is, at first, very gradual, though nowhere during the passage down the glacier, a distance of some four miles, is it at all steep. At first it was easy going, but the snowfield soon becomes a glacier, across which run numerous crevasses,

wide and deep, though narrow enough at some part of their length to allow them to be crossed without difficulty: about four miles down they become more frequent and difficult, and we had to leave the glacier for a rough and obscure path on the débris of the lateral moraine. At last we emerged on the Dasht-i-Baróghil, or Baróghil Plain, a stretch of undulating country on both banks of the Yárkhún river, covered with long grass and shrubs, well watered; and we rested and were thankful.

"The following day we sent off our camp down stream, while Captain Barrow and I rode up the valley to see as much of the Baróghil Pass as possible. We reached the site of the bridge destroyed by our friend Alí Mardán when he fled from Wakhán, and found it impossible to cross to the other side. The river at the bridge contracts to a very narrow rocky gorge barely 20 feet wide. We returned to lunch, and then climbed up a hill to do a little work, and finally addressed ourselves to the Chatiboi glacier, after crossing the stream from the pass, which disappears under this glacier. For the ponies the passage up the moraine is bad, but that across the glacier itself is far worse. The glacier descends steeply from the ravine above, and the pressure has forced it into a series of immense billows and waves, along the crest of which the path lies, with a dip into the furrows now and then; the danger of these ups and downs is increased by the crevasses. Occasionally the path is a steep descent between two crevasses a few feet apart. Here our Wakhí guides proved themselves invaluable. They attached ropes to our animals' tails, and while one led the pony down the other held on to the rope, slacking off gradually, guiding the pony, and ready to haul on the moment he appeared to be slipping towards either crevasse, which was just wide enough to let the pony in beyond hope of recovery. Thanks to Alí Mardán's men, although we went perilously near losing our ponies once or twice, they and we got over safely, and encamped on shingle among some stunted trees in a place swarming with hares. Next morning we rode up to examine the glacier, and see if it would not be possible to turn it, but we found that it had pushed its way right across the valley to the river, and even into the river, out of which it rises in precipices and pinnacles of pale green ice, 100 to 150 feet in height. The water undermines it and carries off small icebergs, which are seen far down the river. The next day we had an experience of another glacier, nearly as bad for us, and quite impracticable for horses, as we had a long and weary climb up a very steep lateral moraine, with no vestige of a path for a long way before getting on the glacier. Our Wakhís again came to the front, and taking off their clothes, tied them into small skins, which they inflated, to increase their buoyancy, and tying them on to their bodies, and mounting the ponies, they swam them across to the other side, returning lower down. At

our camp we found a few plants of rhubarb and some wild gooseberries. Inflated goatskins are much used in these parts in crossing a river. I have seen a man in summer clothing come down to a river side, take everything off and place in the skin, which he then closed, leaving only a small opening, through which he inflated it. The neck was then tightly tied up, he slipped his legs through two loops at the bottom of the skin, which he then clasped to his chest, and jumping into the river, went gaily across. Arrived on the other side, he dressed, strapped the folded skin on his back, and walked off.

" The rest of our journey may be passed over in a few words, the road being over country the nature of which has been already described, and a detailed account of the marches will be found in the Routes. The night before we reached Mastúj, when Pínan Beg and Bahádur Sháh came to pay us their usual evening visit, we noticed Bahádur Sháh's face tied up in a cloth, from which a few green leaves protruded. We commiserated him on his toothache, and told him Dr. Giles would probably be able to do something for him. He laughed, and said, 'This is not toothache, but 'fresh dye for my beard, to do honour to Colonel Lockhart, whom we are to 'meet to-morrow.'

" In many villages, during our journey, I noticed some small erections in course of construction on the roofs of the houses. They were only a few feet square, and 4 or 5 feet high, the walls formed of hurdles, and roofed lightly with the same or with leafy branches. I asked what these were being built for, and was told they were the summer sleeping apartments of the master of the house, the mud rooms below being too hot for him.

" We rejoined Colonel Lockhart at Mastúj on the 2nd September."

3rd September, Sanóghar. Elev. 7,050 feet, 7½ miles.—This was a march that would have been difficult but for the labour which had been expended on it by Afzal-ul-Mulk. Camp was pitched on a beautiful bit of turf under mulberry trees. On arrival, Colonel Lockhart received another metrical address from Mehtar Amán-ul-Mulk, and a letter from him begging that no sanctuary might be given in the British camp to two Chitrálís, who had murdered a priest and taken flight.

4th September Sanóghar.—The heavy baggage was all sent on ahead with orders to halt at one march from Chitrál, keeping meanwhile a stage in advance of the party. This was done to diminish the length of the column over some rather difficult bits of road, and consequently to save fatigue to men and animals. It was a safe measure as the country was peaceful, and entirely under the Mehtar's personal control.

5th September, Buní. Elev. 6,860 feet, 9½ miles.—A fair road had been made over very difficult ground for the party by Afzal, who said it had taken him 12 days' labour, with 40 men, to make passable a short bit across the face of a cliff. There was a good encamping ground by the village, which is a place of some importance.

6th September, Réshun. Elev. 6,480 feet, 12 miles. The road was fair, showing evidence of much work. Wafadár Khán awaited the party on the ground, with verbal orders from the Mehtar for Afzal to return at once to Mastúj. The youth was greatly cast down by this. A servant of the Governor of Badakhsháu arrived at Réshun to inquire if Colonel Lockhart intended to visit that province.

7th September, Barnas. Elev. 6,100 feet, 8 miles.—Afzal-ul-Mulk said good-bye a little way out of Réshun, and the execrable state of the onward road showed where his authority ceased. He begged that no others of his brethren might be allowed to take his place in the friendly feelings of the officers. The Mehtar's natural brother, Bahádur Khán, here took Afzal's place as host. At a point about half way, a child of five years old, riding on a white pony, and attended by an elderly man and a few mounted followers, met the party. The boy was introduced as Shujá-ul-Mulk, a son of the Mehtar by a daughter of the chief of Asmár, and the elderly man with him was his foster-father, the principal person in the village. The Káfirs took their departure at Barnas, to return to their own country, where they promised to meet the party afterwards and be of service. One of the Mehtar's principal servants, Fateh Alí Sháh, took charge of the supplies at Barnas, and continued to have that charge during the stay of the party at Chitrál. He was a man of about 50, with a bad goitre, which Surgeon Giles treated with an injection of iodine. He was at first morose, and disliked by all the officers, but before they finally parted with him the man had shown certain good qualities, his sulkiness had diminished, and he had been of great use.

A Kashmír *munshí*, by name Bahrám Khán, joined Colonel Lockhart at this place. He acted as spy on all the actions of the British officers throughout the period now under report, and, just after their final departure from Chitrál, was murdered there in mistake for some other man. His first act was to show Colonel Lockhart the copy of a proclamation issued by the Amír of Kábal to all his provinces (*in which he had included Chitrál*), directing illuminations and rejoicings on the occasion of his being made a G.C.S.I.

8th September, Morí. Elev. 5,600 feet, 7 miles.—A very bad road Baggage animals had several times to be unloaded, their loads being carried by men. There were a few accidents and some damage was done to officers' property. At half way two children met the party, good-looking boys of eight or nine, also sons of the Mehtar, escorted, as in the case of the child at Barnas, by their respective foster-fathers. The boys' names were Juma Khán and Afrasiáb Khán. From the Mehtar there came two mongrel curs, some *choghas* and skull caps, and yet another set of verses. In the evening Nizám-ul-Mulk arrived from Chitrál and was provided with two tents. A high wind blew all day and did some damage to camp.

9th September, Koghazí. Elev. 5,450 feet, 4 miles.—Although in two places the road was so bad that all animals had to be unloaded, still the distance was ridiculously short, and everything had arrived before the sun was well up. Here the baggage sent on ahead was caught up. It was sent on at once to Chitrál with a small guard, the latter in their red tunics for the first time since leaving India. Camp was pitched on the village polo-ground, a nice bit of turf, with a large grove in rear of it. At night a letter arrived from the Mehtar begging Colonel Lockhart to halt the following day, as it was an inauspicious one according to his wise men. He also asked that Nizám-ul-Mulk should be sent into Chitrál at once, a request that was gladly complied with.

10th September, Koghazí.—A halt, and nothing to record.

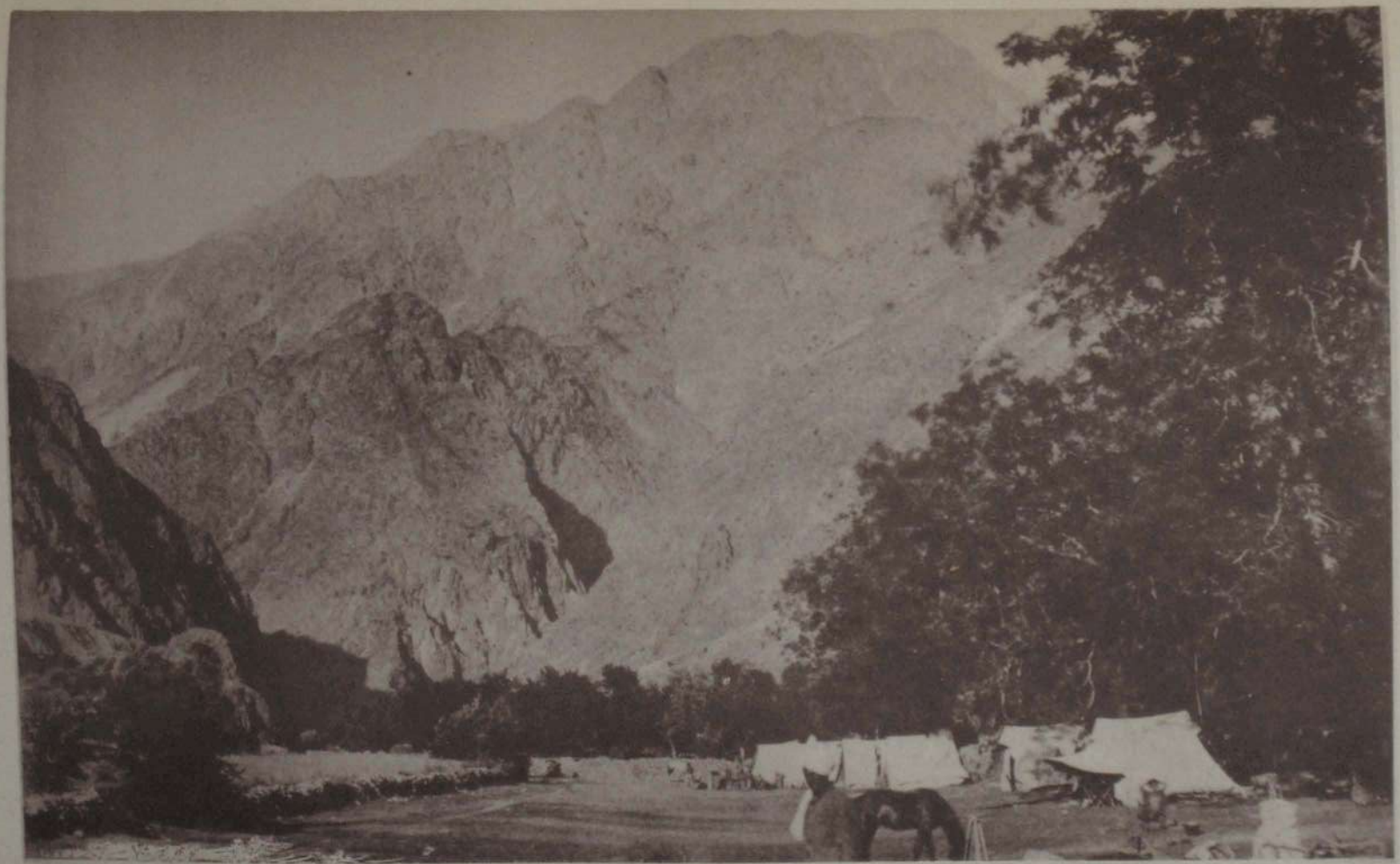
11th September, Chitrál. Elev. 4,980 feet, 11 miles.—The party marched at 7 a.m. and arrived at 12.30 p.m. A little way out the officers were met by the Mehtar's sons, Murid and Ghulám, with some followers. The road was very bad, and the Mehtar, it turned out, preferred, from motives of military prudence, to leave the approaches to his capital in the worst possible state. At one point the party had to unload all baggage animals, as the path ran round a very narrow ledge of rock, some 50 feet above the river. Colonel Woodthorpe's pony, when being led over this bit, slipped and fell into the stream, but was rescued unhurt.* At half way Sháh-ul-Mulk, of Darósh, another of the Mehtar's sons, met the party, attended by a crowd of Amán-ul-Mulk's kinsmen and officials. Sháh-ul-Mulk was a good-looking young man, some 25 years of age, whose mother, the daughter of a Saiyid of Chitrál, took rank after Nizám's and Afzal's mother. At four miles from home Amán-ul-Mulk himself met Colonel Lockhart, and, dismounting, shook

* The same pony, by a strange fatality, fell over the same cliff and was killed two months later, when the mission was on its way back to Gilgit for the winter.

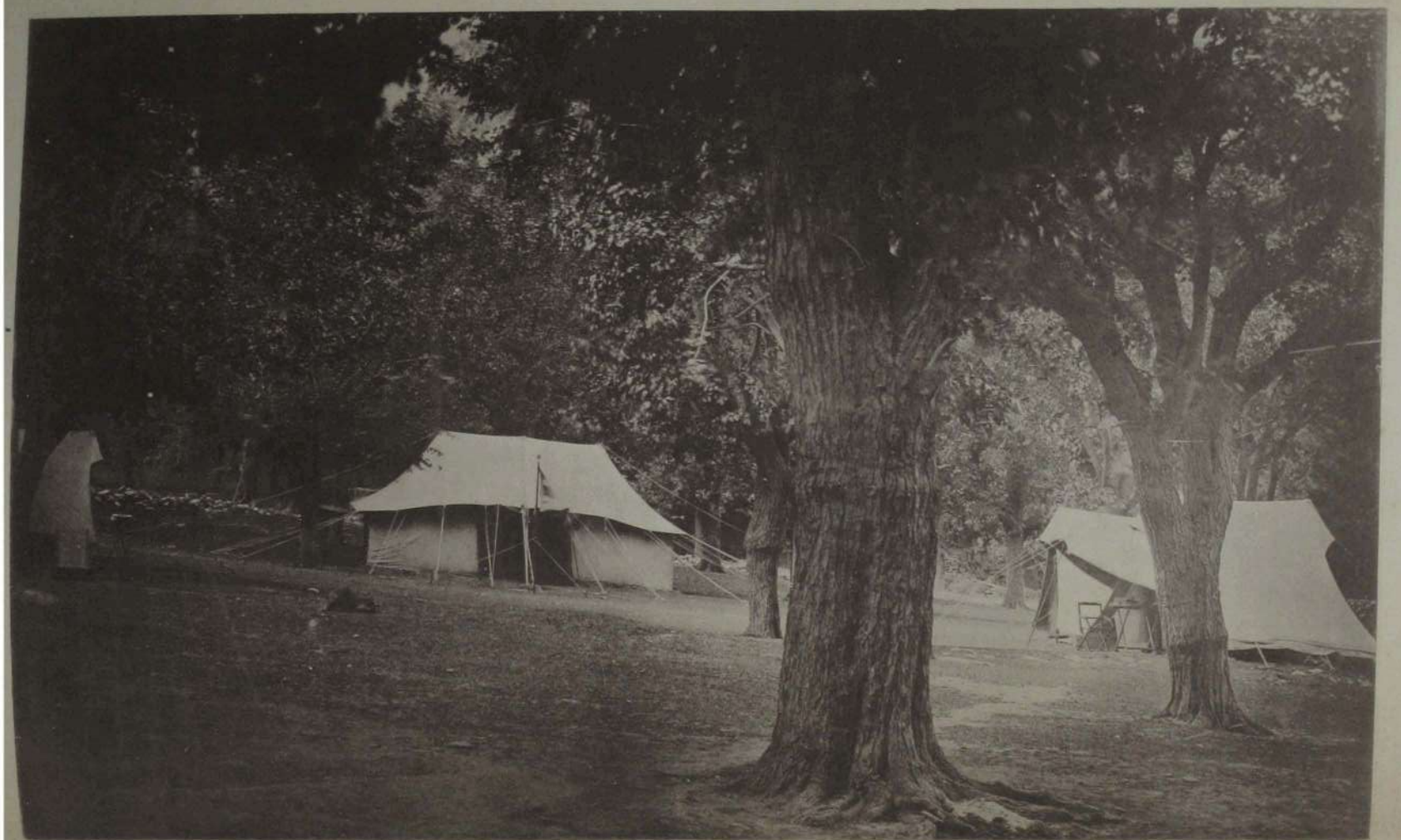


CHITRÁL FORT.

(FROM DANIL).



CAMP AT KOGHAZI.



MISSION CAMP AT CHITRÁL.

hands with the officers and bade them welcome. The following is an extract from Colonel Lockhart's letter to the Foreign Secretary (dated 14th September) :—

"The Mehtar himself, with Nizám-ul-Mulk and a large following, met us some four miles from here and brought us in. At two miles from the fort the opposite bank of the river was lined by some hundreds of horse and foot, who fired a succession of *feux-de-joie* on our approach, and made a good noise—shouting, fifing, and drumming, the horsemen manœuvring parallel to our course, circling and firing. The men were clad in many colours, and the effect was good. Weather threatening, sky overcast, drops of rain occasionally, and distant thunder, all pronounced to be good omens. The Mehtar is about 5 feet 9, and enormously broad, with a fist like a prize-fighter's. Age perhaps 70, large head, aquiline features, complexion (the little of it seen above a red-dyed beard) pretty fair, hands very much so. A fine bearing and a determined cast of countenance. He has lost some front teeth, which makes it difficult at first to understand all he says. We rode hand in hand, according to the very disagreeable habit of the country, and, on passing his fort, were greeted by an artillery salute, most irregularly fired, * * * * We had sent on the tents at daybreak, and found our camp ready pitched in a fine mulberry grove, on good turf, half a mile north of the fort. The Mehtar sat for a few minutes in the mess-tent, and grapes and melons were served. He then took leave after saying that everything in his country was ours."

The weather was warm and a shady camp was most grateful to all. From it the Mehtar's mud fort just showed through a mass of *chinár* and fruit trees. Away to the east rose the huge snowy Tirach-Mír (25,000 feet), like a mass of frosted silver in sunshine ; at dawn receiving the sun's rays whilst the valley was in profound darkness, thus presenting the phenomenon of a "pillar of fire," a mass of burnished copper, and passing, as the sun rose, through gold, to the silver aspect it wore throughout the day. There can be few more beautiful and striking sights than this in the world, and it is not surprising that the Tirach-Mír should be the subject of fairy legend throughout the land.

12th September, Chitrál.—Mehtar Amán ul-Mulk visited the British camp at 11 o'clock in the morning. The tents had been carefully dressed, a large tent (specially made for the purpose, to take to pieces) stood at the head of the street, and in front of it a high *Shamiána*. The flag stood in front of that. As the old chief arrived he was saluted by the escort and received by the officers in uniform. The following extract from Colonel Lockhart's letter to the Foreign Secretary describes the interview :—

"On the 12th, the Mehtar, Nizám-ul-Mulk, and a number of sons, brothers and officials came to camp, by appointment, at 11 o'clock in the day. I received him with a guard of honour, and after we had refreshed the company with tea, coffee, cakes, chocolate and toffee, the prince filled his mouth with snuff, slowly chewed it, and spat the result into the turban of one of his high officers. He then ordered all his people, except Ináyat Khán, out of his tent, and we went to business at once. I said that the object of the mission was to study the Chitrál passes and routes, in order to determine the measures to be adopted in the event of danger threatening India from Badakhshán or Wakhán, and asked him what assistance might be expected from Chitrál in the way of armed men, labour, supplies, &c. The Mehtar replied that he now considered his country as British territory, and that I must do so likewise, and go, within his limits, wherever I pleased. As regarded co-operation, he said he kept no *daftar*, but would at once send express messengers to all district *Hákims*, and get an exact return of their respective fighting strengths. He then said "My advice to the British Government is to get hold of Gilgit as soon as possible, and to garrison and store it, but I do not wish this advice of mine to be made known to Kashmír. For myself, I undertake, at the first symptom of danger, to guard all approaches, from the Baróghal to the Dúráh, until your troops can arrive and hold the passes. I do not care who the enemy may be—Afghán or Russian—but my sons shall all lay down their lives sooner than let him gain a footing in Chitrál. I also undertake, when an enemy approaches, to put the Ashkúman route into a fit state for the passage of troops, bridging the different streams if the season be summer or autumn, and collecting supplies to the utmost of my ability. For myself, I only want a guarantee, in return for this solemn promise, that my dominions shall descend intact to my heirs, and that, whatever territory the British may annex on any of my borders, and however much they may make a thoroughfare of the country itself for a time, still no portion of my present possessions shall be appropriated by them." I said that the British Government would hear with great pleasure the assurance Amán-ul-Mulk had just given, and that I should make known exactly what had passed between us. He next sent for Major Hassan Sháh, of the Kashmír service, and repeated everything he had said *except* the recommendation about Gilgit, and made him repeat it, word for word in Persian to me, in case, as he said, I might have misunderstood him. I think his real motive was to disarm any suspicion on the part of the Mahárájah's Government. The interview lasted over two hours, and he went off saying he would call again by-and-bye. At 4 o'clock he accordingly rode up to camp, and we all went down together to the *jandli* (recreation ground), which is indispensable to even the smallest hamlet in

Chitrál. Here there was some good polo on an excellent piece of turf; then there was dancing (a travelling Afghán, son of a well-known Jalálábád mulla, especially distinguishing himself), then tea and sherbet, and home again by dark. Two things I find I have omitted to mention in telling you of the interview. I asked about going into Káfiristán. He said: 'You may 'go over any portion of Káfiristán acknowledging my authority, although I 'have but little hold over the people in Lut-dih, &c., but if you go further 'west, you must give me a paper to say that you go without my consent. 'In any case one of my sons shall accompany you.' The other thing I left out was his telling me that when I returned to India he wanted to send one of his sons with me to kiss the Viceroy's feet. I asked, 'Which son'? He replied, 'You can take any one you like, but you must name him 'yourself, as I don't want to stir up the wrath of my children, and 'whosoever may be chosen, others there will be who will feel aggrieved at 'the selection.' I said that under those circumstances, I should defer the question until just before my return, when I would declare whom I wished to take. He said, 'Bú jam (very good), you speak wisely.'"

13th September, Chitrál.—At 11 o'clock the officers were entertained by the Mehtar, breakfast being served to them in a tent pitched by the fort. It consisted of every kind of boiled and stewed meat, excellent cakes of wheaten flour, and stewed fruit and cream *ad libitum*. After the repast the men of the escort fired at rocks indicated by the Mehtar, distant from 700 yards to a mile. The firing was in volleys, and was very good, as shown by the clouds of dust after each round. After this more fruit and sherbet were served, and a small hill pony was presented to Colonel Lockhart, his companions receiving some woollen and Bokhára silk cloth. Colonel Lockhart's own saddle having been placed on the pony (over a large embroidered cloth), he himself was raised by six men to the back of the little beast, and the party returned to camp.

14th September, Chitrál.—Early in the morning the following gifts were sent to the Mehtar:—An Arab horse, 100 Snider rifles, 30 boxes of ammunition, four Umritsur *choghas* of value, four handsome turbans, eight revolvers with ammunition, the officers' mess *Shamiána*, 200 yards of different coloured broad-cloth, a miscellaneous assortment of tools, combs, looking-glasses, knives, scissors, thread, buttons, braid and toys, besides 400 gold coins, and 2,600 rupees, total value 5,233 rupees. In the afternoon the Mehtar's relations and dependents received their gifts, and these had to be arranged with much tact. All went off well except in the case of Sháh-ul-Mulk, who declared that, his mother being daughter of a Saiyid,

his present should be as great as that given to Nizám-ul-Mulk and Afzal-ul-Mulk, not, he added, that he cared for the things themselves, but only for his own dignity (*izat*). This was absurd, but a compromise was made by a little concession on the spot and a promise of future generosity after the young man's own district should have been visited. Surgeon Giles removed a very large fatty tumour from a man's nose during the day, before a crowd of spectators. The patient was placed under chloroform, and the operation was a very successful one. Several other complicated cases of fracture were treated, and the doctor's reputation was noised abroad. The Mehtar, indeed, begged Colonel Lockhart to leave Surgeon Giles behind when the party should set out for the Dúráh Pass, which was the first move under contemplation. This of course could not be agreed to, but a promise was made that the native doctor should remain.

15th September, Chitrál.—The Mehtar called in the morning at the British camp to acknowledge the gifts. It turned out that the ladies of his household were disappointed by the absence of any silks and other finery for themselves. His children, too, were quarrelling over the toys, and altogether, he hinted, his fort was rather too hot for him, and he was glad to get away for the the sake of peace. During his visit the Káfiristán trip was discussed. Amán-ul-Mulk deprecated the enterprise as too dangerous. It was finally settled that the Dúráh should be first of all visited, and the country *en route* studied. After which Colonel Lockhart promised that nothing rash should be attempted, but, if a favourable opening offered, Káfiristán would be cautiously entered.

The Káfirs had sent a deputation in the morning to Colonel Lockhart from the Bashgal valley. The motives of the intended visit to their country were carefully explained to them, and they were made to understand that no designs on themselves were thought of. The Mehtar, at the end of his visit, signed an agreement drawn up in Persian by Colonel Lockhart, of which the following is a translation :—

" I, an eater of the salt of the English, will serve them, soul and body. Should any enemy of theirs attempt to pass through this quarter, I will hold the roads and passes with my loins girt until they send me help, and I will put the Ashkúman route into a fit state for the passage of English troops, by making the necessary bridges. I will provide supplies for the troops moving in my dominions to the best of my ability. I undertake that all this shall be done, on condition that the Viceroy of India, under his own signature, guarantees that my present possessions shall descend to my line intact, from generation to generation."

The document bore date 5th Zilhijja, A.H. 1302. Colonel Lockhart was obliged to accept the Ashkúman route in the above, as the Mehtar objected to one passing up to the Dúráh. (Amán-ul-Mulk afterwards conceded this point, and agreed to give a passage by any route through his dominions that the British might select.)

As soon as the agreement had been signed, the Mehtar caused its contents to be read out to his confidential people, and asked for their opinion, which was concisely given in the words *Bú jam.*

Amán-ul-Mulk, before leaving camp, begged Colonel Lockhart to order the escort to fire a volley at one of his servants going up a hill a long way off—1,200 yards. He was much disappointed by a refusal, and kept repeating that the man was his own.

Afzal-ul-Mulk, who had arrived in the morning, called on the officers in the evening.

16th September, Chitrál.—All transport mules and all spare baggage were sent off to India, *viâ* Gilgit. By this means the resources of the country were not overtaxed.

À propos of this and the difficulty of getting carriers in Chitrál, the Mehtar informed Colonel Lockhart that he had been obliged to sell several of his subjects into slavery for refusing to carry up the baggage of the party. Nizám-ul Mulk called at the camp early in the morning, and urged his claims to be sent to India. Afzal also called later in the day, but made no requests. The Mehtar introduced a certain Saiyid of Zébák, by name Sháh Abdur Rahím, who implored Colonel Lockhart's intercession on behalf of his brother, Saiyid Sádík Sháh, who had been, he said, unjustly cast into prison at Khánábád, in Badakhshán. Colonel Lockhart thought an effort on his part on behalf of one of a family of Saiyids, held in great reverence on both sides of the Hindú-Kush, would have a good effect in that region. He therefore gave Sháh Abdur Rahím the following letter to Sardár Abdulla Ján, Governor of Badakhshán:—

" After compliments. Sháh Abdur Rahím has asked me to intercede for his brother, Saiyid Sádík Sháh, who has been thrown into prison at Khánábád by your orders. The said Saiyid is son of Sháh Partaví, and, as his brother is held in respect, I address this friendly letter to you to ask that, should it be possible, and should the prisoner not be accused of any heinous crime, you will be so kind as to set him free. I shall always be grateful to you if you can do this."

This letter, as afterwards appeared, was sent on to the Amír of Kábal, who sent Colonel Lockhart a reply on the subject, in his own handwriting,

brusquely refusing to release the prisoner, whom His Highness declared to be a Russian partisan and an intriguer.

17th September, Chitrál.—Afzal-ul-Mulk called in the morning. It was reported to Colonel Lockhart that the Mehtar had heard of Nizám-ul-Mulk's carele-sness on the way up for the comfort of the party, and of his nightly dances, &c. The old gentleman, it was said, had finally worked himself into a fury, and reduced the young man to a state of abject terror. The Mehtar's agreement was sent off by special messenger to Gilgit, for transmission to the Foreign Secretary. At 7 p.m. Amán-ul-Mulk paid a visit to camp. The interview was a long one (during which the Mehtar got up, and said his evening prayers in a corner of the tent), and it became apparent that his first object was to get the mission out of his country. He recommended either Badakhshán or Gilgit as winter quarters for the party. Regarding Káfiristán, he said: "The mountain barrier makes that country impregnable from the " north, and so you will only be throwing away your lives for curiosity about " that which does not affect you, if you try to enter the land of the " Káfirs."

18th September, Chitrál.—Colonel Lockhart sent off a cypher telegram to the Foreign Secretary. It was addressed through the General Officer commanding at Pesháwar, and was to go by way of Dír, the messenger being promised 50 rupees in the event of his returning with an answer by the 3rd October. In this message Colonel Lockhart asked for discretionary power to visit Badakhshán, as entrance to independent Káfiristán promised at that time to be impracticable.

19th September, Shoghót or Shogór. Elev. 6,200 feet, 12 miles.—The party left Chitrál at 8 a.m., *en route* to the Dúráh Pass. That was to be examined, and an attempt was then to be made to enter the Bashgal valley in Káfiristán. The Mehtar, Nizám and Afzal-ul-Mulk accompanied the officers; the two former as far as the pass three miles from Chitrál, beyond the Dasht-i-Balad, the latter to the village of Shálí, 4½ miles further on. A severe march; rear-guard in at 6 p.m.

20th September, Drushp. Elev. 7,000 feet, 10 miles.—The first part of this march was difficult, the narrow road running across the rocky face of a steep hill overhanging the Arkári river. The rear-guard reached camp at 4.30 p.m. At Andartí (two miles) the Lutkú river joins the Arkári. The village is a small one, and is the residence of one of the Mehtar's younger sons, Bahrám. This youth, about 16 years of age, and full brother to Sháh-ul-Mulk, met the



PATH NEAR SHOGHÓT

(ACROSS A STEEP FACE OF ROCK OVERHANGING THE ARKÁRI RIVER).

officers, and offered fruit, &c. He was plain and sickly, and informed Colonel Lockhart, with some pride, that he had three wives. He is Governor of Arkári. At Drushp, Murid Dastgír, the Mehtar's eldest legitimate son (but having a low *status* owing to his mother's inferior birth) met the party. He is Governor of Injgám, a district comprising the valley of the Lutkú river and running up to the Dúráh Pass. Murid, whose head-quarters were at Drushp, and whose age was about 35, was in appearance soft and languid; his expression was amiable and it turned out afterwards that this languor was affected. When difficulties had to be faced, cold, fatigue, or danger from savages, his nature changed, and the man who had to lean heavily on his attendants, when walking about camp, appeared as a hardy mountaineer, possessed of common sense and courage until the necessity for those qualities ceased, when he at once collapsed, and called out for his usual support. Murid sent out a repast to the officers from his mud tower, and the usual offerings of cloth, &c. In the evening he brought his child, a boy of eight years old, to Surgeon Giles for examination. The boy was stone deaf, and, as this had been caused by small-pox, nothing could be done.

21st September, Parabeg or Parabek. Elev. 7,800 feet, 6 miles.—The party marched at 6.15 a.m., and arrived in three hours, having halted *en route* at a hot spring about two miles from Drushp. This spring is noted for its healing properties, and a regular bath, roofed over, accommodates patients coming from all quarters. The diseases the spring is said to heal are those of the skin and rheumatism. Its temperature was found to be 120° Fahrenheit. Parabeg Fort is built on the right bank of the Lutkú stream, and is of rough stone set in mud; a square of 40 yard sides, with a tower at each angle. It stands on a plain some three miles long by half a mile across, well cultivated.

22nd September, Sháh Salím (or Sháh Sadím). Elevation 10,800 feet, 13 miles.—The road on this march was good, but the stream had to be crossed and re-crossed several times, and the baggage was consequently late in arriving. A halt was made for a few minutes at the fort of Gobar, opposite the Zidik pass. This fort, 50 yards square, of boulders set in mud, with towers at the angles, stands on a plain covered with low jungle of willow and birch, at an elevation of 7,800 feet. Two miles further up was Dighari (or Jighari), 10,300 feet, a Káfir hamlet, the highest inhabited place in the province. At this place there were no trees, and only a little millet was raised. The inhabitants are fugitives from the Bashgal country, who have fled under a chief named Shtáluk, from Mára, the Káfir chief who had met the mission party in Chitrál. The quarrel had been a family one, and

Mára had succeeded in possessing himself of Shtáluk's lands. There were only a dozen families in all, a squalid miserable-looking set, who did not favourably impress the visitors. One exception to this was Shtáluk, who was a fine-looking man of about 30, very fair, with brown hair and good features. He joined the party here, and accompanied it to the Dúráh on the following day. Sháh Salím, where camp was pitched, stands on the left bank of the Lutkú, just below its junction with the Uní. The camp was on good turf, and firewood was procurable from a birch grove. The cold at night was severe. Here also are hot springs (104° Fahr.), below which natural basins serve for bathing purposes. The water has a strong sulphurous smell.

23rd September, camp above Sháh Salím.—A start for the Dúráh pass was made at 7 a.m., and the crest was reached at 9.45, some of the officers riding the whole way to the top. The following is an extract from Colonel Lockhart's letter to the Foreign Secretary, written on the 24th.

"We yesterday ascended the Dúráh pass, and found it wonderfully easy. It is, as Amán-ul-Mulk before told me, the only practicable avenue into his country, and could rapidly be made fit for wheels. No European, unless perhaps a Russian in disguise, has ever visited the pass, McNair having seen it from a long way off only. The lake on the other side is about due west, not north of the pass as shown in the map, and three miles distant from the crest. Its length, N. to S., is 1½ mile by a breadth, E. to W., of ½ mile. The road from Badakhshán has to skirt its N.E. bank, and can be easily barred by a small force. The descent on the Badakhshán side is as easy as that on the Chitrál side. The day was fine, and the view splendid. North was the plain of Gaogird-dasht, some 10 miles distant; south the Mandál Pass in Káfiristán. On the west were some high mountains, one tremendous cone of snow, the Tírgirán, bearing a little north of west. Woodthorpe found the height of the pass to be 14,800 feet. On the actual crest there was no snow, although it stood in frozen waves in many places on the west declivity, and lay in patches on the east side. Above, on both sides, a few feet from us, were permanent snow and green ice."*

Camp, which, during the officers' absence, had been moved up a mile, was regained at 6.30 p.m. Colonel Woodthorpe had effected all he required in the way of bearings, &c., and had, after much trouble, determined the height by boiling point. That operation was made very difficult by a high

* The "frozen waves" mentioned above were produced by the joint action of wind and sun, and stood a yard high, row upon row, in the exact shape of folded table-napkins with very sharp edges.



CREST OF THE DŪRÁH PASS



LAKE DUFFERIN

(LOOKING NORTH).

wind blowing all the time, and a screen had to be formed of waterproof sheets, sheepskin coats and human bodies, before the spirit lamp could be kept lighted long enough to boil the water.

Surgeon Giles took some excellent photographs, and the day was altogether a great success. The lake, known in Chitrál and Badakhshán as Chatí Dúráh and Áb-i-Dúráh respectively, received the name of Lake Dufferin from its first European visitors, and was thus entered on the map.

24th September, Gobar Fort. Elevation 9,200 feet, 3 miles.—The party marched at 7.30 a.m., made a long halt at the hot springs of Sháh Salím, and reached camp at noon. Then arrangements were made for the Káfiristán trip. The escort was reduced to four Sikhs; the baggage train, amounting to 30 Baltí coolies, were to carry four small tents (stripped of outer flies), baggage of officers and men reduced to the coverings necessary at night, some commissariat supplies, medicine, and ammunition, and presents for the Káfirs. Mára, the Káfir chief before mentioned, agreed to the strength of the party as now arranged, and guaranteed its safety as far as Lut-dih, provided that all Patháns were excluded. Sikhs were not objected to, were in fact regarded as merely more remote kinsmen than the English, and four Mussulmán followers were to be admitted, on condition that they were not of Afghán blood, whilst the 30 Muhammadan Baltí coolies were accepted without more ado.

Murid Dastgír, with a few Chitrálís (including Wafadár Khán) received, after much talk, a very reluctant permission to accompany the expedition.

25th September, Zidik or Izidik (in the Káfir tongue, Siminak). Elevation 11,820 feet, 5½ miles.—This march occupied from 9 a.m. until a little past noon. It was a very hard climb, over shingle and rock, but, having no quadrupeds with it, the party experienced no difficulty. There was a slight fall of snow on arrival. Wafadár Khán, who was now helpful and in the best of spirits, had capered along the upward path like a mountain goat, and had received the nickname of "Márkhór," which he always afterwards retained. Whilst waiting for the tents to be pitched he entertained the officers with fairy tales.

"This spot," said he, "is a favourite haunt of fairies, but it is equalled in that respect by the Gehrat Gól, which you will see some day perhaps, south of Bíbí Kala. There Mehtar Amán-ul-Mulk's great-grandfather, when out hunting, met and married a fairy-girl among the hills. She died in child-birth, never having visited the haunts of man, but her daughter still lives and visits Chitrál whenever one of the Mehtar's family is about to die shrieking her warning round the walls of the fort. Some days before the

event she is seen flitting about the neighbourhood, dressed in grey, her long white hair hanging down her back."

Major Hassan Sháh, who at the last moment had been allowed (*much against his will, as it turned out*) to join the expedition, here interrupted and professed incredulity of the tale, on which Wafadár Khán lost his temper and indulged in personal reflections on the fat Major's figure, his courage, his powers of endurance, &c. In the morning the Major had gone to Colonel Lockhart, apparently in great grief, to say that Mára would not hear of his going into Káfiristán. Mára, on being asked about this, said he did not care whether he went or not, so, from his subsequent conduct, it seemed evident that Hassan Sháh was then trying to avoid going in, but seeking to have at the same time credit for attempting to do so.

26th September, Ahmad Díwána. Elevation, 8,680 feet, 10 miles.—The party marched at 8 a.m., and arrived at 6 p.m. It was a very fatiguing march for the baggage-coolies. Shortly after leaving camp the snowfield was reached, hard and slippery, miniature crevasses occurring occasionally. Higher up, the snowfield broke into frozen waves shaped exactly like folded table-napkins, the counterpart, on a large scale, of the phenomena on the Dúráh. The waves on the Zidik stood from two to three feet high, and their sharp edges made them a difficult obstacle to surmount. The height of the Zidik pass was determined by Colonel Woodthorpe at 14,850 feet. Very near the crest, on the Káfiristán side, was the mouth of an excavation from which lead-ore is dug by the Káfirs. No snow lay on the Káfir side, which was at first very steep, until a good way down, when the slope became gentle. Before reaching the place allotted for camp, a plain strewn with boulders had to be crossed, and a stream to be forded, 30 yards broad and 3 feet deep in the middle. The encamping ground was on good turf, with traces of former cultivation which had been abandoned, the Káfirs explained, owing to close proximity to Chitrál territory making it liable to destruction by visits from the latter. From Ahmad Díwána camp the Mandál Pass was visible. Whilst waiting for the baggage Colonel Lockhart had a long talk with a Badakhshí trader, who had brought up some donkey loads of salt to barter for butter and hides. He apparently did so in perfect safety. Apart from the Káfir necessity of having salt, Badakhshí-Káfir relations are doubtless helped by the common hatred of Afgháns entertained by both races. Mára, the Káfir chief, guiding the party, asked for leave to go at night to Lut-dih, as his son was ill, and was of course allowed to go.

27th September, Shúi (in the Bashgalí tongue, Pshúr). Elev. 7,830 feet, 5 miles.—Before leaving Ahmad Díwána, Colonels Lockhart and Woodthorpe



SHUI, OR PSHUR.

walked out a mile to the north-west with some Káfirs and the Badakhshí trader of the night before as interpreter, to a shrine—two stones standing in a rude temple of masonry and wood. Here the two white men were introduced by their would-be kinsmen to Imbra, "their common deity." Some pieces of silver laid on the boulder, which represented the altar, were picked up with great satisfaction by the Káfir who lived on the spot and was probably the equivalent of a priest. This person offered a prayer—or what seemed a prayer—facing the stones, and the interpreter explained that a blessing had been invoked on the English visitors. The party marched at 9.30 and arrived at Shúi a little before noon. At one mile from camp a tower and some straggling huts on the left were passed, and a mile further down two more settlements of the same nature stood on the right, all three being known as Púna. At two miles from Shúi a deputation of Káfirs—some 50 men and boys—met the party, with a very small pony, which Colonel Lockhart had to mount. The path ran through woods of birch and deodar, on springy turf, and down the centre rushed a sparkling stream over granite boulders, widening and pursuing a more tranquil course over sand and pebbles as Shúi was approached. The deputation were dressed in grey woollen drawers and shirts, and on their shoulders was the cloak which gives the Bashgal Káfirs their distinctive name of "Síahpósh" (black-clad), the Persian term bestowed by Afgháns and Badakhshís. This cloak, made of black goat's hair ornamented with a fringe of red wool, is a loose *poncho* descending to the middle of the thigh, with arm-holes but no sleeves. In appearance they resembled the five men who had joined the party at the Shandúr lake. The complexion was that of the fair Hindú, the eyes were a light grey, and the features were Aryan—noses straight, hooked, or snub, lips thin—cheekbones rather high; hair clipped close or shaved in front, and hanging down behind on the neck, but not much lower. They were all men of about 5 feet 5 inches or so, of much the same stature as the Chitrálís. The English officers marched in the midst of their strange hosts, who satisfied their curiosity as to the colour of their guests' skin under their garments, the texture of their clothes and the make of their boots, without any false modesty. The men and boys nearly all carried the national dagger—the hilt of carved steel and brass—and a short axe. In front of the procession went three musicians, playing on reed pipes. A single reed was used by blowing across one end—as in pan-pipes—and the sound was modulated by several holes. The airs played were soft and melodious—different from anything before heard by the officers. There was nothing at all harsh or unpleasant in the music, the character of which was plaintive and melancholy. On arrival the guests were taken into the village, a square three-storied

enclosure; exterior measurement of each face 160 feet; interior about 90 feet. The material was stone set in clay, and deodar timber. The doors, verandah, railings and other woodwork were ornamented by a good deal of carving, and in the centre of the square was a raised platform for dancing, with benches round the sides. Below this platform, on the south side, was a rude stone altar. One gate gave entrance and egress on the north side. Here, for the first time, Bashgal women were seen in their own country by any European, and the novel experience was not pleasing. They had hard, forbidding faces, and were very dirty. Their only dress was a long goat's-hair gown, reaching from the neck to below the knee, and they, like the men, wore ankle boots of soft brown leather. The married women wore a head-dress, but only out of doors. This head-dress is peculiar to the Bashgal Káfirs. It consists of a cap of goat's-hair cloth tied on to the head behind the ears, from which spring four horns of wood covered with human hair and wool. The front horns stand up to the height of about 8 inches, sloped outwards like those of an antelope, whilst the rear horns curve downwards towards the neck. Between the two front horns there are usually brass ornaments in a bunch; very often English thimbles are used for this. This peculiar head-gear is laid aside indoors. Maidens go bare-headed always, their hair, like the married women's, being twisted into a knot behind in the classical fashion. To judge from their manners, their morals cannot be very high. To put it in the mildest language, they cannot have much modesty. At night the four officers went up to the village, by invitation, to see some dancing, but could not shake off a following of Chitrálís, who professed anxiety for their safety. On arrival, therefore, at the gate, no admittance was given. The people said they could not trust the Chitrálís within their walls after dark, and there was some excited talk, so the officers retired, the Shúi men promising to bring down some dancers to camp. "No women," they however said "shall "go and dance before Chitrálís. We are not Kalásh slaves that we should "do such a thing." The Kalásh Káfirs are the inhabitants of Kaláshgum, who, from the position of their lands, are absolutely subject to Chitrál. A little later, the men of the village went down to camp and danced by a great log fire. It was a mixture of country dance and Highland schottische. Advancing and retiring in lines, intermingling in couples, they kept excellent time to the music of reed pipes and two small drums, and marked points in the dance by ear-piercing whistles on their fingers and the brandishing of axes. The red firelight, the savage figures, and their fierce but perfectly-timed gestures, presented a weird spectacle, which it would be difficult for an on-looker ever to forget. During the day there had been much discussion as to the future movements of the party.



KAFIR WOMAN.



KÁFIRS.

From Shúi the Lúluk Pass temptingly offered itself to the explorers, who were informed that Virran, the great settlement of the *red* Káfirs, lay westwards, at a distance of four marches by that route. Colonel Lockhart made every endeavour to be permitted to take this Lúluk road, but Mára, the chief who had brought the party into the valley, was obdurate. He must, he said, consult the other chiefs at Lut-dih; could do nothing of himself in the matter. It was admitted that the Lúluk was the easiest as well as the most direct route, only two passes having to be crossed as against three on the Lut-dih line, but Mára resisted all argument and all offers of money in the set phrase, "A Káfir has but one word." Géna, headman of Shúi, was a tall one-eyed, rather evil-looking man, who was inclined to meet the officers' wishes, but Mára overruled everybody, and there was nothing for it but capitulation.

28th September, Apsai. Elev. 7,230 feet, 6½ miles.—The party marched at 10.30 a.m. and arrived at 1 p.m., a broken-down pony being in waiting 2 miles from home, on which Colonel Lockhart was again hoisted. Bast, the headman, who had brought out the pony, and a large band of villagers welcomed the officers, and there was a triumphal entry, as at Shúi. This Bast was, like Géna, taller than the average Káfir, and had a very keen but kindly expression. At Apsai the valley opens out, and presents a very Swiss appearance. Delightful air, clear rushing water, deodars, pines and evergreen oaks—these agreeable features, combined with the warmth of Bast's welcome, restored the spirits of the somewhat disappointed party. Bast's first act, on arrival at the village, was to lead the officers up to the effigies of his ancestors, and apparently to introduce them to the latter. The stream was crossed by a good wooden bridge, at the village end of which stood the effigies. The latter were figures of men and women carved out of deodar wood, rather larger than life, and standing close together, the modern ones erect, the older often leaning against one another in a manner suggestive of weariness and disgust. The male figures were generally mounted on caparisoned hobby horses, the female ones seated on chairs with high backs, or standing. The village, somewhat larger than Shúi, is of the same plan and construction, and stands on the left bank of the stream. On the opposite bank, close to the bridge, are the houses set apart for the seclusion of women after child-birth and during certain other periods. A similar place of seclusion exists beside every Káfir village and is marked by a high pole on which hangs a black goatskin. Above these women's houses at Apsai—several hundred feet up—stands a shrine, in which are some female figures. A very steep path leads up to the shrine, which was visited by the officers. A Persian-speaking Káfir informed them

that it was not a place of sepulture, but a "*parí khána*," or fairy house, and beyond this nothing was to be elicited.

Murid Dastgír stated that he had carried Apsai by assault two years before—viz., in the autumn of 1883—after several weeks' siege. The people had refused their yearly tribute, and the Mehtar had thereupon sent Murid to coerce them.

29th September, Lut-dih. Elevation 6,660 feet, 6¾ miles.—The road was bad, in several places narrowing to a goat-track and passing across slippery cliffs. Three miles short of Lut-dih a halt was made at Shudgol to collect and rest the Baltí carriers; here the people brought out grapes and other fruit, and were inclined to be very friendly. Camp was to have been pitched on the right bank of the river, now much increased in volume by the Gangalwat, Sháwal and other tributaries, but Mára, who had now rejoined the officers, insisted on their pitching on the left bank under his own walls. Anywhere else, he said, would be dangerous. Lut-dih contains some 5,000 inhabitants. It consists of two portions, built on the usual plan, on either side of the river—now the Arnawai—and connected by a very good wooden bridge. There is a good deal of cultivation here, and vines, apricot, mulberry and walnut trees are abundant. The village on both banks stands higher than the surrounding country, and hence its Káfir name of Bagramatal (or "town on the hill"), the name Lut-dih being simply "Great village" in the Chitrál tongue. The village on the left bank used to belong to Shtáluk, who had met the party at Gobar on the 22nd September. Mára is a cousin of Shtáluk's, and during Murid's invasion above mentioned had sided with the Chitrálís. Shtáluk had held out in a tower on the right bank, until the water was cut off, when he fled the country and Mára possessed himself of the whole township.

Large crowds went out to meet the party and escort it in. The people seemed more forward than those higher up the valley, and would take no denial, but kept moving about camp until nightfall, pilfering anything they could lay their hands on and peeping into the tent doors. The officers now began to understand what the virtue of patience really meant, and what a trial to temper it could involve. During the day the officers had leisure to look around them, and the thing that struck them most was the squalid and miserable appearance of the women and children, and the sleek well-cared-for look of the men. The women, it transpired, do all the out-door work, whilst the men stay at home with the children, which naturally gives these results.

At 7 p.m. some heavy stones were thrown into camp from the direction of Mára's village, one falling on Surgeon Giles' table whilst he was writing,



KÁFIRS—LUTDIH.

and breaking his pen, another badly bruising his servant. The Sikhs immediately got under arms and fell in quietly, and the Chitrálís searched the ground with torches. The conclusion arrived at by the officers was that the work was that of the Chitráli following, and not of Káfir villagers. An old man, Áksakál Nayáb, one of the Mehtar's officials, was probably at the bottom of it. He was feeble and suffering from venereal disease, and seemed from the first bent on thwarting Colonel Lockhart's plans with regard to Virran. Colonel Lockhart told Wafadár Khán of his suspicions in that direction, and the latter's confused manner confirmed the thought, so a message was sent to Muríd saying it was known who the real throwers were, and that his Chitrálís had better be informed that they were dealing with men and not with timid children. One more stone was thrown after that, and the night passed quietly. The fat Kashmír Major, Hassan Sháh, here showed himself in his true colours, and displayed abject terror. He sat by the officers until the latter put out their lights, and then crawled into a bush and hid himself. His visible perturbation caused the most vivid satisfaction to Wafadár Khán, who declared that it was worth while running the dangers of a trip to Káfiristán simply to study the panic-stricken movements of the Major, whose frame of mind was not improved by the horrible gestures of his persecutor dancing round the bush and displaying in dumb show the torture that might be awaiting him at the hands of the Káfirs.

30th September, Lut-dih.—It rained in the night, and daylight showed that the Sháwal pass, leading by the nearest route to Chitrál territory, had received a fresh coat of snow. The day was spent by Colonel Lockhart in many interviews with Mára and his relations, in view to arranging the lines of an agreement to be drawn up on the following day, whilst Colonel Woodthorpe climbed a high hill and was able to take some valuable observations.

1st October, Lut-dih.—Early in the morning Muríd Dastgír told Colonel Lockhart that he had arranged with the people for the party to be safely conducted to Virran, but when it came to be discussed with the Káfirs themselves, it was found that the scheme would have to be abandoned altogether. Mára said that one of his own people had just arrived, having killed a man on the Virran road, and that therefore not a single inhabitant of Lut-dih could venture with the officers. This he clinched by the now terribly familiar saying about "a Káfir being a man of only one word," and refused further discussion. Muríd Dastgír then offered to accompany the party without Káfir aid, but that was of course an absurdity.

An old chief living in the village on the opposite bank, by name Khairullah, sent down word that he would like to have a visit from the officers, who accordingly called on him at noon. He was very old—he himself said 96—and fair-skinned. Stone-blind, he sat in a high-backed armchair with his feet on a stool, comfortably dressed in a woollen gown, his head wrapped in a kind of turban. He said he had been called by a Muhammadan name after some invading chief of great bravery, who was driven out of the valley the year he was born, although, of course, he himself was a good Káfir and always had been. He passed his hands over the English visitors' faces, hands and clothes, expressing joy at having at last been gratified by contact with his "*brethren from Parang.*" Parang is the term for Europe, and signifies of course the land of the *Franks.* He asked Colonel Lockhart (through an interpreter) to explain how the English were so great and powerful, whilst the Káfirs were stupid and poor. The Colonel replied that perhaps this was due to the "*anjil,*" the gospel. "Then," said the old man, "why have you never sent your poor "brothers your holy book? I think you have behaved selfishly to us." After a long talk, a very friendly parting took place, and old Khairullah said he could now die happy.

A letter was received in the course of the day from the Mehtar, who very peremptorily forbade the party to go below Lut-dih, on account of the danger, but, as that seemed the only remaining alternative, the plan was formed of marching right down the valley through Kamdésh and regaining Chitrál territory at Arando. To this the Káfiris offered no objections, although some of the Chitrálís—especially old whining Nayáb—raised every possible difficulty. During a pause in the negotiations, when the other Káfirs had left camp, a tall, athletic man, by name Gumára, went to Colonel Lockhart and said he wished to become his adopted son. "If you agree to this," he explained through an interpreter, "I shall be "bound to serve you all my life, and be as a son to you. You, on the "other hand, will doubtless give me a present." The man was about Colonel Lockhart's own age, but he was strong and had a reputation for bravery (having killed 29 Mussulmáns), so it seemed that his adoption as a son might be of use to the party, and this was agreed to. The ceremony was at once performed. Gumára opened Colonel Lockhart's shirt and applied his lips to the right breast, and then went out of the tent and sacrificed a sheep. Colonel Lockhart, on his part, presented Gumára with a *chogha* and some money. It is said that a contract of this nature is considered sacred, but this was in Gumára's case never tested. He certainly stuck close enough to Colonel Lockhart, and carried him across every bit of water until the ponies were regained, receiving in return tobacco and trifling

presents from time to time, but he became rather wearisome in Chitrál—always hanging about, and unable to make himself understood unless he could secure a stray countryman of his own who knew Persian, or a Chitrálí who knew the Bashgal tongue. He differed from other Káfirs in his head gear, wearing a Dárd cap and shaving the whole of his head. This was explained to be obligatory as a punishment for having once embraced the Muhammadan faith, although he had speedily recanted and gone back to the gods of his fathers.

In the afternoon a covenant, discussed on the previous day, was made by Colonel Lockhart with the three principal men of the Bashgal tribe in the upper part of the valley, and their respective sons. This was ratified by the ceremony of killing a goat and dividing its heart (which was fortunately permitted to be cooked) between the contracting parties.

The following is the text of the agreement, a copy of which, in English, was made over to Mára to be kept by him and his successors:—

"Covenant made between Colonel W. S. A. Lockhart, on the part of the British Government, and the following chiefs of the Bashgal tribe:—

"1. Mára.
"2. Málik.
"3. Gulmér.
"4. Chandlú, son of Mára.
"5. Merig, son of Málik.
"6. Shtáluk, son of Gulmér.

"In the event of an enemy of Great Britain approaching the frontiers of Káfiristán, the above named will send all available men of their own to the threatened quarter, to hinder or repel the invader. In return I agree, on the part of the British Government, to pay the several chiefs mentioned the sum of ten rupees per mensem per man placed in the field, and to provide arms for them; the chiefs on their part agreeing to receive one British officer per 500 men so raised, as instructors and leaders.

"This agreement has been sealed by the ceremony of sharing a goat's heart between myself and the above-mentioned chiefs."

W. S. A. LOCKHART,
Colonel.

Lut-dih, 1st October 1885.

2nd October, Camp, west of Sháwal Pass.—In pursuance of the plan determined on, the party prepared to march down the valley—tents were struck and baggage was packed by 8 a.m. Hardly a single Káfir approached camp, which seemed strange, whilst the Chitrálís showed

great anxiety to march. At 9 o'clock a crowd of Káfirs appeared some 400 yards away, by the river, at a point where the path to be followed by the party ran up a very steep bank, and it was plain that they intended to block the way. The Baltí carriers were made to assemble and sit down with their loads; the Sikhs were ordered to loosen their cartridges, and it seemed as if there was about to be mischief. Murid Dastgír and Wafadár Khán went forward with all the Chitrálís to parley, but the Káfirs brandished their axes and shouted, threatening them if they advanced further. Mára now went up to the band and tried to exercise his authority, but received a blow on the neck from an axe-handle, whilst Wafadár Khán, who had closely followed, was thrown down the bank. Colonel Lockhart at once sent a peremptory order for all Chitrálís to rejoin him. This was very reluctantly obeyed by Murid Dastgír, who showed every desire to force a passage. On the party reassembling, Bast and other leading men who had been with the people on the bank went up to Colonel Lockhart and said, through a Persian-speaking Káfir, "Go away now by the Sháwal Pass. Don't be angry. "We are your friends, but are determined not to let the Chitrálís "remain another day in the valley. The shame is not ours; the shame "of what has happened rests with your Chitrálís. Come back in spring, "but come without Chitrálís, and you can then go wherever you like, "all over this valley and also to Virran." They then all kissed Colonel Lockhart's hand and again begged him not to be angry. Colonel Lockhart replied that he understood the matter thoroughly, and that he was not angry in the least; that he could not help bringing Chitrálís into the country as the Mehtar, whose guests the British officers were, had insisted on sending his own men as an escort, but that they might look for a fresh visit in spring from the Badakhshán side, when he would reappear without any Chitrálís or other Muhammadans.

The parting was very cordial, but it was with feelings of keen disappointment that the little column changed direction to the left, and marched silently off eastwards towards the Sháwal, accompanied for some distance by the chiefs. When the latter had gone, Murid Dastgír showed Colonel Lockhart two arrows, which had been suddenly thrust into his hand, the Káfir mode of declaring war. The ground was cleared at 10 a.m., and by 6 p.m. only 7½ miles had been covered, so severe on the Baltí carriers was the ascent. But little flour had been procurable the day before, and no sheep or goats. Over night this had seemed of small importance, as the intended route lay through a land of plenty; now, however, it turned out a real hardship, and the tired Baltís had to huddle together for the night under the rocks, with empty stomachs except for a scanty dole of flour.

3rd October. Camp east of Sháwal Pass.—The Baltí carriers were all off the ground by 7 o'clock, officers and escort following an hour later in case of treachery in the rear. Messengers had gone off at dawn to Bumburet, the nearest village on the Chitrál side, to order supplies to meet the party. Just before the final ascent to the east was reached, three frozen pieces of water were passed, which were given the name of the MacGregor lakes (after the late Sir Charles MacGregor). As the uppermost lake was reached a bitter wind blew and snow began to fall, whereupon three Káfirs who had followed the party (Gumára among them) stood up in a row and gesticulated wildly in the direction from which the storm was approaching, whilst they chanted a prayer. The day's proceedings are summarised in the following extract from a letter of Colonel Lockhart's to the Foreign Secretary.

"Next day (3rd October) was a bad one. The coolies were hungry, the road bad, over rocks and latterly through snow, and, as we reached the crest, snow began to fall. We had for the last 100 yards to cut steps for the coolies in the frozen snow, and then there was a rocky staircase up to the top, on which lay a ledge of green ice some four feet thick. The descent was easier, but darkness overtook us, and we encamped far short of the place at which supplies had been ordered, by a deserted goat-pen, amongst bushes on the stream. We had kept a bottle of brandy for emergencies, and this was now issued to Sikhs and Hindú followers, whilst tea and sugar were served out to Muhammadans, except to the unfortunate Baltí coolies (we had not enough for them), who had again to lie down empty. They had started at 7 a.m, and did not get in until past 8 p.m., the total distance being nine miles. The Sháwal Pass is somewhere about the spot marked Thuret in the map, a name not known to the inhabitants. The map, by the way, is all wrong. This Sháwal is the furthest point reached by McNair. He never was in the Lut-dih valley, or in Káfiristán proper, his experience of Káfirs being confined to the subject Kalásh.)"

The unfortunate part of this day's march was that the crest was gained in such dark weather that Colonel Woodthorpe was unable to do any important work. Camp was pitched in low bush, which at any rate gave the Baltí carriers good fires all night, without which their sufferings would have been very great.

4th October, Bumburet. Elev. 6,800 feet, 9 miles.—Abundant supplies arrived at camp in the early morning. Sheep were cut up and bread was made in a very short time, and men and followers fell on their food like famished wolves. At 11 a.m. the party marched off cheerfully, every one having had a full meal. Bumburet was reached at 5.30 p.m. It was a

severe march, three-quarters of the distance being over large boulders in a torrent bed, and rather deep water had continually to be crossed and recrossed. Camp was pitched under fine *chinár* trees, on beautiful turf, through which rushed a sparkling brook. The inhabitants, Kalásh Káfirs, are a poor set, identical in breed with the Fakar-miskín, or agricultural class of Chitrál. So at least the Chitrálís said, and appearances bore out the statement. They are said to have been driven from their seats in the Lut-dih district by the Bashgal Káfirs, and are completely subject to Chitrál. At night a great log fire was lighted, and men and women came out in great numbers and danced before the officers, whilst a Chitrálí *Aksakál* kept running in amongst the performers and beating men and women with a cudgel, to enforce his own views as to how the performance should be carried out, until stopped in a summary fashion. The dance here was a *trois temps* waltz, or something very much resembling it, women dancing with women, and men with men. The pretty girls were kept in the background, from a dread of attracting Chitrálí attentions, and only ancient dames danced close up to the fire. One girl, with long auburn hair and a pale, melancholy face, was almost beautiful, but men and women all looked poverty-stricken, starved and oppressed. The general clothing of these people, men and women, is grey, not black as with the Bashgals, and in place of the Bashgal horns, their women wear rather becoming caps ornamented with shells. Their commonest form of ornament, whether in embroidery, shells or silver, is a cross. Blankets, gowns, head-dresses, are almost always thus decorated, and the cross used is generally a "cross-crosslet."

5th October, Ayán. Elev. 4,500 feet, 9 miles.—The march lay at first through meadows and fields, then crossed the Kúral spur at a point about 1,500 feet above the plain, the descent on the eastern side being steep and impassable for horses. The Kúral crest is a large, nearly flat area, covered with deodar and oak. Ayán lies on both banks of the Ayán Gol, the united stream of the Bumburet and Rumbur valleys, amid a mass of fruit trees. Camp was pitched on good turf. The township, containing 500 houses, consists of four distinct hamlets, and is a very prosperous looking place. This is said to be the southernmost point ever reached by Chinese invaders, the remains of whose walled camps still stand on the hill side.

6th October, Ayán.—Camp was shifted two miles up the right bank of the Chitrál river, but was pitched still within the limits of Ayán.

Here fresh supplies, a post and the officers' ponies came in, and the day was spent in writing up diaries and reports. In his letter of this date to the Foreign Secretary, Colonel Lockhart expressed the hope that his former request might be granted, viz., to be allowed to cross into Badakhshán and winter there, re-entering Káfiristán in spring with the help of the Káfirs settled at Munján, at the northern base of the Hindú-Kush.

7th October, Chitrál.--The party marched at 8 a.m., was met by Mehtar Amán-ul-Mulk half way, and reached Chitrál at noon. The Mehtar brought news of the death of the Mahárájáh of Kashmír. During the trip into Káfiristán Colonel Woodthorpe's native surveyor, and the Gurkha *havildár* surveyor had visited the Agram, Khartinza and Nuksán passes, and surveyed the routes leading up to them. In his report on the Káfiristan trip, Colonel Lockhart wrote, in conclusion, to the Foreign Secretary as follows:--

"Although our experiences of the Bashgals has been unpleasant, still I think they are to be won over, and that they are worth winning. Taking the mean of two statements from different chiefs as to the population of every Bashgal village, and the statements agreed fairly on the whole, I put the fighting strength of the tribe at 2,500 men (in their own valley). Either a man like Downes, or a few German Moravian missionaries would do all we want. * * * Whoever undertakes the work must be prepared to rough it with a vengeance."

8th October, Chitrál.--Amán-ul-Mulk called early, and it was evident that he would be relieved by the departure of the British Mission. He had from the first insisted on supplying the party, free of cost, with provisions for man and beast, in spite of repeated offers of payment. Now he was evidently gladdened by our assurance that the only cause of delay was the want of instructions from the Government of India regarding the further movements of the mission.

On this day two emissaries arrived from the Khán of Dír. They brought a letter for the Mehtar, and with it an open one addressed to Colonel Lockhart (which of course was read by Amán-ul-Mulk). The open letter contained only a formal complimentary greeting. In the evening, however when the two men delivered this formal greeting, they also handed secretly to Colonel Lockhart a second letter, begging him on no account to tell the Mehtar that he had received it. This last ran to the following effect:— He, Muhammad Sharíf Khán,was foremost of all the Kháns in the country, by virtue of his ancestors' position from time immemorial. Others might from time to time have risen to temporary eminence, but it had always ended in their downfall, and in their becoming dependents on the writer's family.

His late father had received Mr. McNair in Dír, and thus served the British Government. Now he himself had heard of the arrival of the Mission in Chitrál, and wrote to warn Colonel Lockhart that the people of that country were avaricious. He continued :—

"But you should pay no attention to them, as they are not in a position to do you service. You will only waste your money on them. As I am a well-wisher of the British Government, I ask you whether you have truly come merely for purposes of sport. If this be the case then go about and shoot as much as you please. If, on the other hand, you have other objects, the strengthening of the passes against a Russian advance, your first step should be to locate 6,000 or 7,000 troops in Chitrál, and then you might pay attention to the neighbouring countries. Any other course must end in disgrace and regret. I make this suggestion out of pure sincerity and friendliness, to save myself from future shame and pain. If the British wish to occupy Chitrál and guard its passes, they should do this in consultation with the Mahárájah of Kashmír, to whom chiefly I owe my honour and position, with the Amír of Kábal, to whom I also owe them to some extent, and with other ruling chiefs. But as regards this particular country, the British Government should enter into negotiations with myself alone. They should make a treaty with me, granting me a yearly subsidy, to be expended at my own discretion, and recognizing me as the chief of all Dír, which country holds the most important of all the avenues to be closed. I, who am the chief of 900,000 Yúsufzais and 80,000 Tarkanís, should not be interfered with, and on my part I would undertake to guard all approaches, to check the Russian troops on their advancing, and to keep open postal communication with Pesháwar, punishing all disturbers of British arrangements, whosoever the offenders might be. I have not yet been favoured by any friendly letters calling on me to perform service since you have reached Chitrál. I have never been found wanting and am an old friend of the British. I have now, therefore, taken the first step and made proposals of friendship. My two trusted agents, Mirzá Muhammad Hakím and Mulla Abdul Hamíd take this to you, and you will honour me by handing them a reply. Further, take as trustworthy whatsoever they may tell you by word of mouth."

This letter bore date the 9th Zil Hijja H. 1302 (19th September 1885). On the 8th October a cipher letter from the Foreign Secretary reached Colonel Lockhart by way of Dír. It bore date 13th September, and the delay was explained by the messengers having fallen sick, and having encountered other difficulties on the journey from Pesháwar. Its purport was to the effect that special reasons made it at the time undesirable to press the Amír of Kábal about the proposed journey of the party to Badakhshán,

and its wintering in that province. Badakhshán might, however, be visited in spring. Colonel Lockhart inferred from this that it was the wish of the Indian Government that his party should winter in Chitrál. This was not feasible, as will appear.

9th October Chitrál.—Gumára (Colonel Lockhart's adopted Káfir son) and Chandlú, one of the signatories to the Lutdih agreement, were dismissed with presents and "*au revoir in spring.*" The Khán of Dír's men, on Colonel Lockhart's suggesting that he might pay their country a visit, said emphatically "No." Nevertheless the Colonel sent off the following letter by a Chitrálí runner:—

"After compliments. I have just returned from Káfiristán to Chitrál, and have had much pleasure in receiving your letter through Mirzá Muhammad Hakím, and Mulla Abdul Hamíd. I quite understand, and am obliged for your good wishes. As I am very anxious to meet you, I now write to ask you to arrange an interview, so that we may exchange our thoughts. I hope you will send me an early reply."

10th October, Chitrál.—Colonels Lockhart and Woodthorpe went out at daybreak, and climbed the range to the north, accompanied by Murid Dastgír and Wafadár Khán, getting back to camp at 5 p.m. As soon as they had gained the crest, some 2,000 feet above the plain, rain fell for the rest of the day, but a good deal of country was seen.

11th October, Chitrál.—The Mehtar called in the morning, and it was settled to send off at once the bulk of the remaining baggage towards Gilgit, whilst an agreement was made with some Kháka Khél traders to carry the things taken by the party (in the lightest marching order) to Dír, should that expedition take place.

12th October, Chitrál.—The following extract from Colonel Lockhart's letter of this date to the Foreign Secretary explains the situation. In it the Mehtar's motive for getting rid of his British visitors is ascribed to the question of supplies; subsequent events, however, make it seem more probable that he was influenced by a dread of his fanatical neighbours in the south, and also of incurring the displeasure of the Amír of Kábal.

"I cannot stay here longer. It is evident that supplies are the difficulty, although it is put in a polite way. The Mehtar has from the first insisted on providing us gratis, which, of course, means that he takes our daily requirements, without payment, from his subjects, and I fancy they are getting tired of this, and consequently troublesome. When my last convoy

goes off to morrow to Gilgit, our party, including Baltís, &c., will amount to 50 souls here, and I shall follow in a few days, provided I don't go to Dír, or get fresh orders from you. Meanwhile I have arranged to pay for certain items of provisions, *i.e.*, to get them by purchase from Hindús in the Sarai, the Mehtar still insisting on sending us sheep, and grain for horses. * * * Since sending off the letter to Muhammad Sharíf Khán, I have heard that a visit to his border will be next door to impossible. He is described to me as a man of no power, weak, dissipated, and priestridden, the real ruler of Dír at present being an ambitious Mulla, known as the Bábá Sáhib, about whom, of course, you know every particular. It would obviously be a great thing to get hold of Dír in the same way as I hope we now have hold of Chitrál, and I wished to make a similar convention with the Khán to the one I have made with the Mehtar. Muhammad Sharíf Khán's own messengers assured me that it would be impossible for me to go into their country just now, and that neither would it be possible for the Khán to meet me on his border and discuss matters. If I fail to meet him, it won't be much loss, as he will probably be killed before long, and his successor will most likely destroy the priest's influence, and be glad to join us. I shall, of course, *try* to go, but when the people in this region wish you not to go anywhere, they have a civil but obstinate resistance to offer, which they support by a reference to supplies, to the country being 'Kohistán,' to the people being rebellious, &c. * * * * If I go to Gilgit I shall work Hunza and Nagar, as I think I have told you, and enter Badakhshán in spring (unless ordered not to do so) by the Killik Pass. It will be a pull being at Gilgit as there are quarters for the men all ready, and a good house for ourselves, and Giles will have a hospital to treat patients in from the outside. The ground round our camp here is getting foul, but we have no sickness. Snow has fallen on the surrounding hills, but if we have bright weather again it will melt. I hope I am not doing wrong in going to Gilgit. * * * * I have been thinking of leaving the Kót-Dafadár here, when I go, to keep me informed as to events."

13th October. The following letter to the Foreign Secretary from Colonel Lockhart relates the day's proceedings:—

"Chitrál, 13th October 1885.

"The Mehtar has been closeted with me for two hours this morning, and as I find the post can't go for another hour or two, I add another letter to the one now in the bag, to tell you what passed.

"1. He began by apologising about supplies. Said he had exhausted his own stock of flour, &c., and did not like to levy it. I replied by thanking him, expressed sorrow if inconvenience had been caused, and reminded him

that from the day I reached Chitrál territory at Róshan, I had not ceased to press on his officials my great desire to pay for all our provisions, but had always been vehemently told it was impossible for me to do so.

"2. I then gave him an order on Pesháwar for Rs. 2,000, as he is sending a man to buy goods there. This I have explained in the letter to you enclosed in one to the Commissioner. The Rs. 4,000 from Gilgit are now close at hand, so I could have done without this, but I *may* (very unlikely this) have to give Muhammad Shárif Khán of Dír a present. I also gave him a letter (separate one) to the Commissioner of Pesháwar, asking the latter to buy a second-hand shot gun for him and 1,000 cartridges. He was so keen about this—and asked several times if no one in camp would *sell* him a gun—that at last I gave in, and hope you will not mind.

"3. He tells us that he has now completed his plans for assisting us on the Hindú-Kush in time of need. These are briefly as follows:—He can at any time produce—

| | | |
|---|---|---|
| From Mastúj and Yásín - - | 3,000 | fighting men |
| From Chitrál - - - | 5,000 | „ |
| Total - - - | 8,000 | „ |

"This, he says, would be sufficient for him to hold the avenues through his country until supported by British troops, provided arms could reach him in time, and ammunition, and a few officers from India. The points he would hold would be—

"(1.) Darkót Pass (which covers the Baróghal).

"(2.) The Darband-i-Turíko (a point which he says completely stops the footpath down the Turíkho and the bridle-path to Tópkhána Zíabeg).

"(3.) The Darband i-Arkári (covering the Khartinza, Nuksán, and Agram Passes).

"(4.) The Dúráh Pass.

"With the exception of No. 4, he does not propose to hold passes over the main range in any force. Those passes will have only small posts of observation, the *darbands* in rear being strongly held and affording each other mutual support. This all seemed good enough for me to give my verbal assent to, especially as he reiterated his promise to put the Ashkúman route into a fit state for the passage of troops as regards road repairs and bridging (in summer only, the latter item). He seems to have a rooted objection to conceding a route further west, which I think shows that he is in earnest, and is not making only a paper agreement. As the Dúráh is the

point we should have to gain in all likelihood, I must leave you to insist on that part of the programme. He evidently does not like committing himself to promising a thoroughfare through his capital. Your new relations will enable you to insist on anything you may care to, but not being able to promise, I could not press, or rather thought it wiser not to do so.

"4. The Mehtar next, after a little fumbling with the subject, asked me if he might not expect something like a subsidy now, citing the Amír of Kábal's case! I must say he added that he did not mean to compare his own importance with that of the latter potentate, but still implied that the labourer was worthy of his hire. I said the Amír of Kábal had been placed on his throne by the British, and that we had made him and meant to keep him where he was, &c., &c., but promised eventually to tell you that he had asked for something in the way of substantial recognition for prospective services. The son who goes to India might perhaps get a present for the old grasper.

"5. My advice was next asked regarding his annual tribute to Kashmír, *viz.*, five horses, five hawks, and three greyhounds. Was he to send this tribute to the new Mahárájah, or to wait for orders? It has been customary to send it just before the Kamrí Pass closes, and by starting in a week from now the menagerie will reach Jammú in two months, or by the middle of December. The Kashmír Government sends back yearly, by the envoy, Rs. 16,500, eight *khilats*, &c., &c. The terms are, as I understand the treaty, that Kashmír is bound to send troops to protect Chitrál from attack, to any point not further west than Mastúj, whilst Chitrál undertakes to send assistance as far as Gákúch in the event of Kashmír requiring it. I told the Mehtar I had no information regarding any change in his relations, but that I would tell Government that he was in a state of doubt. Recommended him to send off his tribute this day week, and said that, if his relations were to be altered, instructions regarding him and his tribute would no doubt go to the new Mahárájah.

"6. I next spoke about the Káfir Chiefs whom he has ousted from Lut-dih, and who hang about me incessantly asking for my intervention. He said that for my sake he would do all that he could to ameliorate their condition. 'Let Shtáluk and Jánú only consult and tell me what they really wish me to do, and I swear I will try to do it—for *your* sake.' I have, as I write, had in Shtáluk, who rapped out a torrent of abuse in Badakhshí Persian, and finished by saying:—'The old fox knows that Jánú and I have a blood feud, and that a *maslahat* between us is impossible.'"

The convoy of all spare baggage was despatched on this date towards Gilgit.

17th October, Chitrál.—There was nothing to record on this day except that heavy rain fell in the afternoon and at night.

18th October, Chitrál.—Colonel Lockhart was told that the Parácha traders, who had offered help in the way of transport for the residue of the baggage, had been deterred by an order from the Bábá Sáhib of Dír. There remained a considerable excess over carriage available, so the sum of 1,200 rupees was—on a liberal calculation—offered to the Mehtar to provide the deficient transport. The Mehtar was also asked by Colonel Lockhart to arrange for a trip to Asmár, supposing the projected visit to Dír were not feasible. Nothing definite was settled. Wafadár Khán suggested that Colonel Lockhart should send his adopted Káfir son, Gumára, to Dír, with orders to murder Bábá Sáhib, who was the only obstructionist in the matter of a trip to that country.

"You see," said Wafadár Khán "that Gumára was once converted to Islám, and afterwards reverted to his own religion. He could therefore go with perfect impunity to Dír on the plea of re-entering the faith, after professing his repentance to the Bábá Sáhib. Once in the same place with the Bábá Sáhib, Gumára could easily kill him some night and get away."

Wafadár Khán's utter disregard for religious observances and his hatred for priests are shared by most Chitrálís. It is only when one of this light-hearted race becomes too old to enjoy life, that he turns his eyes to the other world, and doubtfully cherishes the hope that a little strictness of conduct on earth at the eleventh hour may give him some further pleasure elsewhere. In the afternoon a letter arrived from Pesháwar, *vid* Dír. Brigadier-General Norman, commanding the district, acknowledged the packet sent to him by the same route on 18th September, containing a cipher telegram from Colonel Lockhart to the Foreign Secretary, in which discretionary power was asked for to visit Badakhshán, &c. The Brigadier-General had telegraphed the message on the 30th September, had sent a reminder on the 4th October and then, getting no reply, had let the messengers go, retaining the two sent on 24th September from Gobar Fort to carry up whatever might afterwards arrive.

19th October, Chitrál.—A good deal of snow fell during the night on the near hills and lay not far above camp. There was a fresh discussion about carriage, every kind of arrangement in Chitrál requiring much discussion

and tea drinking, and a great deal of patience. Colonel Lockhart sent off a letter to Umra Khán, ruler of Jandúl, the neighbour and relative of the Khán of Asmár, under whose influence the latter was said entirely to be. The letter mentioned Colonel Lockhart's desire to meet Umra Khán, and intimated that he had some presents for him.

20th October, Chitrál.—Two letters were brought to Colonel Lockhart from the Khán of Dír, one an open one—which of course was read by the Mehtar and the Bábá Sáhib—and another secret one, after the usual tortuous practice of Patháns. The first briefly said that he, Muhammed Shárif Khán, was busy, owing to some disturbances on his border, and could not meet Colonel Lockhart at that time. The secret letter was more diffuse and much more cordial. In it the Khán begged to be informed what service was really required of him, promising to consider the matter, whatever it might be, and saying that, please God, he would carry out any orders with which he might be honoured. Colonel Lockhart wrote a civil reply to the effect that as the Khán had said nothing whatever about meeting him, and as his own stay in Chitrál would soon be over, he had been constrained to send back to Gilgit, with much regret, the rifles and other presents which had been intended for the Khán (or Nawáb as he now styled himself). Colonel Lockhart also wrote to the Khán of Asmár, the substance of the letter being as follows:—

He (Colonel Lockhart) had arrived from India in order to make friends with the chiefs in that part of the world. He had had much pleasure in meeting Mehtar Amán-ul-Mulk. He had now been told how desirable it would be to form a similar friendship with two such great chiefs as the Kháns of Asmár and Jandúl, who, according to universal report, wielded supreme power over vast dominions. He therefore proposed to pay a visit to Asmár, and would be rejoiced to meet the ruler, Hazrat Alí Khán, there. If the Khán would send 12 carriers to meet Colonel Lockhart at Mír Kandí, on the Chitrál border, it would be taken as a favour, the men being required to carry on the British officers' few effects, and also some presents for the Khán himself.

21st October, Chitrál.—Colonel Lockhart despatched a letter to the Foreign Secretary reporting progress and prospects. The following is an extract from it:—

"Yesterday a native surveyor (a regular subordinate of the Department, completely trained) started for the Turíkho, with orders to go to Gilgit *viâ* Mastúj. This work, with our trip to Asmár, if it comes off, will complete the survey of Chitrál—one good thing done at any rate. On the 18th instant a

letter reached me from G. O. C. Peshawár, *viâ* Dír. My cipher telegram for you had reached him on 30th ultimo, and been sent off at once, but no reply having reached him from you up to 7th instant, he thought it best to send back the messenger, retaining for your reply the two men who had carried my letter of the 24th ultimo (reporting to you our visit to the Dúráh). I fear your reason for delaying means that you are reconsidering my Badakhshán proposal, embodied in the cipher telegram, and are perhaps referring to the Amír about it. Having accepted as final the veto conveyed in your cipher letter of the 13th ultimo, all my arrangements have been made for our going into winter quarters at Gilgit, and the bulk of our things having gone back to that place, we could not now go into Badakhshán except in the lightest order, which would hardly do. Hunza and the Killik Pass in early spring will, I trust, be the programme sanctioned; then, after preparing the way for the Boundary Commission, and meeting that body, let me go to Virran, if it be feasible, then by some approved route to the Hazárajât, and so down to India. I have discovered, I think, the origin of the name Hindú Kush. The people here call the range 'The Great Mountains,' or 'The Snow Mountains,' but they talk of a pass between Khinján and Chárikár as the *Kótal-i-Hindú Kush*, perhaps the Sar Álang or Parwán. Probably some one at Chárikár, in the old war, asked the name of the range, pointing towards the pass, and received a reply referring to the latter, which he mistook to apply to the former, *i.e.*, the range itself. I don't remember ever hearing the mountain called the Hindú Kush at Kábal, do you? *Army transport* is a work in which I might help during the winter by going to Baltistán and raising a prospective body of carriers, *i.e.*, engaging *Trangfás* or *Makaddams* to bring so many coolies when wanted, and securing them (the trangfás) by a retaining fee of say Rs. 2 or Rs. 3 a month. A trangfá would engage for 20 coolies probably, so Rs. 10 or 15 per mensem would be required to retain the services of 100 coolies. If you think this worthy of attention, you might get authority sent me through the proper channel, and I will secure as many of these splendid carriers as may be ordered, or as may be procurable within the number desired. St. John might be told at the same time to secure Kashmír coolies and ponies by a similar process, avoiding the spongy-hoofed lake ponies and drawing only on the suitable districts—Gurais *par excellence*.* Extend the same system to the eastern frontier (coolies only there, I fancy), and you would have an efficient transport service in time of war at two important points on the border, the expense of maintenance in peace being trifling. The present department is all wrong,

* Subsequent experience showed that the lake ponies, when properly shod, are as good as any other. The ponies used by Colonel Lockhart in his rapid ride from Gilgit to India in July 1866 were all lake ponies, and carried him splendidly.

and the mules, as now equipped and driven or rather led), are unfit for transporting baggage over a road like the one between Srínagar and Chitrál, which we have sufficiently proved. If we can get off towards Asmár the day after to-morrow, we ought to have done all our business there and elsewhere in the neighbourhood, and to have reached Gilgít *vid* this place by say the 10th or 15th December * * * When we leave this I shall make Kót Dafadár Muhammad Nawáz Khán, 15th B. C., stop behind to send news."

22nd October, Chitrál.—The Mehtar called at the camp and had a long conversation with Colonel Lockhart, the upshot of which was that the departure of the officers towards Asmár was put off for a few days, so as to admit of the Khán of Asmár's reply meeting them well within Chitrál limits.

23rd October, Chitrál.—Ináyat Khán, on completion of carriage arrangements, was paid 1,200 rupees for the hire of 120 carriers for 10 days, *i.e.*, for transporting the baggage to Róshan. He said the Mehtar had ordered him to put six men to the sword in the event of there being any hanging back, as an example, but that he, Ináyat Khán, had represented that Colonel Lockhart would be displeased at this, and had compromised for the stimulus of flogging in the first instance, should the money not prove a sufficient inducement. Colonel Lockhart remarks in in his diary of this date—

"The men are getting very handsomely paid by us, viz., 10 rupees each for a fortnight's work, but they hate compulsion very naturally, and do not like carrying loads under any circumstances."

24th October, Chitrál.—Colonels Lockhart and Woodthorpe and Captain Barrow crossed the river in the morning and went down to Jughór, where Wafadár Khán has a house and some land. Returning in the afternoon a letter awaited Colonel Lockhart from Brigadier-General Norman, enclosing the following cipher message from the Foreign Secretary, dated 10th October.

"Your telegram, 30th September. Following for Lockhart begins. I have received your cipher message through Officer Commanding at Pesháwar, and await arrival of papers by Gilgit. Please be careful about entering into any arrangements with chiefs in those parts. Regarding Badakhshán, there are difficulties about asking the Amír at this moment to give you leave. If Afghán Governor of Badakhshán invites you, and distinctly assures that he has Amír's authority to do so, Viceroy

will not refuse permission to do so. But you should tell the Governor that Amír has not been addressed on subject, because Government of India did not contemplate your going into Badakhshán. Viceroy would much prefer your wintering in Káfiristán, if possible to do so safely, for reasons which I cannot explain. It is not at present very important or desirable for you to go north of Hindú Kush, but do not press for entrance into Káfiristán if there is danger. Boundary Commission all well, and hope to begin delimitation about beginning of November—ends."

25th October, Chitrál.—Muhammad Sarwar Khán, a "*péshkhidmat*" of Abdulla Ján, Governor of Badakhshán, arrived with a letter from the Amír of Kábal in reply to the one sent in September by Colonel Lockhart to Abdulla Ján, asking for clemency to be shown to certain Saiyids. This letter and the reply sent will be found further on. Muhammad Sarwar Khán (a Tokhí Ghilzai) was hospitably treated in the British camp.

26th October, Chitrál.—Muhammad Sarwar Khán called early on Colonel Lockhart, and gave him the latest news from Badakhshán.

27th October, Chitrál.—The Mehtar called on Colonel Lockhart. He talked much about the projected visit of one of his sons to India, but nothing was settled.

28th October, Chitrál.—The following letter from Colonel Lockhart to the Foreign Secretary supplies the entries for this day and the 29th.

Chitrál, 28th October, 1885.

"Your cipher message of the 10th instant reached me on the 24th. The warning it contained about entering into arrangements in this quarter, combined with the danger of mishap, which has now become more apparent, has caused me very reluctantly to abandon the Asmár trip, after weighing the possible gain against the possible loss attending an accident to any of the party. If what I now hear be true, our return from the venture safe and sound would not be from want of enterprise on the part of the Bábá Sáhib's followers, even if we gave the Dír border as wide a berth as possible. I have therefore arranged to start to-morrow for Kala Darósh, and, if possible, shall extend the trip to Mírkaní. From the point at which we turn back I shall send on the Kót Dafadár (Muhammad Nawáz Khán) to Asmár with a letter saying that I have been recalled to Gilgit, &c. There will be no risk in this

non commissioned officer's going, as he is a Pathán, and he will fill up the gap in the map between Mírkaní and Asmár (he is an excellent surveyor). He will also carry a letter to the Khán of Jandúl, and I shall get Sháh-ul-Mulk at Kala Darósh to send a letter to Dír for me Each letter will simply be an expression of friendliness and of regret that it has been impossible *on the present occasion* for us to meet.

"On the 25th instant a letter came to me from the Amír of Kábal, a copy of which and a copy of my reply to which are attached. I told you before of my having written to the Governor of Badakhshán in favour of the Saiyid who is now in prison there on a charge of general ill-will to the Amír. My motive in writing was to do a good turn to a person held in great sanctity by the people of Yásín, Hunza, Wakhán, &c., and so increase thereby our *prestige* here and elsewhere. I am astonished that the Amír himself should have replied to me. I do not suppose you will be able to say a word in favour of the offending Saiyid, but if you can I think it would be good for us in this region, *i.e.*, if your good word succeeded in procuring his release. The man who brought the letter was a Tokhí Ghilzai official, by name Muhammad Sarwar Khán. I treated him well, gave him a tent, food and present, and he went away joyful yesterday. In my letter to the Amír you will see that I allude to the preparations I hear have been made for our reception in Badakhshán for some months past. Muhammad Sarwar Khán told me that we had been looked for for five months, but could not say how the report had arisen. Orders for our supplies had, however, he said, come from the Amír himself. Muhammad Sarwar Khán had no news to give, except that the Russians had of late given up sending parties down to the Oxus, or rather Panjah, and never appeared now south of Kuláb. The present strength of the garrison in Badakhshán he states to be as follows:— One field battery, one screw-gun battery (guns made in Kábal, said to be a great success), one mountain battery, two regiments cavalry (regular), four regiments infantry (regular), four regiments irregular cavalry, 19 *bahraks* (100 each) irregular infantry (Khásadár), say 18 guns, 7,000 men. The Afghán messenger's arrival, with a letter from the Amír, put the Mehtar into a state of great mental disturbance. Directly the letter arrived he sent a confidential man down to ask me if I would let him see the actual document, and on my refusing sent away his food (so I was assured), and could not sleep that night. Yesterday morning he came down to camp with all his confidential people, and they are legion, and asked me to send for the Afghán and declare before him that he, the Mehtar, was forbidden by the British Government either to pay tribute to the Amír or to send a son to Kábal as his representative (demands of

this kind seem to have been made some time ago). I replied that it would be unbecoming in me to make any declaration whatever before a mere Afghán courier, and that the Mehtar's dignity would likewise suffer, but I added 'You have now been eight years, more or less, in name a 'tributary of the Kashmír Mahárájah, and, as I have already told you 'you cannot serve two masters. The English Government sanctioned your 'present relations with Kashmír, and you may rely on what I tell you, 'before all your principal advisers, viz., that England will never suffer 'Afghánistán or any other country to interfere with you.' Amán-ul-Mulk rose up, in great elation, when I had finished, seized my coat and said he had taken hold of the skirt of England and cared for no other power, whilst the courtiers 'bújam'd' in chorus as if the same performance had not been already gone through half a dozen times. This is all very childish, but the Mehtar is surrounded by idlers who put ideas into his very suspicious head. I don't think he will trouble himself any more on this particular score. He next repeated his thanks to Government for the *royal* presents he had received, and told me to let the Viceroy know that his gratitude would, without doubt, be shown some day either by himself or by his sons.

"29th.—The Mehtar has sent down to say he wants to send a son to the Viceroy, in accordance with your invitation conveyed by Wafadár Khán. It is very late, but I have agreed to Afzal-ul-Mulk's going provided he travels light and returns *vid* Dír, so as to be independent of the Kamrí Pass. He is to go *vid* Gilgit and Kashmír, and apply for instructions to the Commissioner of Ráwal Pindí. I have said if he takes a couple of hawks it will be a sufficient offering for the Viceroy, and have promised to explain this. Nizám-ul Mulk, the elder brother, will, the Mehtar says, be much disgusted by Afzal's going, so I have said that, if possible, I will take Nizám-ul-Mulk back with me and present him, but I trust that my path homewards will not be by Gilgit, and a veto from you will in any case release me. Will you please be very kind to young Afzal; I mean exceptionally civil. He is worth it. It will be grand if he can see the troops at the Camp of Exercise, and be allowed to play polo and be made much of. He can speak Persian, which Wafadár Khán can't. Wafadár, however, speaks broken Hindustání fluently, and understands everything said to him in that tongue, and he is to go with the young man, although he is entirely Nizám-ul-Mulk's adherent. Your letter to the Mehtar, sent by W. K. last June, has only now been shown to me. I did not know that it contained a specific invitation for a son to go, and have hitherto thought you only said generally that a welcome would be

given should one be sent to India. I have put off my departure for Mírkaní until to-morrow. Now that the escort has been reduced to three men, people are beginning to give up the belief that we are to build a cantonment here. This idea has prevailed not only in Chitrál but in all the neighbouring states, as Hindú traders tell me.

"I told you in my last that I intended to leave Muhammad Nawáz Khán, Kót Dafadár 15th B.C., here when we leave for Gilgit. I am giving him a horse and some money, and intend, unless you direct otherwise, that he shall rejoin me in early spring. We have had no case of either sickness or crime among the men of the escort since we left Murree in June last.

"This morning I had a visit from some Kamdésh Káfirs (they occupy the country west and south-west of the Kala Darósh border), sent as a deputation to invite us to visit their people, *provided* we bring no Chitrálís. Am sending them back with a message to their tribe to say I will try and look them up in spring. Very kindly send me a couple of mule-loads of presents for the Káfirs generally, if I am to be allowed to go into Virran from Badakhshán, only cheap things, viz., cutlery, small looking-glasses, beads, &c.

"I hope to hear from you about the Mehtar's written agreement by the time I return from Mírkaní. I shall then go straight back to Gilgit."

Translation of a letter from the Amír of Afghánistán to Colonel Lockhart, dated 7th Zilhijja 1302 H., corresponding to 17th September 1885.

" After compliments. I have perused your letter which you addressed to Sardár Abdulla Ján, Governor of Badakhshán, at the instance of Sháh Abdur Rahím, asking for the release of his brother Saiyid Sádík Sháh. As the Governor of Badakhshán forwarded your letter to me, asking me to reply to it, I have thought it necessary to write to you.

" Three persons, viz., Saiyid Sádík Sháh, Sháh Abdur Rahím and Mír Alí Murád Khán, of Wakhán, on account of their friendship with Russia, have swerved from allegiance to the God-granted Government, and have formed designs against it. They will not leave the friendship of Russia as long as they live. The apology of such malcontents is of no avail (should not be accepted). They are the source of disturbances on the frontier. Previous to this the Ruler of Chitrál was a vassal and an ally of the Afghán Government, and his country was a dependency of Badakhshán. During the late troubles and disturbances in Afghánistán, viz., after the deposition of Amír Shér Alí Khán, he entered into an alliance and friendship with the Kashmír State, and threw off his allegiance to the Afghán Government. When I took the reins of government, the British Government took him

under their protection, and, detaching his country from Badakhshán, included it in the Gilgit province, and recommended me not to interfere in any portion of his country. Out of regard for the illustrious Government, I have refrained from interfering with Chitrál. At this time the ruler of Chitrál is under a wrong impression that his authority will be established if disturbances take place on the frontiers of Badakhshán. He thinks that disorder in Badakhshán will tend to establish order in his country. Therefore he keeps with him two evil-wishers of the God-granted Government, and he desires to have a third one too by his side through your intercession. I therefore write that should the British authorities fail to advise the ruler of Chitrál to refrain from intrigues with the refugees on the frontiers of Badakhshán, they will be liable to blame should the affairs of that frontier be thrown into confusion."

Translation of a letter from Colonel Lockhart to the address of the Amír of Afghánistán, dated Chitrál, 27th October 1885 :—

"After compliments. I have received and perused your letter in which you inform me that you do not deem it advisable to release the offender, Saiyid Sádík Sháh, who is hostile to you and friendly to Russia, in which you give an account of the misdeeds of Alí Murád Khán and Sháh Abdur Rahím of Wakhán, who are raising disturbances on the Badakhshán frontier, and in which you also give a narration of the past life of Mehtar Amán-ul-Mulk, the ruler of Chitrál.

"At the instance of the Mehtar, and at the request of Sháh Abdur Rahím, I wrote to Sardár Abdulla Ján, Governor of Badakhshán, asking him to release the Saiyid, on condition that he had not committed a serious offence. Now it appears from your letter that he is hostile to you, and has raised disturbances in Badakhshán. Therefore I will not ask you to let him off.

"Further, I have heard from Muhammad Sarwar Khán, a *péskhidmat* of the Governor of Badakhshán, and from others, that provisions have been laid since five months ago on the road on the other side of Badakhshán.* I am sorry your State has taken this trouble. No order has been given to me by my Government to travel in that quarter. As winter is approaching I am moving towards Gilgit to winter there, and will do as my Government may order me next spring."

30th October, Jughúr. Elev. 4,700 feet. 4 miles.—At noon the officers, in lightest order, bade a temporary farewell to the Mehtar as they passed his fort, then crossed the bridge and took the road down stream. The

* *i.e.*, in Wakhán.

path, after passing through the village of Daníl, ran some 200 feet above the river, along a precipitous hill side. At about half-way it descended to the hamlet of Dosha Khél, and thence through fields to Jughúr, a village containing over 100 houses, the *jágír* of the brothers Ináyat Khán and Wafadár Khán. Here camp was found pitched on good turf, under shady trees, and the party was very hospitably entertained by the two *vazírs*, who were both much liked by the officers. Possessed of entirely different temperaments, the one, Ináyat Khán, grave, calculating and thoughtful, the younger, Wafadár Khán, impulsive and full of humour, they, in their different ways, were of more use than any other of their countrymen to the mission.

31st October, Bróz. Elev. 4,500 feet. 7 miles.—Some delay in starting from Jughúr was caused by the Mehtar's sending for Ináyat Khán in early morning to consult about the visit of a son to India. The Dír route had now taken the old man's fancy for this journey, but Colonel Lockhart sent back word to the effect that he had arranged with the Kashmír authorities that the young man, whichever of them it might be, should go by Gilgit, and that any alteration must be made by the Mehtar himself with the Kashmír Government. The march on this day passed through the village of Chumórkón, the *jágír* of one of the Mehtar's numerous sons, a boy, Khush Nazar by name, of six or so. The child was, as usual, brought out to meet the party, riding a pony, and accompanied by his foster-father and a crowd of idle attendants. His village contains 120 houses, and its name, *chumór kón*, signifies "iron shoe," but why that name came to be bestowed no one could tell. Bróz consists of several scattered hamlets and contains 300 houses in all. The situation is charming, on undulating ground covered with orchards and corn-fields. It is the *jágír* of Wazír-ul-Mulk, another son of the Mehtar, and full brother of Sháh-ul-Mulk. The youth, if alive, must be now (1888) about 16 years old. There was nothing remarkable about him, but he gave the usual welcome and hospitality to the officers.

1st November, Kesú. Elev. 4,400 feet. 11 miles.—This was a trying march for the Baltí carriers. For a couple of miles the path ran through fields and then crossed a precipice overhanging the river by a narrow and dangerous track. Three times this alternation of plain and precipice occurred, the high-perched village of Gehrat (or Gairat) being passed at 7 miles. Kesú, on the right bank of the Chitrál river, is gained by a foot-bridge. It stands amid fields and orchards, contains 150 houses, and is the *jágír* of Ghulám, full brother of the Mehtar's eldest legitimate son Murid Dastgír.

Ghulám, a man of 26 or 27, welcomed the officers, having hurried back from a shooting excursion in the mountains. Short, plain, and strongly built, he was said to be a very sensual man, but one devoted to field sports. He appeared with a hawk on his wrist and a greyhound at his heels, and presented Colonel Lockhart with the head of a fine *márkhór* which he had just shot. In the evening a Kamdésh Káfir chief visited camp. He was to accompany the officers for the rest of the way, as a measure of precaution whilst they skirted the Káfir country. This man, Azar by name, said that the entire Káfir nation was ashamed of the treatment given by the people of Lut-dih to their English visitors.

2nd November, Kala Darósh. Elev. 4,320 feet. 6 miles.—A difficult march, on which, at one point, the Baltí carriers had a hard "*parí*" (as the Kashmíris style a path taken across a cliff-face) to pass over, whilst horsemen had to ride through deep water in a rapid current. Below Kesú much more forest appears on the hill sides. Darósh is on the left bank of the Chitrál river, which is here bridged, but the ricketty wooden structure is only fit for foot traffic, although a little work would render it passable for horses. Darósh—fort and village—is the capital of Sháh-ul-Mulk's district, *i.e.*, the southern division of Chitrál. It stands in a wide part of the valley, and has much rich cultivation. A considerable body of troops could encamp here, and would have a fine supply of fuel, forage, and water. Fruit trees abound, two crops of grain are raised annually, and some cotton is grown Once the capital of Chitrál, and said to have contained 10,000 inhabitants, it is now a collection of hamlets with not one-fifth of that population. The fort is of the usual mud and stone, with towers and bastions. Every house in this district is bound to supply a man armed with either fire arm or bow, and as the total number of inhabitants is calculated at 6,000 souls, 1,000 fighting men may be reckoned as Sháh-ul-Mulk's contingent in times of trouble. Besides Kala Darósh there are the smaller forts of Kalkatak and Naghar. The southern part of the district (from Mírkaní to Bailam) is held in *jágír* by a young boy named Amír-ul-Mulk, son of the Mehtar of Chitrál by a sister of the present Khán of Asmár. The roads throughout the Daróah district are infested by Káfirs, and the inhabitants are said to be the bravest men under the Mehtar's rule. With Pathán neighbours, and Káfirs, always on the look out for a Mussulmán of any sort, lurking on their borders, they are doubtless more or less inured to danger from their youth. Sháh ul-Mulk has already been mentioned in this narrative. The following was written by Colonel Lockhart about the young man, on returning to Chitrál from the excursion now being described.

"Sháh-ul-Mulk is 28 years old; his mother is the daughter of a Saiyid of Turíkho, and has *six* other sons. Sháh-ul-Mulk is the best educated of all the Mehtar's sons, and is a man who will probably give trouble to whichever other brother may succeed the old man. He is a very handsome, dignified young man, and was particularly civil to us. He has married a sister of Muhammad Shárif Khán of Dír; his own sister is married to Míah Gul, son of the Akhund of Swát; his son is betrothed to a daughter of the Khán of Asmár; and finally his daughter is married to Ghulám Haidar, an influential Saiyid of Kumbar, or Gumbar, on the Swát border. His pride was hurt at Nizám and Afzal only being spoken of as eligible for the trip to India, but before parting I had a private talk with him and comforted him. I said that I would bring his name to the Viceroy's notice. He told me that, if I liked to wait a few days, he would take us himself to Dír, Asmár, and even further, saying that, owing to his connexions by marriage, he had much more influence than his father amongst the neighbouring Pathán States. On my saying I could not wait, he said, 'Well, 'remember that, if you want to go back to India by Jalálábád, I can manage 'it without any risk, and if your Government wants to send up another 'officer from Jalálábád to Chitrál, and will communicate direct with me, 'I engage to pass him up in safety from the Amír's border, going down 'myself to meet him.' When the Mehtar dies there will be a pretty fight amongst his sons. Afzal will most likely seize Yásín (disposing of Nizám-ul-Mulk), and from Chitrál, which he will of course make himself master of in the first instance, he will try to coerce Sháh-ul-Mulk. The latter will call up his Pathán allies, and hold the *darbands* barring the river road, and defy his younger brother.'

3rd November, Kalkatak. Elev. 4,200 feet. 5 miles.—The road was fairly easy, with the exception of a few *parís*, across which ponies had to be led with care. Sháh-ul-Mulk rode with the party, and flew his hawk at the hill partridge rising every now and again on the path. At Kalkatak a ruined fort protects an insignificant hamlet. The encamping ground is spacious, there is a little cultivation, and forage and firewood are abundant. Near Kalkatak two Persian inscriptions were noticed on a rock, rudely scratched by some Mussulmán traveller, who evidently did not find his journey through this Káfir-infested country a very exhilarating one. The first bore date A.D. 1769, and was as follows: "Except trust in God, I have no provisions for the road." The second, three years later (A.D. 1772), ran: "I write this to be remembered by. Sorrow is my friend, Grief my "companion; Pain is abundant, but Sorrow is my friend. I am therefore

" not lonely, for these comrades are with me." At a distance Kalkatak closely resembles the fort of Róshan on the Chitrál-Kashmír border.

4th November, Kala Darósh.—A letter was received from the Mehtar impressing on Colonel Lockhart the danger of going beyond Mírkaní. A reply was at once sent saying that no such intention was entertained. Camp was struck in the morning and sent back to Kala Darósh, whilst the officers, accompanied by Sháh-ul-Mulk and escorted by an armed band of his followers, paid a visit to Mírkaní, the last inhabited place in this direction included in the Mehtar of Chitrál's dominions. Ashrat, indeed, is nominally so included, but the inhabitants are really independent. These latter are on friendly terms with their Káfir neighbours (some say that they are themselves Islámised Káfirs) and avoid interference from either Dír or Chitrál by escorting travellers consigned to them through the few miles of dangerous, debatable land surrounding their settlement. There is a *darband* (*i.e.*, a narrow commanding spot on the road, artificially strengthened) between Kalkatak and Mírkaní, about half way, the total distance being six miles. A fort and village, Kala Naghar and Badúgal, were passed on the opposite bank. The last mile was very difficult for animals, and the distance took 2½ hours to cover. Mírkaní is a small plateau overlooking Ashrat, and from it a view is obtained of the Raolí or Láwarí Pass. Below the plateau lies the hamlet of Mírkaní on the river bank. From this point one road runs south-east, up the Pésh Gol and across the Láwarí Pass to Dír; another going south, along the left bank of the Chitrál river, to Asmár. The entire neighbourhood is a huge graveyard, upright stones and white flags marking the resting-places of "*shahids*" or martyrs (for so orthodox Muhammadans in that region are styled if slain by the heathen). Before the officers were allowed to ascend the last rise it was crowned by Sháh-ul-Mulk's men, who raised a fearful din with their drums and wind instruments to scare away lurking Káfirs. Ináyat Khán said Mírkaní was "*darmián i-átish*" (in the midst of fire), and he muttered pious words, as he told his beads, until he had placed a mile of bad road between himself and "the flames." The procedure of the Káfirs is to cross the river in the dark on inflated goat skins, and to lie in wait at suitable places on the road, shooting down travellers with their arrows, or felling them with stones and despatching them with their daggers. Kala Darósh was reached at 4 30 p.m., and three post bags were received, sent out by the Mehtar.

A paper by a German Professor on the Soma, a mythical plant thought possibly to have its habitat on the Hindú-Kush, arrived from the Revenue and Agricultural Department, but no orders from the Foreign Secretary.

5th November, Gehrat. Elev., 4,500 feet; 10 miles.—A march of no difficulties. The village stands 200 feet above the Chitrál river (left bank), opposite the Barír Gol. This is a small place of some 20 houses, the property of Bahrám (one of the Mehtar's sons, who has already been mentioned). It is noted for having been a favourite resort of Sháh Katúr, the founder of the Chitrál ruling family.

6th November, Bróz. 9 miles.—There were a good many difficult bits on the road between Gehrat and Bróz, although the march was easy in comparison with what it must be in summer when the river is in flood. Half-way stood Ispálasht, a fort and village on the river bank. Colonel Lockhart's remark on it on this date runs :—"Between Gehrat and Bróz, and indeed for "a mile or two beyond Bróz towards Chitrál, the river has within the last "20 years gradually cut away a great amount of valuable land, and what "was once a tract covered with cornfields and vineyards is now a mass of "shingle. At Ispálasht, five miles from Bróz, the village itself is in imminent "danger, and another year will probably see its downfall. It now stands on "the very brink of the bank, whereas it is said to have had until recently a "great piece of cultivation between it and the river." Near Ispálasht a Persian inscription is cut on the rock, 10 feet above the road. The writing covers a length of about 100 feet, but owing to discolouration it could not be deciphered; indeed, to decipher it would require time and probably some means of bringing the reader close up to the letters. On this march the tomb of Sháh Katúr was passed—an insignificant building by the road side, on which were hung weather-worn Ovis Poli (gusfand-i-Pamér) horns.

7th November, Chitrál, 11 miles.—The officers marched at 9 a.m. and almost immediately met the Mehtar, who had gone out hawking in the direction of Bróz, and had killed twenty brace of *chikór* on the way out. On the way in a small additional bag was made.

8th November, Chitrál.—Amán-ul-Mulk called at camp at 9 a.m., and chatted for half an hour. Snow was falling on the higher ranges, and he improved the occasion by relating his narrow escape from death, as a young man, when overtaken by a snowstorm on the Shandúr Pass. His latest idea—which he urged on Colonel Lockhart—was that the *ahadnáma* guaranteeing the integrity of Chitrál to his heirs, was to be engraved on brass, so that neither fire nor weather could injure it, "But mind," he enjoined, "the brass must be signed by the Viceroy." He was told that Afzal-ul-Mulk, whom he, at that time, intended to send to India, might very well be ordered to make a petition for the brazen tablet to his Excellency.

Regarding his son's departure, he said that it was the Máh-i-Safar, and that he could not let the young man start for India in such an unpropitious month. The Mehtar regards procrastination as a luxury to which his exalted position entitles him, and much enjoys preliminaries, provided the latter go no further than words.

9th November, Chitrál.—A wintry feeling in the air, indicating snow on the heights, made every one long for definite orders so as to enable the party to cross the Shandúr before it became dangerous or impassable.

10th November, Chitrál.—To complete the survey-work in the neighbourhood, Colonel Woodthorpe went to Shoghót, thence to go up the Ujhur ravine on a three days' trip. The other officers went out hawking with the Mehtar at 7, returning at 11 a.m. The party consisted of the Mehtar and a good many of his relations, and a young man from Hunza—son of the chief *vazír* in that country—accompanied it, as also Mír Amán, a feeble and debauched-looking old man, representative of the Kushwaktia branch, which Amán-ul-Mulk has ejected from the country, and all but exterminated. Mír Amán is now a hanger on at Chitrál, whilst his nephew Mulk Amán, with whom Colonel Lockhart was later on to have some correspondence, is a wanderer in Tangír. On returning to camp a man brought in the report that a white man had arrived in Shighnán, but he could not say whether he was a "Farangí" (the term applied exclusively to Englishmen), or an Úruss, the name borne by Russians all over Asia. The Hunza vakíl said that his master was eagerly looking for the English officers' return to Gilgit, as he wished to enter into the most friendly relations with them. Ináyat Khán, however, and other sensible Chitrálís said that Ghazan Khán was extremely jealous of his "*pardah*," and they did not think he would ever suffer white men to pass through the country. Those words, made light of at the time, were to be forcibly recalled in the following summer to the memories of the four officers.

The following extract from Colonel Lockhart's diary-letter to the Foreign Secretary brings the narrative down to the 13th :—

"10th.—You would do a great thing to raise our *prestige* here if you could persuade the Amír of Kábal to release Mír Yúsuf Alí Khán of Shighnán. I do not know what his offence is, but they say here that he was invited to Kábal, and has been for long detained (not confined) on a charge of intriguing with the Russians. *His daughter is Afzal-ul-Mulk's wife.* How would it do to ask the Amír to send him down to India for examination, and to release him and send him up through Chitrál with

gifts and honour? If that were done, and also if the Saiyid, now imprisoned at Khánábád (about whom I wrote to you some little time ago), could be released by your agency, you would gain immensely in this part of the world; I mean Saiyid Sádik Sháh. I promised to mention Yúsuf Alí Khán's case to you, when out with the Mehtar this morning.

"Amán-ul-Mulk has just sent Ináyat Khán to beg me to ask you to give whatever trifle you may intend for him, not to Afzal but to *Wafadár Khán*, to prevent mistakes. He also says he is writing a letter to the Viceroy, which he will show me, and adds that he is going to suggest a subsidy for himself, something as a *nishán*, so that his neighbours may look up to him, although he has only a Kóhistán to rule over. His subjects still keep coming to me and asking for justice in the matter of land and women confiscated, and it is difficult to persuade them that I have no power over their ruler.

"It is our presence here, I now learn, that makes it unsafe for Afzal to go to India *viâ* Dír; the people in those parts persist in thinking that we have taken possession of Chitrál for good and all.

"The man carrying my order on the Pesháwar Commissioner for Rs. 2,000, about which you know, has returned to-day, having been unable to get through by the direct road. The Mehtar had kept it a long time before sending it off. My gold tillas, bought in Kashmír for Rs. 7–13 annas, will only realise Rs. 5 here, so I must take another Rs. 500 from the Mehtar for road expenses I fear, and cash the gold at par in Gilgit.

"11th November.—Another hawking party this morning, but I went out shooting instead of accompanying the Mehtar. I have told the latter that, unless I receive orders to the contrary, we shall leave Chitrál on the 17th instant. If we were to stop much longer, our coolies could with difficulty carry their loads across the Shandúr snow, and the road might even be completely closed for some weeks. It is good politically too that we should clear out. Whatever has been begun in that line can be confirmed or cancelled by you in India with Afzal. I shall not discuss with Amán-ul-Mulk the question of a subsidy. What I should like to see would be Chitrál brought directly under our Government, and the present Kashmír allowance doubled, on condition that slave-dealing was to stop for good and all. The Mehtar is an avaricious old scoundrel, and the dread of having the entire allowance stopped would keep him from disposing of his subjects for the small sums of ready money that he now realises by their sale, whenever he feels so disposed. A good native resident here, and a British officer at Gilgit with instructions to make frequent visits to the Mehtar's territory, would quite stop this traffic, but compensation would be necessary, and the method

I have suggested seems the best form, and surely doubling the present annual sum would be a moderate price for the command of the Hindú-Kush.

"12th November.—The Hunza envoy called on me yesterday evening and conveyed a very friendly verbal message from Mír Ghazan Khán. He said he was sure his master would be glad to see us, provided we went in as a small party. I told him we might look in at Hunza on our way to Wakhán, but that I had no orders. He wishes to accompany us back to Gilgit, but says he despairs of finishing his negotiations here on account of the procrastinating habits of Amán-ul-Mulk. Anyhow he will look us up as soon as released. He has travelled here by the Chilling-Ashkúman route, which I must find out about. It can't be very good as he and his suite had to go on foot, leaving their ponies shortly after starting from Hunza. The business in hand is to marry Nizám-ul-Mulk to a daughter of Hunza. The envoy, Muhammad Rizá Beg, is a fine-looking youth, barring a slight cast in one eye.

"13th November.—Yesterday evening a red bag (express) arrived from St. John, and a post-bag. The express was a letter, dated 23rd ultimo, from Srínagar, containing your telegram asking if I could inquire about harvests in Wakhán and Shighnán for Ridgeway, also as to the present state, tranquil or otherwise, of the inhabitants. The post-bag contained a letter (to which I am replying officially) from you, about my sending exhibits from this part of the world to the Indo-Colonial Exhibition. Your letter is dated 16th October, but I have received no acknowledgment of the treaty, or of the other letters despatched to you in September. We got in the bag a *Civil and Military Gazette* of 19th ultimo, but there was a week's hiatus in the numbers, so possibly another bag may reach me shortly and may contain your reply to the letter of 17th September. I have asked St. John to telegraph to you that I am sending an express to Ridgeway through Badakhshán, stating that the harvest is good in Wakhán, and telling him of the refugees now in the Mehtar's territory from Badakhshán and Wakhán. I have just had a visit from Sháhzáda Lais, with a letter from his father, which I enclose. In a few words, Shighnán and Wakhán are quiet. The people are subdued but discontented. Yúsuf Alí Khán, of Shighnán, is detained in Kábal with 300 followers. Alí Mardán Sháh, of Wakhán, is a refugee in Yásín with 200 *families*. Sháh Sádik, Saiyid of Zebák, has just been carried off to Kábal with 15 other Saiyids. The crops are good in Wakhán, and there is certainly no scarcity in Shighnán.

"The Mehtar sent me yesterday a draft of his letter. I got him to make all routes available for us when required, in place of only the Ashkúman. I don't think the letter is a bad one, on the whole. It goes by Afzal-ul-Mulk, but I have managed to get a copy made, and enclose it.

"P. S.—Woodthorpe rejoined last night, having had a good trip and been hospitably received in the district."

Translation of a letter from Mehtar Amán-ul-Mulk to the address of His Excellency the Viceroy, dated 5th Safar H. 1303 = 13th November 1885.

"*After compliments.*—I beg to represent that I feel extremely thankful and obliged to Colonel Lockhart, whom your Excellency has deputed to this country, for his good policy and manners. Although it is impossible for me to show due deference and proper hospitality to him in this mountainous country, yet according to the capacity of the country and to the best of my ability I have endeavoured to do him service. Since I placed myself in the circle of the friends and dependents of the British Government through the Maháráj ah of Kashmír, I have not been found up to the present, and will never be found, backward in rendering service. Should (which God forbid) an enemy make his appearance from the north, I will, with my 8,000 troops and all my sons, endeavour to oppose him, and will repel him with the help of the British troops. Should the powerful Government think it proper to despatch their troops to oppose the enemy through my country, *viâ* Ashkúman, or by any other route, I will also endeavour to the best of my ability to render whatever service is required of me, provided that the country now in my possession, which extends from Gákuch to Bargám, be granted to my descendants from generation to generation, by virtue of a *sanad* bearing the signature of the great Government, and unfettered by any conditions. An engagement to this effect was drawn by me in the presence of Colonel Lockhart and sent to your Excellency. As soon as a report (of the movement) of any evil-wisher of the Government from this direction is heard, notice will be given to the British Resident in Kashmír and to the Commissioner of Pesháwar. Some time ago I was informed that 200 muskets with ammunition would be sent to me through the Resident in Kashmír, but they have not yet reached me. I feel anxious on that score.

"Further, I beg that the British Government may be pleased to assign to me and to my sons an annual allowance, in order that we may live comfortably in this mountainous country and perform services with zeal.

"In compliance with your Excellency's wishes I have now deputed my son Afzal-ul-Mulk and a few trusted officials, in company with my trusted agent Vazír Wafadár Khán, to kiss your Excellency's sublime threshold.

"They will soon reach their destination. Whereas I have now become prominent among friends and enemies by reason of my services to the British Government, I hope that my son will be treated with the greatest consideration possible, so that I may not suffer shame before those who know and those who do not know me, and that I may not be held up to ridicule by my enemies. * * * * *

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"Sháh Abdur Rahím of Zebák and Alí Mardán Sháh, Ruler of Wakhán, having fled through fear of the Afgháns, have taken refuge with me. As this country belongs to the (British) Government, they may be said to have taken refuge with that Government. I hope that an allowance adequate for their support may be assigned to them, so that they may be looked after here, as they are useful men. I also hope that Saiyid Sádík Sháh and Sháh Yúsuf Alí Khán of Shighnán, who are in confinement at Kábal, may be released through the good offices of the (British) Government, and be allowed to take up their residence in this place. They would prove useful should (which God forbid) an enemy make his appearance in this direction, for all the Badakhshán frontiers belong to them.

"Further, as the Afgháns are all displeased at my new relations with the great Government, I beg that, when my son waits on your Excellency, the Amír of Kábal may be written to strongly not to interfere with nor molest me.

"I send the following presents for your Excellency:—

"Female falcons - - - 2

"Male „ - - - - 2."

Translation of a letter from Sháh Abdur Rahím of Zebák to the address of Colonel Lockhart. Date, *nil*:—

"After compliments.—Should you wish to know how I am, thanks be to God that up to the moment that I write this letter I am in good health, and pray for the well-being of the British Government.

"I have heard that you have received a letter from the Sardár Sáhib (Sardár Abdulla Ján, Governor of Badakhshán) in reply to your letter to him regarding my brother, in which he intimates that he seized my brother and placed him in confinement because he was in communication with the Russians. Please institute a sifting inquiry into the matter. They should produce either my brother's letter or his man. If they do so, they will be justified in doing what they like to my brother. But they only accuse us, the helpless ones, falsely. They have arrested and deported (lit. sent down) all our relations and kinsmen, whom they have also thrown into prison, because I have represented my brother's case to you, and not for any fault on their part. The reason why I have taken refuge in this country is because

it belongs to the great Government, one of whose well-wishers the Mehtar (Amán-ul-Mulk) is. Like the Mehtar, who is also a servant of the British Government, I consider myself one of their sincere well-wishers. I have nothing more to say."

Remarks by Colonel Lockhart :—

"Letter from Sháh Abdur Rahím, dated from Arkári, received 13th November 1885. It was brought to me by Sháhzáda Lais, his son. There are said to be 200 families of Wakhís now in Yásín with Alí Mardán Sháh, late ruler of Wakhán."

14th November, Chitrál.—The Mehtar called early at camp and was entertained in the usual manner. He was in the highest of spirits. It appeared that a man of good family, for whom he had a great regard, had been killed in a fray six weeks before at Kala Darósh. The man who killed him had fled across the border, and Amán-ul-Mulk's present good humour was caused by the report which had just reached him of the vengeance wreaked, under his own orders, on the fugitive's family. He chuckled as he related how the four nearest male relatives had just been put to death on the Kala Darósh polo-ground (where the officers had pitched their camp 10 days before), two of the victims being shot and two cut to pieces. At night it was reported that Afzal-ul-Mulk had arrived in the fort and had thrown his father into a furious rage by saying that he could not take the Kashmír route to India, as the Kamrí Pass would be too much for him in his then feverish state. He had therefore come to Chitrál, with his followers, in order to go down through Dír to Pesháwar.

15th November, Chitrál.—Afzal-ul-Mulk called on the English officers. He was pale and thin, and evidently had been ill, but it transpired in conversation that he disliked the Kashmír route, from dread of his elder brother Nizám-ul-Mulk. He would have to pass through the territory of the latter, who, he insisted, would never let him through alive if he could possibly compass his death.

16th November, Chitrál.—The Mehtar called at camp at 10 a.m., and was overpoweringly cordial. Bahrám Khán, the Kashmír *vakíl*, had accompanied him, but at Amán-ul-Mulk's whispered request, Colonel Lockhart sent him out of the tent and the Mehtar then talked freely. The Kashmír Mahárájah's death, he said, had been officially intimated to the Khán of Dír, who had furthermore received from the newly-installed Mahárájah a large sum of money, whereas no official intimation had been sent to himself and no gift. He finally reiterated his advice about Gilgit, commenting on the

great value it would prove to England as a post of observation and adding: "You ought also to seize Gákúch and Chérkala at once, or one of the two. "The Paiyál Rájahs of those places are not Kashmírís, and have no love "for Kashmír. On the other hand, as members of the Khushwaktia family, "they are closely connected with Chitrál, and if the sublime Government "did not wish to trouble itself in the matter, *I would gladly hold Paiyál "for Britannia.*"*

Letters received the day before from Asmár, Jandúl, &c. were carefully considered, and the bearers of the same questioned. The following cipher telegram was then sent to the Foreign Secretary:—

"16th November.—Afzal-ul-Mulk, son of Mehtar, starts for India at once, *viâ* Asmár, Jalálábád, Pesháwar. Route changed by Mehtar. Kalíd Khán, Salárzai, and Kháns of Jandúl, Asmár, Nawágai intend sending messengers with letters for you at same time. Mullas have advised them that, in the event of Russian advance, it will be best to choose lesser evil and claim British protection. Dír seems hard pressed by Jandúl, &c. Am writing Jalálábád Governor, asking him to pass on Afzal. Will you tell Amír and direct Pesháwar Commissioner to receive and send on to destination you may fix. He carries letter from Mehtar, repeating agreement, now amended, to open all routes in Chitrál to us on emergency. Twenty-five people accompany Afzal. Have warned that this number may be cut down at Pesháwar. We start for Gilgit to-morrow, but during winter I can at any time ride back to Chitrál in a few days, if required, crossing Shandúr on foot. Pass not often closed long for foot traffic. Kót Dafadár remains here. Am not now sending him to Asmár."

17th November, Koghazí.—The Mehtar called at camp at 10 a.m., and a start was made from his fort gate at 10.45. He rode some miles out with the officers, and jokingly said that he hoped no unfair advantage would be taken of him through the knowledge of his country acquired by Colonel Woodthorpe's survey. Afzal-ul-Mulk rode a mile or so further than his father, and said he was very grateful for having been selected to go to India. Ináyat Khán went as far as Koghazí. At the Mehtar's request Colonel Lockhart gave him a letter addressed to the Commissioner of Pesháwar, substituting Sháh-ul-Mulk for Afzal-ul-Mulk. This was to be used only in the event of Afzal ul-Mulk being too ill to go to India.

* In reporting this conversation to the Foreign Secretary, Colonel Lockhart added (with reference to the advice about Gilgit): "There is sense in what he says, but I fear it is unseasonable, if not "unreasonable. I said I had no power to discuss the matter with him, but would tell you what he "had said to me in confidence."

18th November, Prét. Elev., 6,000 feet. 9 miles.—It had been determined to vary the route by taking that through Drasun, on the right bank of the Chitrál river, to Mastúj, so the road which had been followed on the upward journey was left at the Morí bridge. This shaky, dangerous structure was crossed with some risk to the ponies; its length 80 feet. The rest of the road was easy, and camp was pitched under the now leafless fruit trees of Prét, a scattered village of 60 houses. Orders had gone on to Mastúj for any postbags that might arrive to be sent down the right bank, and two bags were now delivered in camp. A letter from Mr. Cuningham, of the Foreign Department, acknowledged the receipt of Colonel Lockhart's three letters, dated respectively 4th, 14th and 24th September, which had reached Simla within a few days of one another, the one of the 14th arriving last. Mr. Cuningham wrote (his letter bearing date 23rd October):—

"Durand has left Simla for camp, and delay is caused by this in sending the Mehtar a letter of thanks and an invitation to his son Nizám-ul-Mulk to visit India, and attend the camp of exercise. But it is intended to do this. The Viceroy will be at Delhi at the final march past and wind up on the 15th January, and Nizám-ul-Mulk will be invited to attend that."

On receipt of this, Colonel Lockhart at once wrote to Amán-ul-Mulk, telling him that Nizám-ul-Mulk had now been selected by Government, and that an invitation for that young man would shortly reach Chitrál. He, however, counselled the Mehtar to send Afzal-ul-Mulk down through Asmár, as already arranged, with the letter intended for the Viceroy. This would save time, would allow both sons to see India, and it seemed not to be contrary to the spirit of instructions. Nizám-ul-Mulk, from the position of his province, would naturally take the Kashmír route, and would be much longer in reaching India, which was of no consequence, as he had not to be there for eight weeks to come, and his invitation had, moreover, not yet arrived.

19th November, Parpísh. Elev. 6,200 feet. 8 miles.—A difficult march, in places somewhat dangerous, owing to landslips. At six miles a bad "*parí*" round some rocks. Half a mile from Parpísh the road ran across a deep ravine with precipitous sides. The village is a poor one—20 houses, and hardly any supplies.

20th November, Gurkí. Elev. 8,300 feet. 7 miles.—The road ran over a good many ups and downs, rising at one point to 2,000 feet above the stream (at the village of Lún). The Gurkí lands are the Mehtar's own private estate, and are among the most fertile in the whole of his dominions. The village contains 100 houses. Before leaving Parpísh, Colonel Lockhart

received a letter from Nizám ul-Mulk, bitterly complaining of Afzal's selection for the Indian visit. A curt reply was sent, disclaiming responsibility for the Mehtar's choice, and the messengers were told that their master had been, after all, invited to India. The thermometer fell to 28° Fahrenheit at night, and snow threatened.

21st November, Khóst. Elev. 7,800 feet. 6 miles.—There was some rough ground on this short march, and it snowed at starting: indeed, some snow had fallen during the night at Gurkí. Before leaving the latter place, the Mehtar's reply to Colonel Lockhart's letter about the visit to India arrived. Its purport was that both sons could not be spared at the same time, and that Colonel Lockhart must name the one to go. To this it was answered that Nizám-ul-Mulk must of course go if only one son could be spared, but that Colonel Lockhart hoped Afzal might perhaps go to India hereafter, possibly accompanying the officers thither.

22nd November, Drasun. Elev. 7,200 feet. 8 miles.—A fairly good road. Drasun is a mud fort of the usual type, and is the chief place in Murikho, Afzal-ul-Mulk's patrimonial estate. Camp was pitched on the polo-ground below the walls, and a hospitable greeting was sent out by Afzal's wife, whose usual residence is at this place. She sent a message about her father, Mír of Shighnán, a prisoner at Kábal, imploring the Viceroy's intercession on his behalf. Colonel Lockhart sent word to her that he had already written about the imprisoned Mír, but would write again, and that he felt sure the Viceroy would do what she desired, provided there were no State objections. He accordingly wrote earnestly about the matter to the Foreign Secretary. Snow had now ceased and the sky was clearing, giving a better prospect for the Shandúr Pass, which was the one formidable obstacle on the road to Gilgit.

23rd November, Sanógbar. Elev. 7,680 feet. 12 miles.—On leaving Drasun, the river bank was followed for a mile, when the stream was crossed by a wooden bridge. A steep path now led up some 1,200 feet to the top of the Kargáhlasht, the ridge separating the Turíkho and Mastúj rivers, and for several miles the road passed over an undulating barren plateau, descending eventually very abruptly to the Mastúj river. At Sanógbar camp was pitched on the polo-ground. Here some postbags and parcels were found lying deserted in the village, where they had been dropped by the runners weeks before. They contained nothing of importance.

24th November, Mastúj. 7½ miles.—The Mehtar's *áksakál*, Fateh Alí Sháh, was here dismissed with a present.

The remaining marches to Róshan were as follows:

25th Rahmán.
26th Sorlaspúr.
27th Langar.
28th Ghizar.
29th Cháshí.
30th Pringal.
1st December, Dahimal.
2nd Jinjrót.
3rd Róshan.

The following letter from Colonel Lockhart to the Foreign Secretary covers the unimportant period between leaving Mastúj and arriving at Róshan:—

"Róshan, 3rd December 1885.—We have just reached our last stage in Chitrál territory, and I write you a few lines in failing light and with numbed fingers to say that I saw Nizám-ul-Mulk this morning, and it is now settled that he is to go, *viâ* the Kamrí route, to Marí and Ráwal Pindí, so as to reach Delhi a day or two before the 15th proximo. Enclosed is a copy of the letter Nizám-ul-Mulk takes with him. I am writing to the Governor of Gilgit to ask that assistance may be given to the Sardár (that is the title of Nizám, Afzal's being 'Tsik-Mehtar,') *i.e.*, in the way of a *pálkí* at the Kamrí and men to clear snow from the path. The party must go on foot, as horses could hardly get across. I have said that you are aware that this is the reason for his only taking a few hawks as an offering to the Viceroy, and that he need not be ashamed. He is taking a great many followers—some 40 I believe—but he understands that this number will, in all likelihood, be cut down at Ráwal Pindí, if not before.

"As soon as I reach Gilgit I shall prepare a short resumé of all that we have done, illustrated by a rough sketch map. The latter will show all topographical work done, and also the routes that I entreat that I may be allowed to follow in spring. I trust the work completed may be thought a sufficient return for the expense of the mission. On the 21st November I sent from Khóst a telegram to be forwarded to you through Dír, and on the following day wrote to you from Drasun, acknowledging Foreign Office letter of 23rd October which intimated that Nizám was to be invited to attend the Delhi assemblage. We have had a few difficulties on the way, but nothing to speak of. Nature was kind (although some of the Chitrálí officials were dishonest and stole money intended for baggage carriers), and we crossed the Shandúr plateau in clear weather. The lake was frozen completely, and a few inches of snow lay on the route for 2,000 feet or so down either slope. Some of the people suffered from

giddiness, and a few men and horses bled at the nose when we reached the top. The cold was intense at night at Langar; sheep intended for our rations kept coming into our tents, and would take no denial. An accident to the maximum and minimum thermometer prevented our knowing what point of cold we reached, but at 10 a.m., in bright weather on the following day, the reading was 16° in shade and 24° in sun, so we probably went near zero before daybreak. Stray Badakhshís and Chitrálís who have come just now from Badakhshán, report the arrival of an Englishman* from Yárkand in Shighnán, and say he is going through Afghán Turkistán to Kábal, and thence to India. A middle-sized man, clean shaven, with his following and baggage all on ponies. Who is he, I wonder? I think I have told you that the Mehtar assured me, before I left, that the new Mahárájah of Kashmír had sent letters and money to Dír, whilst he himself had had no official intimation of the late ruler's death.

"Will you give Ináyat Khán and Wafadár Khán some pecuniary reward? Perhaps Rs. 500 each would do; less would not do I think. They have had a lot of trouble ever since we reached Bandípúr in Kashmír last June, and both brothers incurred some odium when it was thought we meant to take root in Chitrál. Besides, I can't forget Wafadár's courage in Káfiristán, and his constant cheerfulness in that rather troublous trip when some of his countrymen were despondent. He only comes out in bad times. By the way, he does not know Persian at all, but he knows Hindústaní quite sufficiently, so will you please talk to him direct in that tongue, and not through a Pushtú-speaking Munshí. He calls a mare 'zanána ghóra,' and so on, but is quite intelligible. I have never had your acknowledgment of my letters about the Káfiristán trip, &c. You are, most likely, too busy to write about this thing, which is very insignificant compared with the other stirring enterprises now going on, but we have evidently lost some postbags, and my fear is that they may contain some letter from you. Everything has gone well in essentials; nobody has been sick; the Mehtar is friendly beyond measure. Nizám-ul-Mulk has hitherto received an annual allowance, I hear, from Kashmír. I think that he, Afzal, and Sháh-ul-Mulk might very advantageously receive a yearly grant each from Government in addition to the Mehtar's, and I should be inclined to fix the sum at Rs. 2,000 per annum each. They are all three of importance to us, either from their character or from the situation of their respective provinces.

"P.S.—Will you wire orders to Commissioner of Ráwal Pindí to arrange for Nizám-ul-Mulk's reception at Marí and for his being passed on to Ráwal Pindí and Delhi? Of course they take no tents, but the following can lie

* This turned out to be Mr. Ney Elias.

out in all weathers. Three or four tents, or say two fairly big ones, and two or three mountain battery ones would take in the party, however large. The Mehtar is extremely anxious all the same that his 'face may not be blackened before his ill-wishers,' and that the reception of his son may be so honourable that both Mahárájah and Amír may think much of him (Amán-ul-Mulk himself).

"I have told Nizám-ul-Mulk that he must return by Pesháwar and either Dír or Asmár. The Kamrí will be out of the question in a few weeks.

"In reporting no mishaps I have forgotten to mention that Woodthorpe's horse fell over a cliff and was killed the day we left Chitrál, and that the native surveyor the day before yesterday got slight concussion of the brain from falling on the ice whilst manfully trying to slide on a pool by the river."

4th December, Hupur.

5th December, Gákúch.—Rájah Áfiat Khán met and entertained the officers, who here overtook the last detachment of the escort sent on from Chitrál with baggage. The men had had some very rough experiences on the road, had been absolutely without supplies of any sort for two days in Nizám-ul-Mulk's territory, and had, moreover, been robbed of a few articles of baggage. In addition to all this the Mehtar's Yasáwal, Baghdúr by name, had decamped with 80 rupees which had been made over to him to pay to the Chitrálí carriers. There had, however, been no serious mishap, and no sickness.

6th December, Singal.—Here Bakhshí Mulráj, the Gilgit Governor, met the party.

7th December, Gulapúr, or Gulpúra. Elev. 5,700 feet. 11 miles.—It was found to be better, in view of the work contemplated at Sharót, to halt here rather than at Dalnatí, which had been the halting place going up. Rájah Akbar Khán met the officers half way and entertained them at Gulapúr, which belongs to him. As the party rode through Dalnatí, the Kashmír garrison holding Akbar Khán's fort of Chérkala on the opposite bank turned out and presented arms.

8th December, Sharót.—This was a very short march, about four miles, and the officers had the whole day to spend in fishing for the treasure lost here just four months before. The water was still very muddy, and

after many hours of fruitless labour it was determined to return to the spot from Gilgit when the river should be reported to be in a more favourable condition.

9th December, Gilgit.—This march of 17 miles was made by noon, and the party was met some distance out of Gilgit by the temporary commandant, Colonel Nihál Singh. A salute of nine guns was fired, and a guard of honour was drawn up in front of the house last occupied in August, and which now seemed to the officers the most comfortable mansion they had ever entered. A weather-proof roof, furniture, books, and—perhaps above all—the power of secluding themselves by shutting a door, these were luxuries of the highest order to men who for many weeks had lived in small tents amidst people who regarded them as legitimate subjects for study, and who accordingly gratified a highly developed curiosity at their expense at all hours of the day and the night.

10th December, Gilgit.—Colonel Lockhart arranged to send away to Astór all spare ponies, owing to the scarcity of grain and grass at Gilgit.

11th December, Gilgit.—A post, but no letter from the Foreign Department. Wafadár Khán dined in the evening with the officers.

12th December, Gilgit.—The officers paid Bakhshí Mulráj, the Governor a visit of ceremony in the afternoon, riding down to the fort in uniform with an escort of half-a-dozen Sikhs. The Bakhshí gave tea and talked business. Two hundred smooth-bore muskets and a good deal of ammunition, promised to the Mehtar of Chitrál long before Colonel Lockhart's mission had been thought of, were lying at Gilgit. The delay in sending them up so far was probably due to the routine of one or more Government departments, but their onward despatch from Gilgit was now hindered by Kashmír's dislike to placing arms in the hands of a chief whom the Mahárájah held by a very fragile bond of suzerainty. It required some persuasion to induce the Bakhshí (who doubtless had his orders from Kashmír) to have the arms delivered at Hupur—the frontier—to the Mehtar's people. He at first would only hear of delivering them at Gákúch. On the march down from Chitrál several complaints had been made by the relations of a married woman, the Mehtar's parting gift to Major Hassan Sháh, and Colonel Lockhart had told them that he was angry with the Major for having taken her, and would do his best to have her restored. The subject was now broached, but the Bakhshí assured Colonel Lockhart that

the woman had been taken in ignorance of her being another man's wife, that she was delighted with her new lot, and that the Major meant to marry her. Matters were finally arranged by a money payment, and at a later date the original husband appeared at Gilgit and accepted his supplanter's hospitality; in fact he found the fat Major's quarters so comfortable that he seemed inclined to billet himself there permanently, had not means been found to dislodge him.

A letter was received this day from Hunza, Ghazan Khán the ruler asking what he could do to show his friendship, &c. In reply Colonel Lockhart asked him when it would suit him to receive the party at Hunza.

13th December, Gilgit.—The following letter and telegram were despatched by Colonel Lockhart to the Foreign Secretary. Regarding telegraphing from Gilgit to India, messages had to be sent by express runners to Srínagar and thence telegraphed onwards. A line did exist between Gilgit and Astór, but this was rarely used as the saving in time did not compensate for the risk incurred of error in translation, Astór and Gilgit signallers working only in Persian.

Gilgit, 13th December, 1885.—"Below is the copy of a telegram I am sending off through Kashmír."

"The only things I have to add are:—

"I. I had a good deal of difficulty in getting Kashmír officials to agree to deliver the arms for Amán-ul-Mulk at Hupur. They wanted to drop them at Gákúch, where the Chitrálís would have had difficulty in taking them over. Bakhshí Mulráj was, I presume, acting on orders from Darbár, for he is willing to do everything I ask him, and it is probable that his Government does not like the arms going to Chitrál. All right now I think."

"II. Yesterday a messenger came from Hunza; the ruler asking in a letter how he could be of service. I replied by saying we wished to visit Hunza, and asked him when it would be convenient for him to receive us."

"Have dismissed Baltí carriers and got rid of all ponies except one apiece by sending the rest to graze at Astór, after picking out weeds and giving the latter away to Kashmír people."

"Can always move one or two officers anywhere at a moment's notice, and the whole party in a week."

"P.S.—I trust my recommendation that Government should subsidise the Mehtar's three sons, Nizám, Afzal and Sháh-ul-Mulk, may be approved."

"Received here the two express rifles for Wafadár and Ináyat Khán."

Telegram from Colonel Lockhart to Foreign Secretary, Calcutta.

"Gilgit, 13th December.—In absence of orders to contrary we left Chitrál 17th November, arriving here 9th December. From gap in our newspapers it is evident that three postbags have been lost between Gilgit and Chitrál. As no letter has reached me signifying either approval or disapproval of my proceedings in different places during September and October, I fear some communication from you may have been in missing bags. If so please repeat. Will you send me five thousand rupees as a public advance? Accounts shall go to you shortly, but all public moneys have been expended for some time. Nizám-ul-Mulk not yet arrived here. I don't think he can arrive in time for Delhi Darbár as Kamrí and Burzil Passes are reported closed just now. He will probably have to go round by Iskardú. Have received two hundred muskets and ammunition for Mehtar. Hope to despatch to-morrow to Chitrál."

14th December, Gilgit.—The muskets and ammunition were despatched to Hupur, thence to be delivered to the Mehtar's agents.

15th December, Gilgit.—Bakhshí Mulráj arranged a beat, and accompanied the officers with his gun and hawk. The hawk given to Colonel Lockhart by Amán-ul-Mulk killed three brace of *chikór* in excellent style.

16th December, Gilgit.—Nothing to record.

17th December, Gilgit.—A letter arrived from Nizám-ul-Mulk, excusing himself for delay in reaching Gilgit. To this Colonel Lockhart replied that the Kamrí and Burzil Passes were undoubtedly closed by snow, and that the choice now lay between the Iskardú and Asmár routes. If the Iskardú route were selected then Nizám-ul-Mulk must give up all hope of reaching in time for the assemblage at Delhi; if, on the other hand, the Asmár route were chosen, he must return at once to Chitrál without visiting Gilgit, and go down to India as hard as he could.

18th December, Gilgit.—A little snow fell in the night, but did not lie lower than 200 feet above the valley. A post arrived but contained no orders.

19th, 20th, and 21st December, Gilgit.—Nothing to record.

22nd December, Gilgit.—A letter received from the chief of Nagar, offering his services. A letter also received from Nizám-ul-Mulk in which he said he had captured and was bringing in some men of a band sent up from Darél to kill the officers on their way back to Gilgit. Another post arrived, but contained no orders. Colonel Lockhart had compiled a memorandum on Chitrál, and this was now despatched to India with the following letter to the Foreign Secretary:—

Gilgit, 21st December 1885.

"I send you a few rough notes on Chitrál, thrown into some kind of shape from my pocketbook. If you want anything more and will tell me so I have no doubt that I shall be able to send you further information before leaving this region.

"Woodthorpe has surveyed about 7,500 square miles of country, and we know nearly all we want to know about Chitrál, geographically and topographically. He has also made geological notes. Barrow has sent reports on all our routes to the Quartermaster-General, and Giles has made botanical and natural history notes and collections. Giles has also taken many photographs of landscapes, buildings and people, but a large proportion of the plates were either broken or destroyed by water on their way to India.

"As regards the primary object of the mission, friendly relations have been established with the Mehtar of Chitrál, his sons and other kinsmen, and also with the principal men of the country, whilst the peasantry (*fakr maskín*) know that if they have not received full payment for supplies, or for carrying our baggage, the money has not been withheld by us, but has been stolen by their own people.

"I enclose a sketch-map showing the area surveyed during our stay in the country, and also the route I hope we may be allowed to follow in spring, through Hunza, Wakhán and Badakhshán. As you will see by the map, I propose that we should visit from the north all the passes already done from the south, and then make for Virran, the capital of Káfiristán. From Virran we would explore the whole of the country and could return to India by Asmár and Jalálábád, or else we could recross the Hindú Kush from Káfiristán, go westward and through the Hazáraját, emerging at any point and taking any India-ward route that might be ordered. There would be no difficulty or danger in going to Káfiristán from Badhakhshán, as we should enter the country without a Chitrálí following, and the Káfirs would be glad enough to receive us under

those conditions. Sir Oliver St. John writes to say that it seems from the letters of the Kashmír *vakíl* in Chitrál as if the Mehtar prided himself on having prevented our going through Káfiristán in October last. He was averse from the first to our going, but it was only from dread that we should come to harm, and that he would be held responsible. It is pretty certain that the people who bombarded our tents with stones at Lutdih were Chitrálís, but it is equally certain that the Káfir opposition to our further progress next morning was genuine. If the Mehtar did instigate it, the Káfir chief Mára (whose daughter, now dead, was in the Mehtar's harem) must have been the agent employed, and he probably told the people that our numerous Chitrálís were going to settle down for the winter, and eat them out of house and home.

"The Hunza trip I would not of course undertake without first assuring myself that it could be done with safety, but it is obviously desirable that we should find out whether troops can pass southward through that country, as it is on the most direct line from Farghána to Kashmír territory. I should like some presents for the Hunza people. If you agree will you send Rs. 1,000 to the officer commanding 24th P.I., and tell him to buy four Amritsar *choghas* like the ones bought last summer, and 12 Pesháwar *lungís*. He ought to send them in four parcels, one a week, as our postbags must not be unduly weighted in winter. If you can spare them from the Toshakhána, a few handsome pistols, or other portable things, might help us in Wakhán and Badakhshán, as well as in Hunza. I have just received a large consignment of cutlery, &c., from Calcutta. The knives will do very well, but there are a great many heavy-looking glasses, which I shall have to leave here. I should like a great many little round zinc-backed mirrors, sixpenny or shilling ones, and that is what I meant to ask for. Perhaps you will have them bought and sent up?

"The river will soon be clear enough to let us fish for the Rs. 4,000 we lost at Sharót in August last, and I have great hopes that we shall recover the money. We tried on our way down, but the water was too high, and two thick for us to see the bottom. The spot is at the base of a cliff where the channel is deep, and the search has to be made from a mussack raft.

"Wafadár Khán tells me that the Governor here, Bakhshí Mulráj, wrote to Mulk Amán (in Darél) last summer and urged him to make an inroad into Amán-ul-Mulk's dominions; that Mulk Amán therefore sent two emissaries to Hunza suggesting co-operation, whereupon the Mír of Hunza (just now on very friendly terms with the Mehtar) sent the messenger in chains to Chitrál; and that Amán-ul-Mulk released one of the men

and has kept the other a prisoner up to now. There may be truth in this, or Wafadár Khán may have got hold of the wrong story. He is generally pretty accurate, but I wish he had mentioned the circumstance in Chitrál. As you know, Amán-ul-Mulk is burning to attack Darél and Tangír, and to run Mulk Amán and other enemies to earth. It might lead to a big conflagration, and he is pledged not to act without your advice in the matter, which I fancy Nizám-ul-Mulk may be told to ask for. No, by the way, he would not trust Nizám, as the latter is known to have friends in that particular Yághistán. I have heard, indeed, on good authority, that Nizám had arranged for the Darél and Tangír people to waylay and murder his brother Afzal if the latter had been sent to India now by the Kashmír route instead of himself. Nizám-ul-Mulk will be here about Christmas day, and cannot possibly reach Delhi by the 15th proximo.

"I hope you will soon write to Amán-ul-Mulk and accept his agreement. He is straight enough at present, but wants some patting on the back and some money. He would give much to be free of the Hindú suzerainty and directly under our Government.

"It is a good thing that the 200 muskets have at last gone to the Mehtar. He is a suspicious person, and was beginning to think that he was being humbugged. Some one must be to blame for the delay."

Dated 23rd December 1885.

"P.S.—I put in a P.S. before the bag goes off this morning to say that last night I got a very civil letter from the Nagar man offering his services. I also heard from Nizám-ul-Mulk to the effect that he has caught, and is bringing in with him a band of Mulk Amán's men who were sent to attack my party, but arrived too late. I think this is probably nonsense. If true, I will send the men back to Mulk Amán.

"Please acknowledge receipt of this or make someone do so by return, or I shall be anxious Have not kept a copy of my report, and if it goes astray it would be difficult to re-write from my notes, a lot of which I have now torn up."

There is little of interest to relate in the remaining days of 1885. The Mehtar intimated to Colonel Lockhart how rejoiced and honoured he had been by the receipt of a letter from the Viceroy, and his son Nizám-ul-Mulk was despatched from Gilgit on the last day of the year to go to India by the Iskardú route. The departure of that young man was very welcome to both British officers and Kashmír officials. With the latter he was overbearing, his head being quite turned by the exalted position he now filled of "Ambassador" to Lord Dufferin's Government. Accustomed to

the roughest life and the poorest accommodation, he now discovered that he must have a palanquin to travel in, that he must have the fattest sheep, the finest flour and the most expensive sugar for his own consumption and that of his followers. Given tents unlimited, nothing would satisfy him until Bakhshí Mulráj (very weakly) turned the patients out of the general hospital for him, and this the young barbarian promptly set on fire and very nearly burnt down through his ignorance of the construction and uses of a chimney. He asked for the Kashmír military band to be sent to play at his quarters, and, although he was good enough to approve of the music, he was dissatisfied because the Colonel commanding the garrison did not see his way to sending down some of the troops to dance before him. He lay in bed till all hours of the day, keeping the Bakhshí waiting from early morning till afternoon for his visit of ceremony at the Fort. It was much against the grain that Bakhshí Mulráj managed to fulfil his duties as official host, and the English officers gave him their fullest sympathy and encouragement to bear the temporary trial. Matters however came to a head when (after all but destroying the hospital) Nizám-ul-Mulk invaded the telegraph office with his mischievous crew, and nearly ruined the instruments in trying to gratify his curiosity. When he called on the English officers his demeanour was most humble and courteous, but once out of the house his foolish arrogance knew no bounds. Wafadár Khán, his foster brother, said to Colonel Lockhart, with tears in his eyes, "One "day in the Sardár's service just now is more aging than 10 years would "be in the service of you English gentlemen." After the telegraph-office incident he was told that go he must, one way or the other, back to face his father's anger, or on to India, but that Gilgit could hold him no longer, so at noon on the 31st he marched out with 65 followers, including dancing-boys and musicians, and did not again trouble the Bakhshí for many months to come. Meanwhile, a good deal of correspondence was opened with neighbouring chiefs, a correspondence that continued throughout the winter. The rulers of Hunza and Nagar, various refugees in Darél, Tangír and other parts of Yághistán, the Ex-Mír of Wakhán and several notables in Chitrál and Yásín sent their confidential men with letters to Colonel Lockhart, all of them professing friendship and asking for something in return, either money, arms, or medicine, or else influence with someone in a position to advance their interests. Afzal-ul-Mulk, indeed, never asked for anything but friendship and remembrance. Colonel Lockhart thought it advisable to encourage this correspondence, so all reasonable requests were complied with, answers were invariably sent to letters, and messengers were treated with hospitality and generosity. There was, of course, continual

difficulty in this, for assistance to one man very often meant offence to someone else. The principle adopted was to be very chary of promises, but once a promise was given, to carry it out, at the cost of any trouble, to the smallest detail. On the last day of the year a letter, dated 5th December, arrived from Mr. Ney Elias, who wrote from Zebák. He, it now appeared, was the European whose presence in Shighnán had excited the Mehtar. Colonel Lockhart had agreed with Mr. Elias before leaving India that they should communicate with one another on opportunity offering, and a correspondence was now begun. Mr. Ney Elias had reached Zebák from Yárkand by way of little Kára Kul and Rang Kul, then across the Murghábí and the Neza Tásh Pass to Sassik Kul and over the Kaitezek Pass down to Bar-Panjah. Thence to Wámar and up the Murghábí as far as the Kúdara confluence, then down the Oxus to the Darwáz frontier, and thence back to Bar-Panjah and on to Zebák by way of Ishkáshim. The letter arrived through Chitrál, and a reply, with some medicines asked for, was at once sent back by the same route. Kót Dafadár Muhammad Nawáz Khán, who had been left at Chitrál, wrote on every occasion that presented itself and gave news of what passed in that quarter. His presence with the Mehtar was of value, for Amán-ul-Mulk liked him and gave him every assistance, so that before he left Chitrál he had done some useful survey work (including the route to Asmár, which he was able to visit), had collected a good deal of information about the inhabitants and administration of Chitrál, and had compiled a vocabulary of the language. The men said to belong to Mulk Amán's band, brought to Gákúch by Nizám-ul-Mulk as prisoners, were detained there under the care of Rájah Akbar Khán, whilst the Mehtar of Chitrál was communicated with. The latter wished them to be either sent back to Chitrál or down to India, there to be thrown into prison. The men were taken into Gilgit eventually and brought before Colonel Lockhart. They were Alí Akbar, Asab Alí Khán, Ghulám Rasúl, Pur Dil Khán and Akbar Alí Khán, all brothers, whose father, Akbar Rahmán, uncle of Mulk Amán, was murdered by the latter. Nizám-ul-Mulk, who had given the five brothers an asylum in Yásín (by the Mehtar's orders), wished to prove that they had conspired with their father's murderer to kill the English officers on their way back to Gilgit. It seemed to Colonel Lockhart that Nizám-ul-Mulk had become tired of keeping them, and had wished to get rid of an encumbrance, and at the same time to ingratiate himself with the English officers by inventing this incredible story. The men themselves implored Colonel Lockhart not to send them back to Chitrál territory, saying that they would be killed "like sheep," without doubt. It was therefore arranged with the Bakhshí that they should be kept at Gilgit, where some land was

allotted to them. The Mehtar objected strongly to this, but he was told that the matter had been settled, and that no further discussion could be allowed. How this sudden desire to get rid of the brothers arose in his mind it is impossible to say. He was too shrewd to credit Nizám-ul-Mulk's tale—which, on the other hand, may possibly have been concocted under his own directions. The five were rather prepossessing young men, and their gratitude was unbounded when they were told of the decision arrived at.

The first part of this narrative will fitly terminate in a note by Colonel Woodthorpe, giving an account of the manner in which the winter passed at Gilgit and describing the sport there.

"Our life in Gilgit during the four winter months was comparatively quiet and uneventful, and one day told another, though we had plenty to do and many simple pleasures, and the time passed quickly. Usually the mornings were occupied by us variously; by Colonel Lockhart in political matters, receiving deputations, &c., a duty which often kept him till far into the afternoon: by Captain Barrow in learning Persian or writing the *Gazetteer:* by Dr. Giles in attending to his many patients; by me in painting the portraits of my fellow-missioners, of chiefs who came to call, in preparing some pictures for the Indian and Colonial Exhibition, or occasionally in assisting Dr. Giles in some elaborate operation In the afternoon we walked or played polo, or went out shooting till dark. Persian lessons were then taken up till dinner time, and a quiet rubber closed the peaceful day. We all took a great fancy to Alí Dád Khán, the titular rájah of Gilgit, Kashmír allowing him little beyond the name. He used frequently to come in for afternoon tea and a chat, and took the greatest interest in my painting, which was almost an unknown art to the simple tribesmen, and they marvelled exceedingly at a successful portrait. We picked up an excellent Shikári, by name Sultán Sháh, a man of Darél, a wonderful mountaineer who could negotiate the most difficult pieces of climbing with the ease of the mountain goat. I drew a picture of him with his face attached to a márkhór's body as a compliment, and told him to keep it, as a far more eloquent testimony to his skill than any written certificate I could give him, but, strange to say, he was much hurt, and said he dared not take it home as his wife would bully him very much about it, and say, 'Don't come here any more, be off to the 'mountains to your beloved márkhór; mate with them, you are no more 'my husband.'"

"We used sometimes to devote a morning to going out with him after márkhór, and a description of one day's sport which I had will serve for all. Overnight my man left some wood in the grate, a kettle of tea ready made,

and some cold meat, hard-boiled eggs, and scones on my table. At 4 a.m. I awoke, blew up the smouldering ashes, put on fresh wood, set on the teapot to get hot, and to-bed again until 5, got up then, and dressed and had my breakfast, by which time Sultán Sháh had arrived, and it was just light enough to see our way without breaking our shins over boulders, and we soon reached the foot of the hills.

"A climb of 1,500 feet took us to the snow line (February), *i.e.*, 7,500 feet above the sea. Thence for 1,200 feet we climbed up a steep slippery hillside through the snow, and came on the tracks of the márkhór. They led us to the edge of a precipice, and there, far below, we saw them at the water. A man in the ravine frightened them, and we could see them returning. We crouched in the snow out of sight, and after an hour's anxious waiting, some stones rolled on us from a crag above, and, looking up, we saw two márkhór gazing gravely at us. They had passed us, up a face of rock which seemed hardly to afford foothold for a fly. They disappeared at once, but catching sight of another just below me, I fired; the poor beast just turned and fell, and after one or two bounds from rock to rock, went down a sheer 1,000 feet into the stream below, landing with a crash that echoed and re-echoed through the glen like the report of a cannon. I was glad to find afterwards that the horns were not very good, for they were smashed to atoms in the fall.

"Coming back we had some very nasty ground to get over; at one place we came to a deep funnel-shaped cleft in the face of the rocky cliff, which it was necessary to pass, a few slight projections in the perpendicular sides afforded the only footholds, and to get to those we had to lower ourselves for about 5 feet from where the track ended above, and what made it worse was that a projecting rock above barely left room to crouch under while lowering ourselves. However my Shikári went first and, standing straddle-legged across the cleft facing inwards, said "It is all right," and so I followed, letting myself down gradually. He caught one foot and guided it into his waist cloth, where I found a footing, and thence, Sultán Sháh holding my waistbelt as if we were a couple of acrobats, I was able, with his assistance, to sway myself across to a rock I could clutch, and so climb down to safety. Sometimes we came to a precipitous face of rock; weathered strata forming slight ledges at intervals, on which a man might rest his heels; down this face Sultán Sháh would skip like a goat to the first ledge; resting his feet on this and lying back flat against the rock he would tell me to lower myself, also back to the rock, till my feet touched his shoulders; he would then gradually let himself down into a crouching position whence I could remove my feet to the ledge and there find a resting place, while he went down to the next ledge, and the operation was repeated till the foot of the slope was

reached. A little trying at times, but he was a careful man, and I had the greatest confidence in him, for I knew he would never let me attempt anything unless he was sure he could bring me safely through it.

"For about 3,000 to 4,000 feet above Gilgit the hills are very difficult, bare, precipitous, and rocky, but above that elevation climbing is easier. Snow, however, during the four months of our stay at Gilgit, restricted our wanderings to the lower slopes. I remember once stalking some márkhór, which we hoped to reach as they lay down for their noonday siesta; but we came upon a spot from which we could no way advance, nor turn the márkhor's position without betraying our presence, so we had to wait and watch till they were on the move again, a weary two hours. To beguile the time Sultán Sháh brought out of the innermost recesses of his woollen shirt a thick cake made of Indian corn, a portion of which he insisted on my taking, and, hungry as I was, after being six hours on my feet, I thought it delicious. When the márkhór moved on, we followed cautiously, but just as we were getting within range, we came to a precipice, round or over which even Sultán Sháh could not find a way, and after many attempts, while we had the satisfaction of watching our prey getting further and further away, we had to give it up and return home. A disappointment of this sort was not an uncommon one.

"Wild fowl are generally very plentiful at Gilgit, but the winter of 1885–86 was more than usually mild, and we only got a few shots at them. Chikór and pigeons abounded, and afforded a little sport; but there were some ardent sportsmen among the Kashmír garrison, who were always out with some old flintlock, and the birds were somewhat shy, except when we were going after márkhór; they seemed to know instinctively when we were out after big game, and, when we had only our rifles, seldom troubled themselves. A beat was occasionally organised, and we then took up our station, on the fans above Gilgit, and beaters, with dogs and guns, with blank cartridges, would go up to the hills behind and frighten out the chikór, which swept past us in their flight across the river; they are very swift and strong on the wing, and not easily hit by an inexperienced sportsman. The Mehtar of Chitrál had presented Colonel Lockhart with a hawk, with which we sometimes had a little sport, but it was an expensive bird, requiring for its support, as its keeper gravely informed me, nearly half a sheep daily. This we could ill afford, as our meat supply was somewhat limited.

"Another great amusement was polo. The Gilgitis do not, as a rule, play much in winter; but when they found we liked it, Alí Dád frequently got up a game, and we played at least once a week. The average Gilgit polo pony is smaller than that of Chitrál, and there were few above 13 hands, though there was no limit imposed, and it was not unusual to see a 13-3

pony racing with one of 12 hands for the ball. The ground at Gilgit is close to the bungalow. It has been mentioned before that the villages stand on the slopes of alluvial fans, and on these slopes also the polo grounds have to be made. They are generally over 200 yards long, but only 30 to 40 yards wide, partly because a large patch of ground cannot be spared from the comparatively small area capable of being cultivated, but partly also because wide grounds would require a considerable amount of labour in excavating and embanking. They are bounded on both sides by walls of loose stones about three feet high. The goals, some 20 or 30 feet apart, are marked by white stones, half buried in the ground. The surface is sometimes turf, as at Chitrál, but frequently, as at Gákúch, the ground is bare and hard, and is not always kept in very good order; the stones which are displaced from the walls lie on the ground as they fall, and the players seldom think of having them removed. The ball is small and hard, and somewhat heavy, bamboo root being unknown in those parts; as canes are also unknown, the sticks are necessarily short, about 3 feet long, for the ball, being heavy, requires a heavy mallet to drive it, and a long handle of cherry or almond cannot carry a heavy head without soon breaking; the leverage also of a long stick with a heavy head would bring a severe strain on the player's wrist.

"There is no limit to the number of players on each side (though more than six or seven, in our opinion, spoiled the game, which became too crowded) and sometimes even as many as twelve a side have been collected on the little Gilgit ground. Sides having been chosen or drawn for by lot, the players all collect at one end of the ground. Alí Dád used to come for us to the bungalow very often, but otherwise he received us at the near end; and we were conducted in state, as is the custom with people of any importance, to the spot where play was to commence. The game begins by the rájah or head man among them riding away as hard as he can, holding the ball and stick in his right hand, and followed by all the other players; arrived at the centre of the ground, he tosses the ball in the air and strikes it towards the enemy's goal; very often a goal is hit straight off, if not, a struggle ensues for the ball. The walls are used by the players as cushions at billiards, and excellent practice is frequently made in getting a ball past an opponent by striking it against the wall so as to rebound beyond him, where it is again picked up by the player. A goal is not obtained by merely hitting the ball between the stones. The player who hits it, or one on his side, must dismount and pick up the ball before it is hit back again on to the ground by an opponent, or the goal is not counted. This custom leads to a good deal of scrimmaging, and it is not unusual to see a man who has hit a goal so intent on securing it that he at once flings himself off his pony, which takes the opportunity of cantering away, and his owner, though he scores a goal,

has to look on through the next two or three games until his pony is brought back. The goal being secured, one of the winners at once gallops out again with the ball, generally the one who picked it up, and hits off as before. Thus goals are changed at each game, for, by starting afresh from the goal just taken, the winners make it their own. There are no rules as to off-side or against waiting in the adversary's goal. Play generally goes on for a couple of hours with very few, if any, pauses, victory being declared in favour of those who first score nine goals.

"When this is done, the winning players assemble in front of the band, which strikes up a strain of victory, and accompany the music with shouts and cheers, keeping time in the air with exultant flourishes of their sticks. The band, consisting of a few clarionets and kettledrums, is an important and necessary feature at polo. The musicians occupy a place on one of the walls about the centre of the ground, and cheer both men and ponies with their music, now loud in encouragement of the hitter-off at the beginning of a game, or during the final struggle for a goal, or in recognition of the brilliant play of some local favourite: now low as the game seems to flag, or the play calls for no special applause. The band is perfectly impartial in its favours, encouraging or applauding both sides alike. At Gilgit and Astór, and, I think, generally, in that district, on a polo day, the band strikes up about 9 a.m. and plays for a short time, as a notice to the villagers that there is to be polo that day, then at 1 they take up their position on the ground and perform at intervals till play commences at 3. After the game is over the spectators, who have been crowded on the walls, or even crouching beneath them on the ground itself, at the imminent risk of getting hit or ridden over, form a ring, and the band takes up a position immediately opposite the place of honour, which is reserved for the Rájah and his guests. The losing side then, either singly or in groups of two or three, have to dance for the amusement of the conquerors, while, as in Chitrál, tea and biscuits are served to the most honoured among the spectators. The dance is not, however, necessarily confined to the losers; men who can dance at all are seldom averse to showing off their powers, and a call for some well-known performer is generally complied with.

"Polo is played by almost everyone, even the poorest, who have no ponies of their own, exhibiting very creditable skill when they get the loan of an animal. All the boys play hockey from their infancy, as a preliminary training for hand and eye, and they are great adepts at the game. When we took our evening strolls we always saw a number of small boys playing away under the control of, and instructed by, one or two young men, the ground being generally some field which was lying fallow, or from which the crops had been removed. Occasionally we got up matches for them, the

boys from the villages west of the Gilgit polo ground against the boys from the villages east of that ground. They always played with the greatest skill, spirit, and good humour, notwithstanding the frequent whacks they received on their little bare shins. A couple of the Rájah's musicians used to play during the match. Our Khánsámán made a plentiful supply of cake and buns, which, with large kettles of tea, well sugared, were taken to the ground. When the match was over some of the boys danced with much grace, the usual circle of spectators being formed and the winners presented with small money prizes. Then the boys seating themselves on the ground, the cakes were cut up, the tea poured out, and the players were regaled after their hard work; a great many other children also came in for some crumbs. These entertainments were highly appreciated as well by the boys as by their parents, who used to look on with very gratified countenances at their children's enjoyment.

"I was much touched by one incident. There was an old man who was an exceedingly good polo player, to whom I became indebted for much of my knowledge of the game, and one day in the end of February he came to see me; he was quite well then, and I was therefore much shocked three days later to hear of his death, apparently from pneumonia. The day after, a young man came to see me, and announced himself as the old man's son; he said, "My father, when dying, told me to come and see you, and give you his very last and best salaams." His son explained that my interest in the Gilgitis' favourite game had quite won the old man's heart.

"I think it possible the name "polo" comes from these people. One day, at Gilgit, a man rode up to me, saying "Bulu, bulu"; thinking he merely meant that he was going to play, and that his remark was an attempt to say "Polo," I nodded and went on; but he followed, still calling out something about "Bulu." Rájah Ali Dàd then came to my assistance, telling me that "Bulu" means "a polo stick," that the man had smashed his, and wanted to borrow one of my spare ones."



PADSHÁH KHÁN.

KHUSRU KHÁN.

## PART II.

The programme for 1886 submitted by Colonel Lockhart was, briefly, that Wakhán should be gained by way of Hunza, so soon as the season permitted. From Wakhán the mission would then go west into Badakhshán, and enter Káfiristán from that province. The final return to India might, it was suggested, be made through Afghánistán. As a beginning, every effort was made to establish something like friendly relations with Nagar and Hunza, the two so-called Dárd states interposing between Gilgit and the Hindú-Kush range. These are considered elsewhere in their geographical and ethnological aspects. Here it is sufficient to say that whereas Gujál, the upper portion of Hunza, has a population identical in race with that of Wakhán, the lower portion, Kanjút, has one identical with that of Nagar, whilst the rulers of the two states are connected by a common origin and by frequent intermarriage. Jáfir Khán, Tham* (the Burishkí term for ruler) of Nagar, has been a tributary of Kashmír since 1868. His eldest son, Muhammad Khán, married a daughter of Ghazan Khán, Tham of Hunza, quarrelled with his father, fled to Kashmír territory in 1882, and died of small-pox there. This Muhammad Khán's two sons, Khusrú Khán and Pádsháh Khan, aged respectively 13 and 9 years, and his widow were living at Gilgit in 1886, under surveillance. Ghazan Khán of Hunza became tributary to Kashmír in 1869. The two lads above-mentioned were thus the common grandchildren of Jáfir Khán and Ghazan Khán, and were the objects of a considerable amount of intrigue, both Thams claiming them.†

January, February and March passed quietly at Gilgit. The health of the party was good, and all looked forward to what seemed to be a great undertaking in the spring. The winter was a mild one, snow seldom falling in the valley, although it lay on the mountains a few hundred feet above its floor. As spring approached, avalanches began to descend, and in March

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* Pronounced like the English word "thumb"

† Their ultimate fate is given in the following extract from the translation of a letter from Jamadár Muhammad Nawáz Khán to the resident in Kashmír, dated Gilgit, 19th April 1887 :—

"Ten days ago two brothers, Khusrú and Pádsháh, aged 14 and 10 years respectively, the sons of the deceased Rájah Muhammad Khán, son of Rájah Jáfir Khán, ruler of Nagar, and the nephews of Safdar Alí Khán, the present ruler of Hunza, who were in confinement at Gilgit, disappeared during the night by the secret help of the servants of their cousin, and reaching the river where it was fordable, crossed and arrived at Hunza. On account of their living in confinement there for a long time, the Gilgit officials had become careless about them; although there was a guard on the river at the place where it could be crossed. The next morning when the news of their having fled spread about, some horsemen were ordered to go after them in search, but without finding them they returned."

frequent reverberations both by day and night announced their fall, by which many large ravines were filled with snow and debris, destined to be carried into the river on the sun's regaining power. The valley has been for many years denuded of trees. When Gilgit fell into their hands the Kashmír troops wantonly destroyed groves and orchards—at least so say the Gilgitís themselves—and no attempt has since been made to plant anything but a few fruit trees. The miserable inhabitants have no voice in the matter. Their fruit and their stores of firewood, the latter gathered at the cost of great labour, high up in the mountains, are liable to seizure at the will of the Governor or the commander of the garrison: indeed Kashmír sepoys help themselves independently, whilst, in addition, the people have to maintain at the fort a large supply of wood for the troops Colonel Lockhart had been struck, soon after arriving in the country, by this destruction of timber, and the absence of all forethought as regarded planting on the part of those in authority. He had, therefore, asked for Eucalyptus seed to be sent to him from India, and at the same time had asked for potato seed, hoping thereby to give the valleys a rapidly-growing tree for fuel, and a new food staple, from Gilgit up to Chitrál. At last two boxes arrived on the 8th February, but, owing to delay in transit, the potatoes were in great part rotten, whilst the Eucalyptus seed had been carelessly packed in paper parcels and placed amidst the potatoes. The poor result of this was that some few potatoes were produced in summer in the Presidency garden, whilst the Eucalyptus did not germinate. The latter disappointment was a bitter one, as the villagers had been told of the marvellous rapidity of that tree's growth, and had looked forward to having their fuel difficulty solved. Some vegetable and flower seeds were procured from a shop in Calcutta direct. These arrived properly packed, and were distributed with perfect results on a small scale.

The Ashkúman route, which had been thought of as an alterative to that by the Killik into Wakhán, was reconnoitered by a sepoy surveyor and reported blocked by an insurmountable glacier in February. In January a Pathán follower of Colonel Woodthorpe's, by name Shér Zamán, was sent with a letter addressed to Mr. Ney Elias (at Khánábád) by way of Hunza. This letter was only a pretext for learning something about the Killik Pass, Shér Zamán's instructions being to cross the latter and re-enter Chitrál by a western pass, returning to Gilgit with all speed. He carried a letter to Ghazan Khán of Hunza, in which that chief was asked to pass him on towards Afghán territory, the request being backed by a present of whisky, of which the Tham was said to be fond.

Meanwhile the correspondence with neighbouring chiefs went on briskly. Ghazan Khán of Hunza insisted that not only his daughter, but also his two grandsons should be taken up to Hunza—the lads Khusrú Khán and

Pádsháh Khán—and at first would not hear of the mission passing through his country into Wakhán, his utmost concession being that the officers should visit him, have some shooting, and return to Gilgit. The two lads could not be given to him without offending their paternal grandfather, Jáfir Khán of Nagar, and Ghazan Khán was told that they were to remain at Gilgit. Everything else that he asked for was sent to him, and a handsome sum of money and other gifts were provided in exchange for the required permission. Jáfir Khán of Nagar was also conciliated by similar means. The stipulation which appeared to be absolutely essential was that some real hostage should be sent to Gilgit by Hunza, and kept in Kashmír territory. As regarded Nagar, a permanent hostage already existed in the person of Alí Dád, son of Jáfir Khán, Tham of that state, a young man who, through his mother, was titular chief of Gilgit and lived there on a small pension under surveillance.

The Mehtar of Chitrál asked for advice and assistance about his daughter in Darél. She was the widow of Pahlwán of Yásín, and Mulk Amán, a fugitive in that country and the murderer of her husband, had forcibly married her to his own son. The Mehtar now wished to recover her through Colonel Lockhart's intervention, but threatened to invade Darél and Tangír if she were not restored by peaceful means. All overtures were rejected, Mulk Amán declaring, civilly enough, that his quarrel with the Mehtar was one that could not be ended except by the death of one of them. Colonel Lockhart then sent the Mehtar's nephew and representative at Gilgit, Azíz Beg, to the Darél border with a letter to the "Jashtirán" (elders) of that country, in which he urged them to surrender the woman, and promised a reward. He told them that the country from India to Chitrál was now of one mind, and united, and that, as a friend, he advised them to do this, and avoid possible evil consequences to themselves. Azíz Beg carried also a letter from the Mehtar to Mukaddas Amán, his daughter's new husband, which ran as follows:—

"I have no object in killing you, and swear I will not harm you if you bring or send my daughter back to me. If you do not do this, then expect punishment."

Azíz Beg did not like the duty entrusted to him, but carried it out. He crossed the Darél border, and had an interview with Mukaddas Amán, who, however, was quite obdurate. Azíz Beg, according to his own account, had a narrow escape, swords having been drawn on him, and he was dismissed with the warning that, as Amán-ul-Mulk had thrown in his lot with the unbelieving English, he might look out for a "ghaza" (religious war), in which a vast number of Patháns would join, and in which he and his people would be blotted out altogether. This threat was given a feeble effect to in the following June, when Róshan was seized by raiders from Tangír

who were, however, expelled with some loss by Afzal-ul-Mulk. The Mehtar's daughter still remains in the hands of his enemies, whom he has hitherto refrained from attacking. Colonel Lockhart impressed upon him that no conflagration was to be started by him in the independent region bordering on India without English sanction. Perhaps this has deterred him, but more probably he has found himself isolated amongst his Muhammadan neighbours, and has dreaded embroiling himself with them until he shall have secured an ally, or obtained English support. Before leaving Gilgit, Colonel Lockhart sent in a scheme, by which he proposed to establish British influence throughout the Hindú Kush, and at the same time to dominate the Pathán and other tribes lying between that range and the frontier of India. This will be found in the chapter headed "Military Deductions."

The Mehtar continued to send Colonel Lockhart reports of everything that occurred of any importance. In February he sent a letter, in original, from Sardár Abdulla Ján, governor of Badakhshán. The Sardár congratulated him ironically on his alliance with the English, and ended by asking for as many boys between 7 and 8, and girls between 12 and 14, as the money accompanying his letter would pay for. This letter was sent on to the Foreign Secretary as an instance of how a slave trade is carried on with impunity by our allies in one part of the world, whilst British men-of-war are continually engaged in repressing it in another, the traffic in the first case being in people of Aryan race, whilst it is repressed in the second, where mere negroes are concerned. Another bitter reflection was that these Aryan slaves are bought for the gratification of the foulest desires of bestial monsters, whereas the African slaves are employed almost entirely in honest labour. As a case in point, Alí Mardán Sháh, ex Mír of Wakhán, who paid a visit to Gilgit at this time, stated—and his statement was true, so far as inquiries showed—that his real reason for fleeing the country with so many of his subjects was simply owing to the requisitions made on him for boys and girls by the Afghán Governor. He said pathetically to Colonel Lockhart, "I offered him as much of my live-stock as he wanted, but I could not give him my own people."

Absence of orders regarding the programme was, as the time for moving approached, a cause of much anxiety. The period between the commencement of melting on the snowy range and the overflowing of the torrent-beds was a brief one, in which the only really practicable road, the lower one, was open through Hunza to Wakhán. After that brief period the alternative offered itself of a high-level track, traversable only by experienced mountaineers, over which but a scanty amount of baggage could be carried, hardly sufficient for the long journey contemplated on the northern side of the range, and where of course no ponies could be taken.

On the 19th February a cipher telegram, dated 25th January, reached Colonel Lockhart from the Foreign Secretary. It ran—

"Following from Ridgeway. Message begins: Have you any information as to supplies obtainable between Gilgit and Chitrál and Nuksán Pass? Perhaps it would be possible if part of the Mission returns that road to send Rahat Mian Sháh by Dír and Swát to make arrangements. Ends. Following reply sent, begins: I have no information, but Lockhart and party are now at Gilgit, and could arrange. Has Ney Elias communicated with you? He is now, I believe, in Badakhshán. Ends: We have sent Ridgeway by post full account of your proceedings."

On the 22nd February, Colonel Lockhart sent a letter to the Foreign Secretary, in which he said:

"Will you warn Amír that we shall want supplies in Badakhshán and Wakhán. Early in May we, the Hunza party,* will require supplies at Sarhad-i-Wakhán for 4 officers, 36 men and followers, 90 Baltí coolies, and 6 ponies. I'll send a telegram of date and place of entering Amír's territory, and numbers of the balance of our people in a few days."

On the 1st March, Colonel Lockhart telegraphed (through Srínagar) as follows to the Foreign Secretary:—

"My letter of 22nd February. Following party reaches Sarhad-i-Wakhán by Hunza, first May: four officers, 130 escort, followers, coolies, 6 ponies. Following party reaches Zébák, by Chitrál and Dúráh, fifteenth May: 150 escort, followers, coolies, 3 ponies. Please inform Amír of Kábal, so that supplies may meet both parties on his border."

On the same date he wrote to the Foreign Secretary to the effect that, in the absence of orders, he would do his best, and would prepare the way for Boundary Commission detachments returning to India, if only informed of what they required, and finally deprecated being placed under Colonel Ridgeway in any manner.

On the 1st March also Colonel Lockhart sent off an express through Chitrál to Abdulla Ján, Governor of Badakhshán, at Khánábád, and to Mr. Ney Elias at the same place, giving them each the strength of the two parties, and the probable dates of arrival at different stages on the two routes, in the event of the Viceroy and the Amír sanctioning the programme. The Sardár was asked to arrange for supplies in accordance with that programme, and Mr. Ney Elias was asked to see that the Sardár understood exactly what was wanted.

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* The Hunza party was, of course, to carry only bare necessaries, whilst everything not an absolute necessity was to go round by Chitrál, and join the officers in Badakhshán. The escort was to be divided, 10 Sikhs going with the officers through Hunza.

On the 11th March a telegram, dated 7th February, arrived from the Foreign Secretary. It ran—

"I have written to Amír about your proposed journey, and if he has no objection you can start on receipt of telegraphic information from me. Letter follows by next mail."

On the 16th March Colonel Lockhart despatched to Kashmír, thence to be telegraphed to the Foreign Secretary, the following—

"Your message, despatched from Srínagar, 8th February, reached Gilgit 11th March. 5th April is our latest safe date of departure for Hunza by river-road, owing to snow melting. Upper road unfit for ponies or laden coolies. So unless I get orders not to go meanwhile, there is nothing for it but to start as arranged, explaining to Abdulla Ján that we shall not go further than Zébák until Amír's permission reaches us."

On the 18th March Colonel Lockhart received a letter, dated 6th February, from the Foreign Secretary, containing the following passage—

"I have now written to the Amír asking him whether he will help you to go round by the northern slopes of the Hindú-Kush to Káfiristán. Directly I get his answer I will telegraph to you, and you can then start. I hope he will not object. Elias has been well received, and altogether the Afgháns seem to have no objection to our presence in the north-east. You will of course be very careful in Hunza and those parts, also in entering Káfiristán itself. It is, I think, no use your going on to the Hazára country. Ridgeway's people have done a great deal there, but you should get into communication with him, and work out a plan upon information of his views and movements. At present he seems likely to be on the Oxus by the beginning of April. After that I cannot say what he will do. We have not yet received news from England as to the continuation or non-continuation of the work beyond Khójah Sáleh. But you have doubtless done what you could already to get into communication. Don't try to work back by Dír or by Jalálábád unless invited by the Amír. It is not at all safe."

On the 20th March a letter (open) arrived from the Mehtar of Chitrál, addressed to Ghazan Khán, of Hunza, which Amán-ul-Mulk requested Colonel Lockhart to read, and to forward if he approved of it. This enjoined on Ghazan Khán the duty of making most careful provision for the safety and comfort of the English officers. Amán-ul-Mulk, in his letter to Colonel Lockhart, said he was suspicious of Ghazan Khán, and recommended Hunza to be avoided altogether, if possible, and a route through his own territory adopted instead. The feast of Naoróz (the vernal equinox) was now being held at Gilgit and in all surrounding States. For several days nothing went on but feasting, music and dancing, and polo.

On the 30th March, at last—after a very great deal of negotiation—a letter arrived from Ghazan Khán, which left nothing to be desired. A passage was conceded through his country, and he agreed to provide supplies on payment at a fixed rate. His son was to be sent down to Gilgit as a hostage.

On the same day Jáfir Khán, of Nagar, sent an equally satisfactory letter. Next day, the 31st, the following telegram arrived from India. It was from the Foreign Under Secretary, and was dated 3rd March:—

"Am sending you 6,000 rupees. Don't start for Afghán territory till you hear from Durand."

This was in reply to a telegram sent by Colonel Lockhart on the 4th February, through Kashmír:—

"Please wire 6,000 rupees through Kashmír if my programme be approved."

On April 5th a letter arrived from Ghazan Khán, in which he tried to evade the condition agreed to that one of his sons should go to Gilgit as a hostage. Colonel Lockhart treated the vazír who brought the letter with some sharpness, and had him removed from the Residency. He was a much-trusted servant of Ghazan Khán's, and had been frequently to and fro between Gilgit and Hunza in connexion with this matter. Bakhshí Mulráj (who had received a similar letter from Ghazan Khán) now recommended the employment, as go-between, of one Ghulám Haidar, vazír of Gilgit, a notorious scoundrel, but well known in Hunza, and a man whose avarice could be counted on to keep him straight if the bribe offered were sufficiently high. Ghulám Haidar was accordingly sent to Hunza in company with the crestfallen vazír Fazal Khán. He carried a curt letter from Colonel Lockhart, demanding the Tham's eldest son as a hostage. From Bakhshí Mulráj went a strong letter also, and old Bahádur Khán, Rá of Astór, wrote too, as Ghazan Khán's brother-in-law, and said that he himself meant to accompany the officers to Hunza, and demanded courtesy to be shown to them, as they had been kind to him ever since their arrival at Astór in the preceding autumn. News now arrived that Dulla, the Hunza vazír, entirely hostile to any intercourse with the English, had died. His death was a secret, even in his own country, but the source from which the report arrived seemed good. It turned out to be true, and one great obstacle was thus removed.

On April 10th a letter arrived from Ghulám Haidar. He had reached Hunza in a marvellously short time, and the messenger had been equally expeditious. Ghulám Haidar reported, first, that Dulla was really dead; secondly, that Ghazan Khán was very ill with gout and wanted Surgeon

Giles to cure him; lastly, that the Tham's younger son, Muhammad Najíf Khán, was really to start (as hostage) on the 12th, taking with him the sons of the principal men of Hunza. All seemed to be now settled, so far as local arrangements went. A letter arrived from Ghazan Khán apologising for the delays that had occurred, and was suitably replied to. The weather was becoming perceptibly warmer, the streams were swelling, and every day's delay was now a serious consideration.

On April 13th two telegrams were received from the Foreign Secretary, dated 22nd and 24th March. The later one included the earlier, and ran as follows:—

"537 F. Your letter 1st March. I telegraphed to you on 7th February that I had written to Amír regarding your proposed journey, and if he had no objection you could start on getting telegram from me. My telegram appears to have missed you. The Amír has not answered yet, though he has been reminded. I telegraphed to you on the 22nd instant—Begins—Your telegram 1st March just received. Your letter 22nd February, not yet arrived. Have received no reply yet from Amír. Do not start till you hear from me again. See my telegram 7th February. Amír has been reminded; will write to him about supplies. Ends: I repeat this in case it has missed you also. Following telegram just received from Ramsay at Sialkót—begins—Gilgit and Bunjí officials represent hostile gathering, about 7,000 men reported collected Tangír. His Highness has ordered officials to act according to Colonel Lockhart's advice. Governor Kashmír ordered to hold 1,000 men ready, and if necessary send them Gilgit. Ends. Please be careful to avoid any unnecessary action. Very likely it is only the old game again. Mulk Amán trying to stir up trouble for the Mehtar. The less you have to do with it the better. Your letter of 22nd February has arrived just as this is being despatched."

A telegram was also received from the Maharájah of Kashmír, informing Colonel Lockhart that he had ordered Bakhshí Mulráj to be guided entirely by his advice at this crisis.

The last telegram from Gilgit to the Foreign Secretary was sent by special runners to Kashmír. It ran:

"Gilgit, 14th April. Your messages of 22nd and 24th received together. Quite understand we are not to enter Afghan territory until permission reaches, but assume words '*do not start*' apply only to starting for Wakhán. Shall therefore leave this for Hunza on 16th. Country opened to us at last after much obstruction on part of ruler and his advisers. Scarcity of supplies makes any prolonged stay there impossible, and

return to Gilgit will become daily more difficult owing to river rising. Situation rather unpleasant. Can only trust your orders will reach me in Hunza. Tribal gatherings reported in Tangír and elsewhere deserve no attention. Exaggerated reports sent to Kashmír but not by Bakhshí. All seems quiet again. Shall send spare baggage and men to Chitrál as arranged. If Amír objects to Wakhán, &c., then let me go to Káfiristán through Chitrál, and send me orders quickly. Kashmír authorities will send with speed if you ask them."

The runners took also the subjoined telegram to His Highness the Maharajáh of Kashmír from Colonel Lockhart:

"Your Highness' message of 24th ultimo. I shall always be glad to be of service to your Highness, but the news of the gatherings has been exaggerated. Tangír, &c., now seem quiet, and your very able official here, Bakhshí Mulráj, is on the alert, so I hope to leave this for Hunza on the 16th instant."

It was settled that Bakhshí Mulráj should accompany the party to Hunza. No Hindú had ever visited that place, and the desire of gaining reputation doubtless helped him to make the venture, but, in addition to that, he had come to be on very friendly terms with the four English officers, and was really anxious to help them, even at a risk to himself. His presence was felt as a distinct gain, for his qualities of resolution and astuteness were well known, and it was also thought that his position as representative of the Maharájah might command some respect with the treacherous chief of Hunza. The party had thus two staunch and capable friends to rely on, viz., the Bakhshí and Bahádur Khán of Astór, brother-in-law to Ghazan Khán, a most chivalrous old chief, between whom and the Englishmen a very warm friendship had sprung up, and who had always been a welcome guest at the Gilgit Residency.

On the 15th, Colonel Lockhart wrote to Sardár Abdulla Ján, governor of Badakhshán, expressing a hope that he might soon have the pleasure of meeting him, but saying that up to date no orders conveying permission to enter the Amír's territory had reached him from the Indian Government. An extract from Colonel Lockhart's diary of the same date will elucidate the position in which the party stood on the eve of starting on what turned out to be a journey of hardship and danger.

"*Gilgit, 15th April* 1886. * * * Rá of Astór goes with us, also Ghulám-Haidar from Hunza to Killik. Dismissed Hunza *vazír* Taighún, who now goes to meet Muhammad Najíf Khán [Ghazan Khán's son, who was to be hostage]. Wrote to Kót Dafadár [*i.e.*, K. D. Muhammad Nawáz Khán

at Chitrál] ordering him here to take command of party for Chitrál with our heavy things for Badakhsh án or elsewhere, which I shall now halt here, sending their orders by Bakhshí Mulráj, when he leaves us at Hunza to return. Our things go off at daylight to-morrow. We march at noon, being received at the fort by Bakhshí Mulráj and the garrison under arms, and by an artillery salute. We leave this under peculiar conditions. It is doubtful whether I am not guilty of disobedience in starting at all, as the Foreign Department telegram of 24th ult. says, 'Do not start till you hear from me again.' This veto I have, rightly or wrongly, taken to apply only to Afghán territory. If Hunza is meant to be seen, it would not have done to delay, for we should never have had another chance had present arrangements, arrived at with considerable difficulty, been abandoned. The clearing away of our ignorance about the Hunza routes seems well worth some risk and a good deal of trouble. The risk is, in my opinion, next door to nothing, for independently of the son as hostage, Bahádur Khán of Astór will go with us up to the Hindú Kush. Supplies form the main difficulty. The country cannot support us long, and we therefore shall not be able to wait for our orders beyond a certain number of days. By a careful calculation, if orders either to advance or withdraw reach us 19 days from now at Misgar, in Hunza, we shall be all right so far as supplies go. If we don't hear by then we must return to Gilgit the best way we can, leaving behind our ponies and, perhaps, most of our baggage if the river is up, and if the road turns out as bad as described by Biddulph—*i.e.*, the high-level path. Pistols, mirrors, &c., still on the road, but two handsome *choghas* [robes] arrived yesterday, and are a great acquisition to our slender stock of presents. Medicines we want badly. The box which we received yesterday—forwarded through with our post-bag, at the cost of much labour and expense—was from the Stationery Department, and contained two quart bottles of ink for Dr. Giles. Empty, this box weighed 36 lbs. Of course the Kashmír officials did their best, on being told to pick out what appeared to them to be medicines and to despatch express. A dozen quarts could well have come in the chest thought necessary for two bottles, and Dr. Giles says he only wished (in sending his requisition to the Stationery Department) to be supplied with a couple of sixpenny bottles of ink. In afternoon received a letter from Muhammad Najíf Khán (the Hunza hostage), saying he would meet me at Budlas, where Biddulph had been met. Sent a verbal message to say that I expected to be met at Nomal, and should look for him there."

On the 16th the four officers and their escort of 10 Sikhs marched out of Gilgit, crossed the rope-bridge spanning the river (whilst the ponies were swum across higher up), and encamped for the night at Pilchí, 6½ miles

distant, at a height of 5,000 feet above the sea. Camp was pitched in heavy sand, amongst tamarisks, which give their name to the spot. A high wind blew throughout the night. It must here be mentioned that Bakhshí Mulráj had with him an escort of 50 Kashmír Sepoys, which was to return with him from Hunza. On the 17th Nomal was reached, and Muhammad Najíf Khán met the party, together with the sons of several Hunza notables, all on their way to Gilgit as hostages. On the 20th, at Chalt, permission at last reached Colonel Lockhart to carry out his programme. The telegram from the Foreign Secretary had been despatched through Kashmír on April 5th, and ran as follows:—

"Your telegram, 16th March.—Amír has sanctioned your entering Káfiristán *viâ* Wakhán and Badakhshán, and I have asked him to lay down the supplies you asked for. You can, therefore, go on from Hunza. Ridgeway will take or send small party round by Upper Oxus, to survey Afghán north-east frontier, by some route leading into Kashmír. Please make any arrangement you can to help them, and communicate with Ridgeway. Following is list of daily supplies given by him:—15 English maunds wood, 28 maunds grain, 56 maunds bhoosa [chopped straw], 7 maunds atta [flour], 20 seers ghee [clarified butter], 20 seers dáll [vetch]. If these cannot be found, estimate can be reduced by one third as regards bhoosa, grain, and perhaps atta."

With regard to the above, it is to be noted that the *maund* was 80 English pounds and the *seer* two English pounds. The concluding portion of the Foreign Secretary's telegram was in cipher, and ran thus:—

"There is no desire to place you under Ridgeway's orders, but if you meet, and your views differ, it must be understood that the interests of the Boundary Commission are of primary importance. I have not said this to Ridgeway, because he has not suggested, nor do I anticipate difficulty, but it is well you should know the views taken by the Viceroy."

Simultaneously with the above, Colonel Lockhart received a letter from Colonel Ridgeway by way of Badakhshán and Chitrál. This letter was on the subject of supplies in Chitrál territory for Colonel Ridgeway's own party, and suggested that Colonel Lockhart's party should go back to Chitrál by the Baróghal Pass. A reply was sent, pointing out the difficulties attending the passage of any party requiring grain and grass through Chitrál, and warning Colonel Ridgeway that disaster was sure to follow the attempt. The survey work in Wakhán, &c. would, Colonel Lockhart observed, be carried out by Colonel Woodthorpe, so there seemed to be no necessity for the Boundary Commission survey officers operating in the same direction. Colonel Ridgeway was also informed that the Baróghal route to Chitrál was not practicable in summer. The subjoined letter and

diary cover the period between the departure of what was officially known as "the Gilgit Mission" from Gilgit and its departure from Chalt.

"Dated Camp Chalt, the 20th April 1886.

"From Colonel W. S. A. Lockhart, C.B., to H. M. Durand, Esq., C.S.I.

"Many thanks for your telegram and the much longed for permission to go into Káfiristán by Wakhán and Badakhshán. You must excuse a hasty letter, as I have been engaged all day, and write this at night under circumstances of discomfort, for it is pouring outside, and gusts of wind in a small tent play havoc with papers and temper. The diary will show you, together with enclosures, what has happened. We march to morrow morning, and should reach Hunza on 23rd. This rain means heavy snow on the Killik, but we shall overcome that, no doubt. I will send you the Kót-Dafadár's* reports from Hunza. He has done well. Please acknowledge the Khán of Asmár's civility. We *may* want his help some day. By "we" I mean our party; not that that is likely. I don't see how we are to enter Káfiristán if accom anied by any Afgháns. The latter will be forced on me if it is to be done, but no good can come of it. They either won't have us in Káfiristán, or else they will murder the Afgháns out of hand, and then there would be trouble. It's of no use to forebode evil, and I am too much pleased with the permission to take any but the bright side. However, St. John tells me that the Amír says he will send officials with me. I'll choke them off civilly, or by bribery, or else go into Chitrál territory, and enter from there, where one can this time hold one's own in respect of a Chitrálí tail. It must be managed, so there is an end of it; but don't be anxious about my doing anything to commit Government. I know a good deal more now than at starting, and find that one can beat an Asiatic by civil obstinacy, as a rule. Your cipher portion of the message I quite appreciate and understand. All I wanted was an assurance that I should not have my party made over to Ridgeway, to do as he pleased with. Of course, everyone knew that his business was the real one, and that all our little schemes and plans must be subordinated to the aims of his party. I really don't see the good of his trying—or any of his party trying—to strike Kashmír territory. I take it they can't enter any place under Chinese suzerainty, and to the west the roads in summer are barred to any but small parties on foot, by the torrents, except the Dúráh. I have tried to show you that an invasion of people requiring what you telegraph his requirements to be, would quite undo all that has been done in Chitrál—

* The Kót Dafadár had visited Asmár from Chitrál, and had been well received by the Khán. The reports referred to were those made by the Kót Dafadár on Asmár. He managed to make a fairly good survey of the route he had followed.



FORT AT CHALT.

because near the Dúráh there are no supplies, and the country has no coolies to carry them up, at least, supplies might go, but the people would hate it, and rebel, and the Mehtar would protest with all his might. Why don't they go back by Kábal? Believe me, that is the only way. Ridgeway writes to suggest that from Hunza I should go back to Chitrál by the Baróghal, the object being to get us out of his way. But the Baróghal route to Chitrál is out of the question in summer—supposing my mission had accomplished all it had to do after Hunza.

Ridgeway's handwriting is so difficult that I doubt if I have made out his meaning altogether. Proper names are hopeless."

Gilgit-Nagar Diary, from 16th to 20th April 1886.

"16th April, Pilchi, 6½ miles. Elevation 5,000 feet.—Marched at noon. Guard of honour on parade ground by fort. Artillery salute as we crossed rope-bridge. Encamped in sand. A few tamarisks; hence the name. High wind.

"17th April, Nomal, 8¼ miles. Elevation 5,200 feet.—Marched 8, arrived 11 a.m. River rising. Road in places difficult where the upper path had to be followed, ponies going through water. Muhammad Najíf Khán, son of Ghazan Khán of Hunza, arrived in afternoon. Received him with a Kashmírí guard of honour. In evening he returned for a private talk. Told him he is to go to Gilgit to-morrow morning, and said I would arrange with Jáfir Khán of Nagar for his sister to be passed up to Hunza by way of Nagar, and that, if I could not arrange this, then he must bring her round by Ashkúman later in the season. Ghazan Khán urgently calls for Giles to be sent on ahead, as he is suffering much. Said I would send him on from Chalt.

"18th April, Sháhi-wai, 8 miles. Elevation 5,400 feet.—Before starting gave Muhammad Najíf Khán and the sons of chief men, sent in with him as hostages, presents of money. Took another Rs. 2,000 from Bakhshi Mulráj in case we may run short, as the number of people to receive presents at each place is enormous. Rope-bridge a mile from Nomal rather difficult. Road in places bad, but nothing to frighten one yet. Find there is a Chitrálí in camp. He is going to the Chitrálí Vazír now at Hunza arranging a marriage between Amán-ul-Mulk's daughter and one of the sons of Ghazan Khán.

"19th April, Chalt, 5½ miles. Elevation 6,100 feet.—Quarter of a mile from last camp crossed river by rope-bridge—ponies ridden through by

Gilgitís. Awful precipices, but road still follows low level, except here and there, where ponies had to take to water, and men had to climb staircases corniced on the face of the cliff. Met out of Chalt some way by Babar Khán and Sikandar Khán, sons of Jáfir Khán. The latter excused himself as he could not travel on horseback without pain. Received Jáfir Khán at 1 p.m., with a mixed guard of honour composed of our small escort and the Bakhshí's Kashmír guard. The Chief is a stout man of middle height, 60 or so, flushed face (looks as if he drank), dyed beard, bad on his legs. After tea, &c. had been served, we all left the tent and Giles examined him. He thinks he has a paralytic affection brought on by over sexual indulgence. The Tham prescribed for, Giles started with a Hunza guide and some trustworthy people on his ride by double stages to Hunza. He will have a rough time of it. In evening came post from Chitrál. Satisfactory in every way.

"20th April.—Post in morning from India and from Badakhshán. Telegram (*Srínagar, 5th instant*) from Foreign Secretary, saying we may go to Káfiristán by way of Wakhán and Badakhshán. We are all glad. I am told to make arrangements for Ridgeway's party, *i.e.*, to help them, but I can't make out their route. They can't get down to Kashmír territory by any pass in the Hunza-Chitrál frontier further east than the Dúráh when once the rivers have risen. The Baróghal only leads to Chitrál or to the Darkót. The summer route on this line is very difficult. Supplies all but *nil*, coolie carriage alone possible. Wrote to Ridgeway in reply to a letter from him that arrived same time as post (dated Chárshamba, 4th March), and told him all this. His only way is by the Dúráh, if he must send any of his party down through Chitrál, but nothing but coolie carriage should accompany him, as there is no grain or *bhoosa* up there. The Mehtar's people will leave their country if he puts great pressure on them, and then the horses will still not be fed. Have offered to give him 100 Baltí coolies in Badakhshán in exchange for 50 pack animals, but God knows when my letter will reach him. Our total baggage train, when united in Badakhshán, will be 200 Baltís. Received Jáfir Khán privately at 10 a.m. and discussed subject of his son's widow and her son going up to Hunza to arrange for the latter's marriage with his cousin. Jáfir Khán said the late Muhammad Khán had been a rebellious son, and that he had cast him off. Said he did not care about his grandsons, but that he objected to their going to Hunza to his enemy. He at last yielded, but not cordially. The widow, he said, might pass up and down without molestation—her son might, instead of marrying a daughter of Safdar Alí Khán of Hunza, take a daughter of his son, Uzar Khán, but he really did not care. I might take her and her two sons at Gilgit, and do what I pleased with them. Still, if young Khusrú Khán went to Hunza with his mother,

he would never be allowed to go back, and his (J. K.'s) enemies would laugh at him."

On the 21st old Jáfir Khán accompanied the officers for a mile, and had much difficulty in getting over the ground when it was necessary to dismount. Mayún, 6¾ miles (in Hunza territory), was the first stage from Chalt. The road to it was bad. Shortly after leaving Chalt the Budlas stream was forded, and after that the Hunza river had to be crossed and re-crossed. The stream was swollen and rapid, and it was clear that very shortly the river route would become impassable. A good deal of labour was necessary to carry the baggage across, but there were no mishaps. Mayún stands on a strip of land, with precipitous banks, between the Mayún stream and the Hunza river, and immediately opposite Nilt, a fort in Nagar territory. The people of Hunza consider Mayún as their first strong position of defence towards Gilgit. Camp was pitched close to the fort and village, and here began the first difficulty about supplies, which was smoothed over by Bahádur Khán of Astór. Some distance out of Mayún the party was met by a son of the deceased vazír Dulla with 100 armed men.

On the 22nd Hiní (7,000 feet) was reached. The distance was only 6¾ miles. Colonel Lockhart made the following entry in his diary about this march.

"Marched at 9.30; delayed by tents being wet from heavy rain in early morning; in at 12.30. Road awful in places; rocky staircases and narrow paths over long bits of shale that kept sliding down from above as we disturbed it below. The opposite (Nagar) side is much more fertile. The cultivated ground, terraced from the foot of the mountains to the river, is in broader and longer strips than on this bank. Met a mile from Hiní by a son of Ghazan Khán, Muhammad Nafís Khán, civil, but not a prepossessing young man; speaks Persian. Encamped at Hiní on the village archery ground, a narrow strip that takes our party in well, on the edge of the high and precipitous river bank, with terraced fields behind us. Large fortified village on the edge of the bank. Opposite, on the Nagar side, are the mouths of two wide ravines separated by a spur half a mile across, each of which is choked by a monster glacier of great age. If either of those glaciers ever comes down, the river will be dammed, and there will be fearful havoc made when it bursts its barrier. Fruit trees coming into blossom and poplars into leaf, but everything behind hand in comparison with Chalt. Supplies in plenty to-day, but it is a fearfully poor country. When Hunza and Nagar are at peace, which they rarely are, the latter is the former's grain market. Now

nothing comes from Nagar, as the rulers are virtually at war, although no active operations go on. On arrival got a post from India, the quickest yet. Foreign Secretary (letter dated 2nd) says that owing to the *military* authorities being opposed to the occupation of Gilgit, no scheme for that is to be entertained, and that accordingly our relations with Chitrál must remain unchanged. Got a note also from Giles. He reports well of Hunza and the Tham. This latter tried the physic given him on one of his servants, and only took an under-dose himself, otherwise he might have been better now. He confessed his suspicions to Giles afterwards. Giles says he is suffering from high vascular tension, heart and probably kidneys affected. Leg swellings merely dropsy, symptomatic of above general condition. Nothing can be more civil than Giles' treatment at Hunza, which is good. Avalanches always falling."

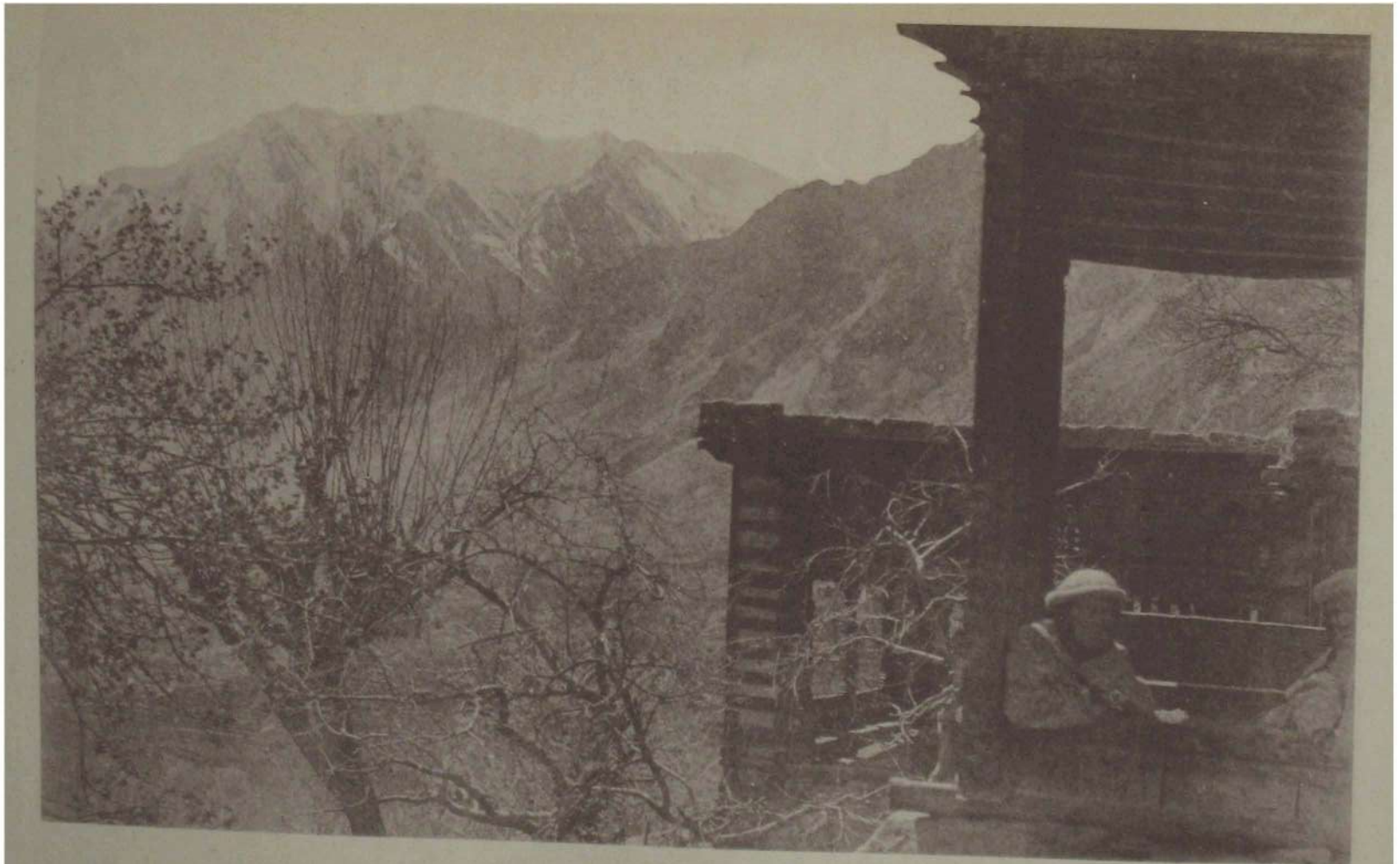
On the 23rd Aliábád (8 miles) was reached. Colonel Lockhart says in his diary—

"Heavy rain all night. Tents wet, so started late—12 noon—arriving at 6 p.m. Road bad; ponies had to be led a great part of the way; rocky staircases, narrow passes, and loose shale, &c. Met some miles out by Safdar Alí Khán (eldest son and heir of Hunza.) S. A. K. is a bloated-looking young man, of perhaps 30, but seems good-natured. With him came two younger brothers, one about 11, the other 8 years old. The elder of these is of distinct Mongolian type (his mother is a daughter of the Sarikul chief, and it is said that this lad will succeed his grandfather as ruler of that State); the younger is a fresh rosy child, showing no Mongolian trace. Another dispute about supplies to-day. Camp pitched on a bleak plain."

On the 24th the party arrived at Hunza. The events of that day and of the following one are concisely described in the annexed diary letter, but, to rightly understand what occurred, it is necessary in the first place to be acquainted with the Chaprót Chalt question, on which everything now turned.

Originally an appanage of the Gilgit chiefs, Chaprót is a district which, from its position, has long been a bone of contention between Hunza and Nagar. The villages of Chaprót and Chalt, closely adjoining one another, are held in *jágír* by Bubar Khán, a younger son of Nagar, whilst Chaprót fort is garrisoned by a small Kashmír infantry detachment, the Maharájah thus dominating the debateable land between two tributaries, whose allegiance hitherto has been nearly nominal.

The ascendancy guaranteed to Nagar by the recognition of Bubar Khán as holder of the lands of Chaprót and Chalt, has been the cause of continual



MUSJID, HUNZA.

soreness to Hunza. The people of the latter State loudly proclaim that, if left to fight the matter out, they would soon settle the question now for good and all, and expel their Nagar rivals; but with a fort, which they consider impregnable, commanding the approaches, and held by the troops of their suzerain, they are impotent. Were Chaprót and Chalt in Hunza hands, there would be no security from raids on the outlying villages of Gilgit, whilst Nagar would be cut off from that place at the will of the Hunza Tham.

Hunza, the 24th April 1886.

From Colonel W. S. A. Lockhart, C.B., to H. M. Durand, Esq., C.S.I.

"We arrived here to-day, and I hope before closing this to tell you that we are off to Wakhán, but there is a hitch, which I will tell you of presently. Your letter of the 2nd instant reached me on the 22nd at Hiní, and was very welcome. I'll adopt the letter form as you wish it. I am very sorry that the occupation of Gilgit is thought so undesirable by the military authorities, and hope that the change in their views some years hence may not arrive too late. I have great hopes, however, that when all our travels are over, and our reports before Sir Frederick Roberts,* he may form another opinion. My scheme—imperfect as it was—did not draw a man from the Indian army; was economical, and would have been most popular all over the Hindú Kush region, but it does not become me of course to say anything more on the subject now—however strongly I may feel that it is one of vital importance to us, and that time will justify the conclusions very deliberately arrived at by myself, after studying the question in all its bearings on the spot. We left Chalt on the 21st, and made on that day Mayún; on the 22nd Hiní; yesterday Alíábád. The roads are execrable, the precipices tremendous, and even now, at low water, the river is crossed (*has* to be crossed) several times, with difficulty on foot, owing to the strength of the current. This route is of no importance, and may be disregarded as in any way a weak point. The case lies in a nutshell. When the Killik (now deep in snow) becomes practicable for the passage of troops, the river is swollen, and the road absolutely barred for any but the most daring cragsmen. When the river-road is fit for traffic in winter and spring, the Killik 'is unfit for anything but the passage of birds,' as Ghazan Khán wrote to me at Gilgit. We have just got here in time, the Killik being reported still deep in snow, whilst the river is

* Sir Frederick Roberts had never himself disapproved; it is understood, indeed, that his Excellency did approve of the occupation of Gilgit generally, although of course Colonel Lockhart's scheme for that occupation may not have been accepted.

beginning to rise. Of course an army could blast a way for itself with time and immense labour, from the north, but the country could not give any supplies whatsoever—even our small party is a difficulty. The Killik is the best pass on the Hunza frontier, so all others may be left out of our consideration. The road we have come by is nearly the worst in our experience in this trip. Narrow paths on the faces of huge cliffs, corkscrew staircases in the rock, or else a track for miles along the steep, shingly mountain side, everything on the slide, one's passage disturbing the mass and bringing down quantities of *débris* from above. Had no accident to man, horse, or baggage, but only good hill-ponies could have done the journey—and even with them some bits looked as if our beasts could never be led across them in safety. Of course *laden baggage-ponies* are altogether out of the question, but a Baltí coolie will go anywhere. The Hunza bank is much wilder and more barren than the opposite, or Nagar one. On the latter, the strips of cultivated land between the mountain-foot and the river are broader, longer, and of more frequent occurrence than on this bank. Nagar seems, indeed, very fertile, every bit of ground not absolute precipice, being tilled; fruit-trees now in blossom everywhere. The river-bank on the Nagar side is, however, very apparently, being slowly eaten away by the river. At Hiní our camp was on the village archery ground, and opposite us, on the Nagar bank, two great ravines run down, separated at their mouths by only half a mile of narrow ground; each of these ravines is filled with an enormous glacier, (who can say how old?) either one of which, when it reaches the river, as it must do in some future year or century, will completely dam the stream up. The scenery along our route has been grand—enormous snowy peaks and ridges, beside which Mont Blanc would be a hill, quite close to our line of march; and the view from Hunza itself cannot, I think, be beaten in the world. A straight 9 miles or so of valley, with snow on all sides—near and distant—width 4 or 5 miles from mountain base to mountain base, and here both Nagar and Hunza sides are terraced with green fields, and pink and white with blossom. What strikes one in all this country is the very careful husbandry, every scrap of fairly level ground being tilled, and the stone walls and terracing show much labour. There is nothing slovenly or untidy about the fields—they would do credit to any European country. The people are a good-looking Aryan type*—level, middlesized men, no very tall or very small folk—5 feet 6 inches I should say the average—well built, wiry frames, light complexions, blue

* With occasional specimens of very marked Mongolian.



GHAZAN KHÁN

(KHAN OF HUNZA).



WAZIRS OF HUNZA AND ATTENDANTS.

eyes and red or brown hair, frequently well dressed, (like all the races in this quarter) in *chógha*, drawers, knitted stockings, boots of soft leather, and rolled woollen cap. Friendly enough, and much interested in us. There are apparently very few ponies, not many cattle, but a fair number of fine goats and small sheep. The diet of the people is said to be dried fruit for six months in the year. It seems to agree with them. Grain they used to buy in Nagar, but for some years there has been no communication between the two States, as the rulers have a feud. Giles gives a very favourable account of Ghazan Khán and the people about him. They have been very civil, and he, in return, has done the chief a great deal of good, although he discovered that the first medicine sent was administered to a servant to make certain that Giles had no evil designs. We marched this morning from Alíábád in uniform, and on arrival went straight up to the castle, as I may call it, standing on a rocky knob at the end of a spur overlooking the valley, with houses clustered below on the steep sides. Here, after passing through outer and inner gates—both guarded—we gained the chief's own apartments up two flights of ricketty steps. Ghazan Khán is perhaps 60, fat, blackish, ugly, but with rather a merry eye. He was dressed in a common *chógha* &c., was supported by servants, and after greeting us was put back on his couch, a raised platform covered with blankets and sheepskins. He was very civil, apologised for not having been able to meet us himself, said Giles had done him a lot of good, &c. Arranged to go and see him on business to-morrow at about noon, and that Woolthorpe should take his likeness in the morning. Our camp is pitched in an apricot grove a quarter of a mile from the fort. On returning to our tents, two days' supplies were sent to us as a *ziyáfat* by Ghazan Khán; after this we are to pay, as we have been doing since we reached his country. Bakhshí Muiráj now comes to my tent rather agitated. He says that Fazal Khán, the Vazír, has just been to him "with a changed countenance" to say that his master is going to refuse to have anything to say to us unless I promise to hand him over Chaprót, including, of course, Chalt, to-morrow. This is rather a facer. The Bakhshí would fain have me give the promise and secure his own retreat and our advance, but I have told him I can do nothing of the sort. 'Whatever you do,' he says, 'don't say you have no voice in the matter, and don't leave him without hope.'

Shall think out a plan to-night."

"25th April.—Barrow, the Bakhshí and I went up to the fort at noon and had a long interview with Ghazan Khán. Result completely unsuccessful. He was civil enough, but held out about Chaprót. 'Give me Chaprót' was

the burden of his song, 'and my people shall carry you through the Killik snow as if you were women, but refuse and I don't let you pass.' I said I would give him a letter to the Maharájah, but he said, 'No letters, send an official now with one of my sons and make over the place to him.' He added that nothing had come of Biddulph's promises, and that, now that he had two officers of rank like Bakhshí Mulráj and myself here, he meant to make his own terms. Bad look out for the Killik, and to-day is very hot and our retreat is becoming more difficult every hour. Shall see if bribery will be of any use. Dádú, the late Dulla's son, seems to be our enemy. He ordered his son (G. K. did), at the close of the long and weary interview, to go to the head of the wooden steps leading up to the room, and to ask the crowd of followers below what they thought of the matter. Two questions received in reply two loud shouts—the first I was told meant that they would carry us 'like glass' over the Killik, provided Chaprót were given back to their master, but the second meant that they would not let us pass if Chaprót were withheld. The old man was, as I have said, very civil, but he ended by saying that he was the subject of the 'King of China' and could acknowledge no other masters. The business about his daughter was completely thrust into the background, and those were the only terms he offered or would accept. Rá of Astór urged him to consent, Ghulám Haidar did his best, and the Bakhshí made a dignified speech in Persian, and afterwards in Hindústání, translated by Ghulám Haidar into the Hunza tongue, but it was of no use, and we went away disappointed. As I passed out of the room a tall man, whom I don't know, whispered 'Don't mind, it will be all right,' but I doubt it. Must settle one way or the other to-morrow. If we go back, shall try to cross here by the village of Haidarábád to Nagar, and go back to Chalt by the left bank. Must then make for the Amír's territory through the Mehtar's. It is a great grief this collapse of all our fine plans. Shall leave this till to-morrow morning, when perhaps there may be some change for the better. By the way Salím Khán, one of the Tham's younger sons, is by a daughter of the Saríkul Khán, and it is said here that he will succeed his grandfather as ruler of that State. The Bakhshí says he will give out in Gilgit and elsewhere that we have been recalled by our own Government. I don't think this lie will do us much good, but of course I can say I was ordered not to press the matter.

"25th, night.—My dear Durand. I found we were between the devil and the deep sea, and had to wriggle out of the difficulty as per enclosed copy of a letter to the Maharájah, which explains all. I don't think I have sinned. If abandoning the Killik trip would have served us, I was quite prepared to abandon it, but the Bakhshí was told that we should not be allowed to go

back until the old gentleman's request had been complied with, and I could not afford to risk a scuffle here, or to be cooped up and let you in for an expedition. We march to Altit to-morrow close by, and I hope shall make Wakhán without further hitch, and find supplies there. The fact of a son and daughter of his own, and the sons of all his chief men being in Gilgit, does not seem to have weight with Ghazan Khán. There is one ruffian at the bottom of it all—Rajab by name—who was our first Hunza visitor last year, and who constantly goes between Gilgit and Hunza. I have told the Bakhshí to seize the first opportunity of twisting his tail for him when he gets him into Gilgit again, and he has promised with great fervour that the twisting shall take place, and that I shall be duly informed of the method employed. After settling matters this evening, sent up Ghazan Khán's presents to him. The Sikh Havildár who went up brought back the Tham's hearty thanks and assurance of friendship for ever! Good night.

"26th April.—I must finish this sharp as there is a lot to do before starting to-day, presents to give, rates of supplies to fix, Ghazan Khán to be called on. You will quite understand that Chaprót is and will be held by the Maharájah's troops, and that the method by which we are now enabled to advance entails only the withdrawal of Jáfir Khán's people from Chalt, and the payment to him of a sum of money in compensation for his temporary loss of *prestige*. No one will ever want to come up this way again, and we (if successful) shall have got through Hunza, and disappointed many predictions to the contrary. Our return was to be avoided, if possible, for reputation's sake. I have said there must be no force used with Jáfir Khán. The presence of Kashmír troops will prevent his refusing, and the money will I trust comfort him. Splendid morning—not a cloud. When the sun has been out for some hours avalanches come tumbling down all round us—the noise resembling distant artillery or the passage of a heavy train.

"P.S.—Bakhshí Mulráj is the *first Hindú* who has yet visited Hunza; the Kashmír officials sent here are always Mussulmáns. I can't speak too highly of Bakhshí Mulráj. He has great tact, readiness, and resolution.

"I hope we are really off now."

Dated Hunza, the 25th April 1886.

From Colonel W. S. A. Lockhart, C.B., to His Highness the Maharájah Partáb Singh of Kashmír.

"I arrived here yesterday on my way to Wakhán by the Killik pass, and found that Rájah Ghazan Khán would not let my party go further. To-day I saw him, in company with Bakhshí Mulráj, and it seems pretty certain that he means to detain us all until he can get some hope of gaining his

heart's desire by the ejection of Jáfir Khán from Chaprót and its restoration to himself.

"The position is a very delicate one, and I have, after much reflection, taken it upon myself to authorise Bakhshí Mulráj to get Jáfir Khán to leave the place until Your Highness' orders shall reach Gilgit, by which time my party should have reached Wakhán. I have, moreover, promised to lay before Your Highness, Ghazan Khán's earnest petition for the permanent restoration of Chaprót to himself.

"Bakhshí Mulráj will explain matters fully when he reaches Chaprót. Meanwhile the party under my command starts to-morrow for the Killik pass, and on the following day Bakhshí Mulráj will commence his return march.

"I am sending back Ghulám Haidar with Bakhshí Mulráj, and have authorised the latter to pay Rájah Jáfir Khán what sum of money he may think sufficient (probably 500 or 600 rupees) to compensate him for leaving the place entirely to Your Highness' servants in the meantime.

"Rájah Bahádur Khán, of Astór, is to accompany my party to the Wakhán border."

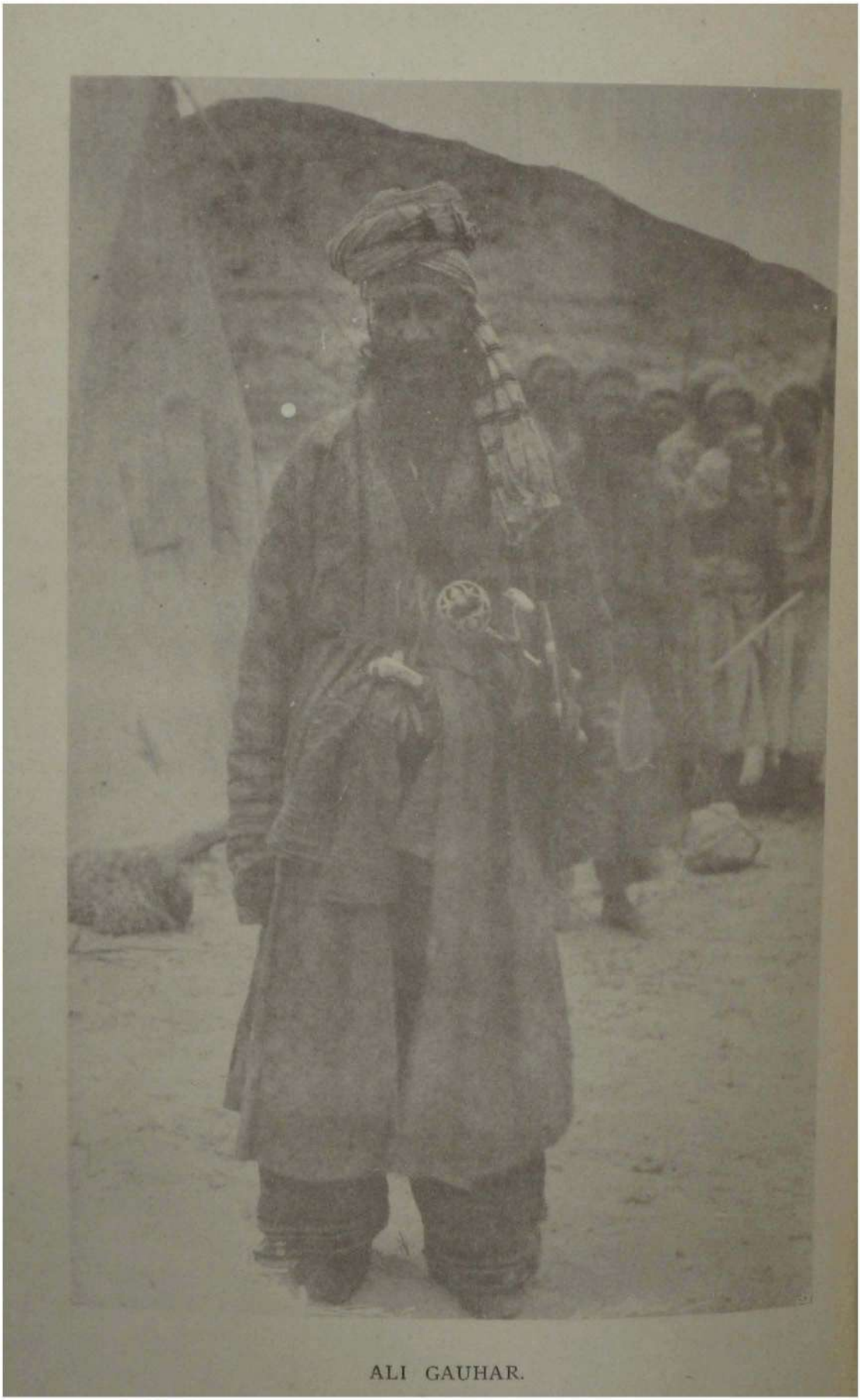
Colonel Lockhart's last diary entry at Hunza, on the 25th, ran:—

"We came here with what seemed sufficient hostages, in all conscience, but everyone says Ghazan Khán will disregard hostages. I don't think I could do anything else than what I am doing. We could give a good account of the people here, with the Kashmír troops and our own handful, and the ground serves well for getting to the river; but some casualties would be inevitable, and we might lose our baggage, and the whole thing would be bad."

On the 26th the party reached Altit, only 1¼ mile from Hunza. Before leaving camp a great deal had to be done. Presents were given to all the chief people, including Ghazan Khán's sons, early in the forenoon. Then rates to be paid for supplies on the onward journey had to be fixed, and confirmed by Ghazan Khán's seal. At 2 p.m. the four officers went up to the fort to bid farewell to their remarkable host. On Colonel Lockhart's suggesting to Bahádur Khán, of Astór, that Colonel Woodthorpe and Captain Barrow should remain below with the escort, in case of treachery, the old man said "You must now trust entirely or not at all. You must all go." The meeting was short and friendly, Ghazan Khán only once or twice using his favourite gesture of defiance, viz., crooking his right forefinger into his left thumb, drawing the latter slowly up to his right ear, as if it were a bowstring, and then releasing it with a jerk towards the



ALTIT FORT.



ALI GAUHAR.

person addressed. He asked that Surgeon Giles might be left behind for four days, but that request was refused, as being absolutely out of the question, and was not pressed. Camp at Altit was on a splendid polo-ground between two rows of tall poplars. Bahádur Khán, of Astór, was to return to Hunza, and remain as a hostage until Jáfir Khán's people should have cleared out of the debateable land. Ghazan Khán would not hear of his going up to the passes, but appointed a man, by name Alí Gauhar, chief of Ghulkin, to accompany the officers instead. Alí Gauhar was a fine handsome blue-eyed and brown-bearded Gujálí of about 40, who spoke Persian well. He was always in the highest of spirits, quoting proverbs and making jokes, and, when a difficulty arose with the people of the country, his whip generally solved it—used not brutally, but with a genial jocularity that deprived it of its sting. If a Baltí had trouble with his load up some precipitous path, or if a pony refused to be led along some rocky ledge, Alí Gauhur was sure to be on the spot to help, and, when not engaged on such work, he would relate stories about his country and his forefathers, or else, with head thrown back and feet thrust forward in his broad stirrups, would sing a discordant song.

Bahádur Khán, at parting, said he praised God that evil had not come of the farewell visit to Ghazan Khán, and that he had been very anxious until he saw the last of the four officers emerge from the lower gateway of his brother-in-law's fort. The fine old chief expressed great regret that he was not allowed to go on to the Wakhán border, but said that Alí Gauhar was a man to be absolutely trusted.

On the 27th a fairly early start was made, and the party reached Muhammadábád, a large village three miles from Altit, which was indicated as the camping-ground where supplies for the night were waiting. This seemed absurd, so the supplies were bought and carried on 4½ miles further to a point just below the village of Áta-ábád, where camp was pitched in the Hunza river-bed, at the base of a cliff. The adventures of the day will be found further on in Colonel Lockhart's letter to the Foreign Secretary from Pasú, dated 30th April. On this march the party was joined by Ghazan Khán's son, Muhammad Nafís Khán, who was to be given a *rází-náma* (quittance) by Colonel Lockhart on the Killik crest, on receipt of which, at Gilgit, Bakhshí Mulráj was to release the hostages detained there. Bakhshí Mulráj had said good-bye just out of Hunza (Ghazan Khán insisting on all Kashmír officials returning at once to Gilgit), but a letter arrived from him, at night, at the camp below Áta ábád. The bearer was a scared-looking Chitrálí, a servant of Afzal-ul-Mulk, who had reached Hunza with a letter of greeting from his master to Colonel Lockhart. Ábad Sháb, the bearer, was, the letter

said, to go with the English officers to Wakhán, and thence to make his way round to Mastúj with the news of their progress. The verbal message (there is a verbal message in that region with every letter) said:—"Take care. You are in the hands of the most treacherous people in the whole world." The height of Áta-ábád was found to be 7,650 feet above sea.

On the 28th Gilmit, or Gulmit, 8,200 feet, was reached; distance 9 miles Extract from Colonel Lockhart's diary:—

"The wildest scenery in the world *en route*. Great bare precipices, thousands of feet high, on every side. Had to cross and re-cross the river—pretty deep and strong at one crossing. Rode all the way—or nearly so—our Baltís keeping the right bank, and coming by a rocky path, reported by the escort as the worst we have yet had, *i.e.*, the most dangerous. Gulmit is the first village in Gujál, that is, here the population is Wakhí, whilst below Gulmit it is Kanjútí."

On the 29th the party arrived at Ghulkin, 8,000 feet, 1½ mile.—This very short march was made because news arrived that snow still lay deep on the Killik. Every little delay caused anxiety. It was always possible that Jáfir Khán of Nagar might betray the Chaprót *ruse*, and that a hot pursuit from Hunza might follow, until the Killik should be crossed.

On the 30th Pasú, 8 miles (8,200 feet) was reached.—Two miles from Ghulkin a difficult stream was crossed, which issued from a huge glacier. A letter was despatched to Bakhshí Mulráj, through Hunza, in which the following letter was enclosed:

Dated Camp Pasú, the 30th April 1886.

From Colonel W. S. A. Lockhart, to H. M. Durand, Esq., C.S.I.

"Since my letter of the 26th from Altit we have marched, Áta-ábád 27th, Gulmit 28th, Ghulkin 29th, and here to-day. Getting on well, but the marches are too short, and I shan't feel happy until we get on the Wakhán side. Am told it is no use going faster, as snow on Killik is still too deep for coolies, and we should only have to wait in the desert. We are buying as much as we can get in the way of supplies, and hope to have everybody loaded up when we get to the uninhabited region. Ghazan Khán's list of prices excluded sheep, and the result is that they ask us Rs. 10 for a beast not worth R. 1, and I am afraid of running short of money, as we brought not an excessive amount with this eastern party, and it is little enough, even with what I took *en route* from Bakhshí Mulráj, now. Every day there are a dozen men to receive presents, foster brothers of some of the chief's family,

cousins, headmen, &c. Our programme is, to-morrow, 1st May, Khaibar, 2nd, Murkhún, 3rd, Ghircha, 4th, Misgar, 3 marches in desert to foot of pass, then 3 to Bozai Gumbaz on the other side, then 3 to Sarhad. That is to say, we should reach Sarhad-i-Wakhán on the 13th May, having carried our supplies for 8 or 9 marches. We shall probably be on half rations for a day or two. Once we are clear of habitations we shall be all right, and can account for any number of Ghazan Khán's men, should he, owing to treachery on the part of Ghulám Haidar, try to have us cut off after we have parted with his son Muhammad Nafís. The latter is a pleasant young man, and more intelligent than the others of his brethren whom we met at Hunza.

"It was first suggested that we should send coolies by the Yurshád, and our riding ponies by Killik, but that is abandoned. It would have entailed dividing our party, both officers and men. The Yurshád is very direct, but it is horribly dangerous, and we should have had to march through it at night (there would be no moon) to avoid avalanches that fall all day. Our first march from Altit to Áta-ábád was bad, as the hill side at half way suddenly gave way, and down came a tremendous stream of melted snow, black mud, and rocks, and this went on in regular pulsations for hours, with slight intervals. Our baggage had all crossed fortunately before the outbreak, really a melted avalanche, but we had stopped to buy supplies at a village. We got our ponies across with great difficulty; half an hour later it would have been impossible until night had fallen and stopped the rush. We had, between the river and the mountain, a fan of some 400 yards of running black mud to get over, and we did it over our knees, struggling like flies in treacle, but the fan had in it two deep channels, 20 feet or so across, which formed the difficulty. The whole fan was on the move, but in the channels were carried immense blocks of rock, slowly revolving, and that was the danger. Nearly lost a Baltí, who fell in crossing a channel, but was pulled out. That night we pitched on a sandy strip at the foot of a precipice. As it got dark a scared-looking Chitrálí came in. He had done the distance from Drasan in 11 days, and was tucked up. We knew him in Chitrál, and he is a servant of Afzal's, who had sent him with a letter of greeting and a verbal message. The latter was to the effect that we were in the hands of the most faithless people in the world, and this man is sent to perhaps help us. He is a sharp enough little man, and is looking less alarmed now. He tells me, but it is perhaps a lie, that Ghulám Haidar had advised Ghazan Khán to have us murdered on the Killik, but that the Chitrál Vakíl at Hunza had said that the Mehtar would be certain to attack him if he did. Ghulám Haidar may have made the suggestion as a mere preliminary to conceal his hand before suggesting the arrangement by

which Jáfir Khán's people were to clear out of the Chaprót side of the river, and I was to write the letter I did to the Maharájah. I fancy that suggestion was concocted by him, the Bakhshí of course approving. We are, since reaching Gulmit, in 'Little Gujál,' Wakhán being known as 'Great Gujál,' and the people are of Wakhí race, and a great improvement on the Kanjútís. Kanjút is Hunza below Gulmit, but Afgháns and other foreigners call the whole country Kanjút. At Gulmit was the mother of Alí Mardán Sháh (Ex-Mír of Wakhán). She sent a message to say she knew we had been kind to her son, and that Woodthorpe had painted his portrait. Said she was in great distress for money. Would like a little help, and would like to see the picture. Sent her Woodthorpe's book, and she was delighted, and sent warm thanks for Rs. 100. The headman of Ghulkin, Alí Gauhar by name, is to accompany us to Sarhad. He came all the way from Hunza, and seems trusty. Old Bahádur Khán, of Astór, whom Ghazan Khán has kept at Hunza, told me to trust him, that he knew him, and that he was a thoroughly good man, and a Gujálí. Bahádur Khán said he was very anxious about us when we went up to Hunza fort to say good-bye to our invalid host, Ghazan Khán, as he feared there might be treachery intended on the part of his brother-in-law. Alí Gauhar gives me a good deal of information. Ghazan Khán, he says, sends an 'elchi' every year to Yárkand with a nominal tribute, who brings back valuable presents for G. K. Every three or four years an official comes to Hunza from Yárkand. G. K., he says, has written to the latter place to explain that he has let a British party pass through his country in consideration of a grant of land made to him by our Government.

"Trying to buy a flock of sheep at a decent figure, also to get felt socks and goat-skin boots for the coolies, but the people are trying to make 1,000 per cent. out of everything not priced by Ghazan Khán. To give you an idea of the scale the mountains are on here, our yesterday's camp was at the foot of a 'hill,' the crest of which was 4¼ miles distant, and 11,000 feet higher than we were, and our elevation was 8,500. Here we are encamped below a splendid glacier, which Giles has photographed. I hope you are not anxious about us. We can take care of ourselves. Four Englishmen and 10 excellent Sikhs, well-armed, and always on the look-out, are hardly the kind of prey for a cowardly Kanjúti. Getting dark, and a high wind rising, so I'll finish this. I doubt if you'll ever get it, as old G. K. may open the cover Ghazan Khán writes daily, and in terms of the greatest respect, begging me to pardon anything disagreeable in his barbarous country!"

1st May, Khaibar, 10¼ miles, 8,700 feet.—A miserable hamlet, but some supplies forthcoming. Colonel Lockhart sent the following letter for the

Foreign Secretary, to be forwarded by Bakhshí Mulráj. It was taken back by a messenger from Ghazan Khán.

"Camp, Khaibar, 1st May 1886.

"To-day we marched 10 miles from Pasú, horses having to ford several times this stream, and once the Shimshál, baggage crossing a troublesome glacier a mile across. We are doing well, the sky is clear and the prospects of the Killik being fit to pass, getting bright. Difficult road. People very civil. We have now enough flour, and hope to get our sheep. Letter from Ghazan Khán, asking me to get Bakhshí Mulráj to let his son, Salím Khán, pass through Gilgit to Chitrál to take home the Mehtar's daughter. Wrote accordingly; the letter will perhaps be opened. Told Bakhshí to telegraph our safe progress to Resident, Kashmír. Bahádur Khán of Astór to stay at Hunza, Ghazan Khan says, until we are reported safe across the pass. He writes so humbly, and in terms of such apology for his country and the barbarous habits of people, unaccustomed to deal with royalty, that I fancy he is alarmed at the Chaprót incident.

"I hope you don't wish we had never come, but fear you may have the feeling. Please trust me anyhow to complete the work remaining, *i.e.* Káfiristán. There will be no hitch there, I feel certain, if I can, without offence, shake off an Afghán escort."

On May 2nd the party marched to Ghircha, 8¾ miles, 8,900 feet. It was an easy march for horsemen, who forded the river three times, whilst the Baltís, to avoid those deep fords, were forced to keep the upper path, which ran across several *paris*. The hamlet of Murkhún was passed at 6 miles. Ghircha is a square fort, belonging to Muhammad Nafís Khan, and contains 40 houses within its walls. Camp was pitched just outside, on the left bank of the river. The day was splendidly clear, and there was a high wind. For days no water had been procurable except from the river, polluted by glacier drippings, but here there was a spring of good clear water. One of the Baltís was reported ill with pneumonia. This was a day of disappointment, as no sheep could be procured. From Ghircha, a servant of Colonel Woodthorpe's, by name Dóst Muhammad, a refugee Pathán whom he had picked up at Gilgit, was sent forward to Sarhad-i-Wakhán with a letter for the Governor, requesting supplies to be sent for the party to Langar, near the confines of his province. The man's comrade, Shér Zamán, sent from Gilgit by this route in February, on the pretext of carrying a letter to Mr. Ney Elias, but really to report on the Killik pass, had been long detained at Hunza by Ghazan Khán, and had left Ghircha a few days before the party reached it. Dóst Muhammad was now told to make his way at his best speed to Sarhad, going by the dangerous Yurshád pass—dangerous

by reason of avalanches continually falling into the defile leading to it at this season.

On May 3rd camp was struck, but before the tents were packed it was resolved to re-pitch them, as no sheep had yet been obtained. The bulky gun-cotton (sent in place of the dynamite asked for) it was now determined to reduce, and some of it was therefore disposed of in a manner intended to impress people with a great idea of the British officers' powers of mischief A heavy charge was secretly laid under a rock in the river-bed, 400 yards from the fort, then Muhammad Nafís Khán was invited to camp, shown a cake of the explosive, and told that a Baltí-load of the stuff was enough to blow his fort up to the sky, and to pull down the opposite mountain into the river. He smiled incredulously, but his curiosity was excited when Colonel Woodthorpe, taking up a cake, broke it in half, and offered to show him an explosion on a very small scale. The young man, with a crowd of followers, now took up his position on the high bank beside the officers and Sikhs, when Colonel Woodthorpe ran down into the river-bed with his half cake, a fuze and slow-match, and, attaching the latter to the hidden charge, ignited the match and ran back at top speed. The effect was much greater than had been calculated on, one great fragment of rock flying over the heads of the spectators and landing inside the fort itself, luckily without injuring anyone.

In the early morning, before a halt was determined on, the following letter had been sent off, in the faint hope of its reaching the Foreign Secretary. It did reach him, as did all other letters sent subsequently.

Dated Ghircha, the 3rd May 1886.

"We got here yesterday, Muhammad Nafís' Fort, and go on to-day to Misgar, our last bit of 'abádí' on this side. Things go on well, but sufficient sheep not yet procured. *Must* fill up that item of rations to-day and to-morrow, as afterwards there will be no chance. A man from Yárkand arrived last night. He reports pass still unfit for ponies to cross. If this condition remain we shall have to leave our riding-beasts behind us, which will be a misfortune, as they form our only sick carriage. We have only five now, as I leave one here to reduce our grain requirements. The weather could not be better. Set fair, hot sun all day, which does our work for us on the Killik. The country is an utter desert, save at intervals of many miles, when there is a patch of cultivation. Health of all good. Baltís are insufficiently clad, and the shoe difficulty is not mending much, although many have now sufficient goat skin to wrap round their feet in the snow. We are going to give them the outer flies



POLO GROUND AT GILGIT.



POLO PLAYERS AT GILGIT.

of our 5 officers' tents as a covering at night when we get to the snow, and with tarpaulins under them they will do. Eye-bandages, made out of *táshakhána loongees*,* have also been made up and served out to the Baltís, all others having goggles. I doubt if this will ever reach you, but hope it may, and that you will banish all anxiety from your mind about us. We have just the one big jump before us, and difficulties are diminishing as we approach them."

On May 4th the party marched to Misgar, 12 miles, 10,200 feet. A very severe march, begun at 7 a.m. and ended, so far as the Baltís were concerned, at 6 p.m. At two miles from Ghircha the hamlet of Sast was passed, 20 houses. At three miles the junction of the Chapirán and Khunjuráb ravines was reached, the former leading to the Yurshád, whilst the Killik route runs up the Khunjuráb for four miles, then goes N.W. for three miles up a deep valley, ascends a plateau, and drops down to Misgar. Camp was pitched at the far end of the village by a stream. The place has a mud fort and 50 houses. Supplies to a limited extent were purchased, but sheep were still deficient. The party had to cross the water many times on this march, the stream icy cold, waist deep, and very rapid. The sick Baltí was brought on, but it was evident that he would die if carried further.

On May 5th Múrkushan was reached, 12 miles, 12,000 feet.—Before leaving Misgar Colonel Lockhart made over the sick Baltí, with another Baltí from the same place in Baltistán, to Muhammad Nafís Khán, who undertook to send them both back to Gilgit. He had them housed in the village meanwhile, and received an order on Bakhshí Mulráj for one hundred rupees, to be paid on the men's safe delivery.† The march to Múrkushan was a hard one, with several streams to cross. Near the camping-ground a flock of nine goats was met, and bought on the spot, at the last grazing ground. No human beings were to be looked for beyond this place, and this windfall was a most fortunate one. The ponies had been regarded as the last food-reserve, and now it seemed as if these might be spared to carry their riders on the further side of the range. The dread was that the weather, very threatening, might break down, and

* Turbans intended for presents.

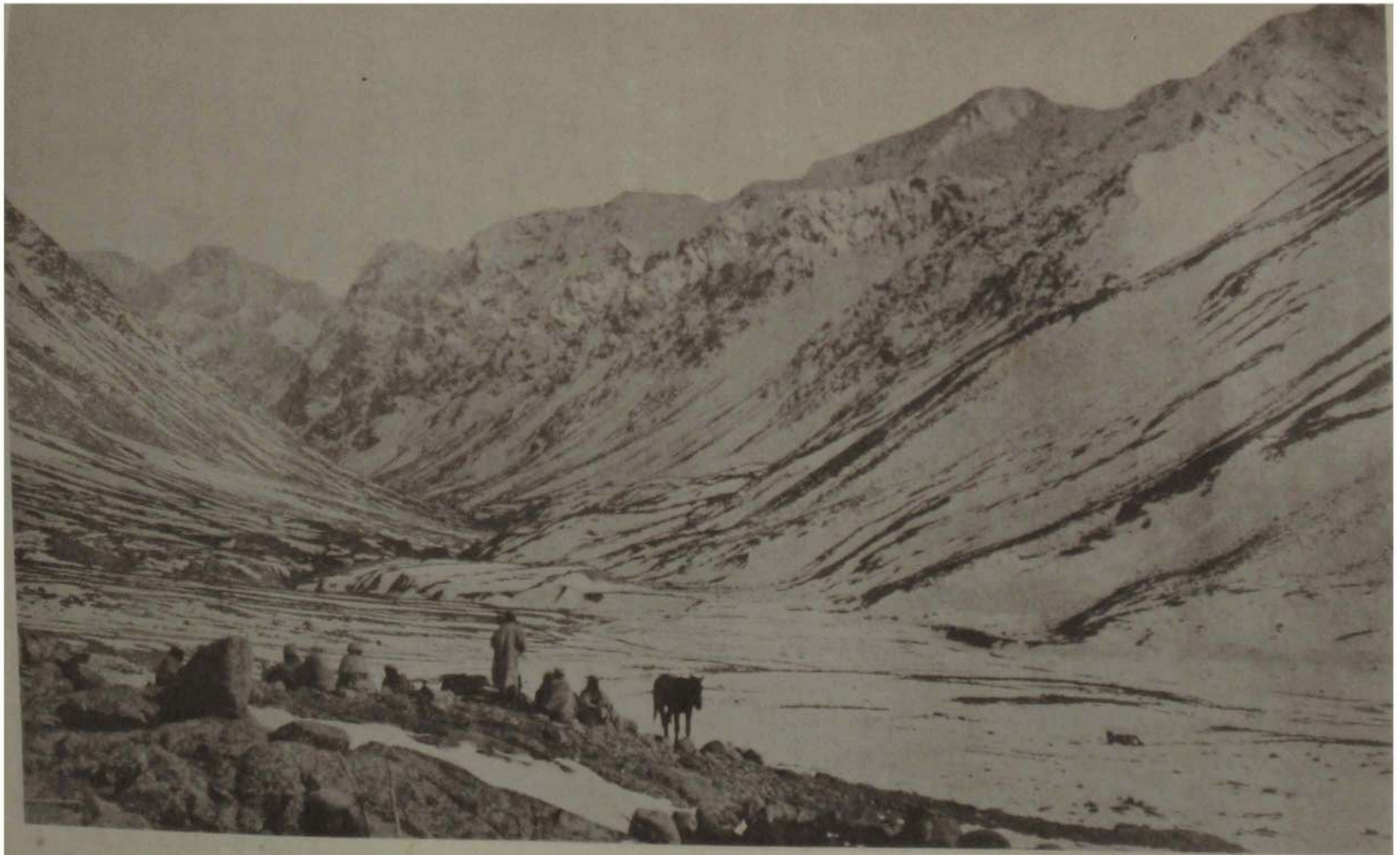
† These two men had several vicissitudes after this. The sick man recovered, but both he and his comrade were sold into slavery. Last year (1887) Lieutenant Younghusband, of the King's Dragoon Guards, found them at Yárkand and bought them from their owner. On his adventurous return journey his route took him through their very village in Baltistán, and he had the pleasure of restoring them to their families, who had mourned for them as dead. The men themselves quite believed that they had been *sold* to Muhammad Nafís Khán by Colonel Lockhart.

that the party might be caught by snow and starved between the Killik and the next and higher pass, the Wakhujrúi. Camp was pitched in a birch and willow wood, so that there were roaring fires all night, which made up for the scanty rations that had to be doled out with a sparing hand.

On May 6th the party marched eight miles to the foot of the Killik Pass (Bun-í-Kótal) and encamped on bleak ground, under snow at an elevation of 14,600 feet. At half a mile from Múrkushan the Killik stream was crossed by a ricketty bridge, ponies fording, and then there was a stiff climb for half a mile, after which the road was easy, although stony. At Múrkushan the grass had been grazed down by *yáks*, sent there for summer pasture, and the ponies had fared ill in consequence. On the present ground they fared worse, for there was, of course, no grass at all, except a scanty bundle or two brought from Misgar by the Baltís. Neither was there any firewood, but every one had brought up a handful from below, and it was thus possible to make a blaze for warmth at night. Two days' provisions had been cooked at Múrkushan, so no more cooking had to be carried on here. Officers and men were packed as closely as possible, and the tent-canvas thus released was made over to the Baltís, who lay down in rows at sunset and had it drawn over them. The night was bitterly cold. Before dark Colonel Lockhart gave Muhammad Nafís Khán a handsome *chogha* and 200 rupees in cash, promising to send him a horse from Kala-i-Panja, and to give his followers a money present at the top of the pass on the morrow, when the *rázináma*, or quittance, would also be given. Muhammad Nafís Khán was told that he himself need not go further, and that his servants would receive the *rázináma*.

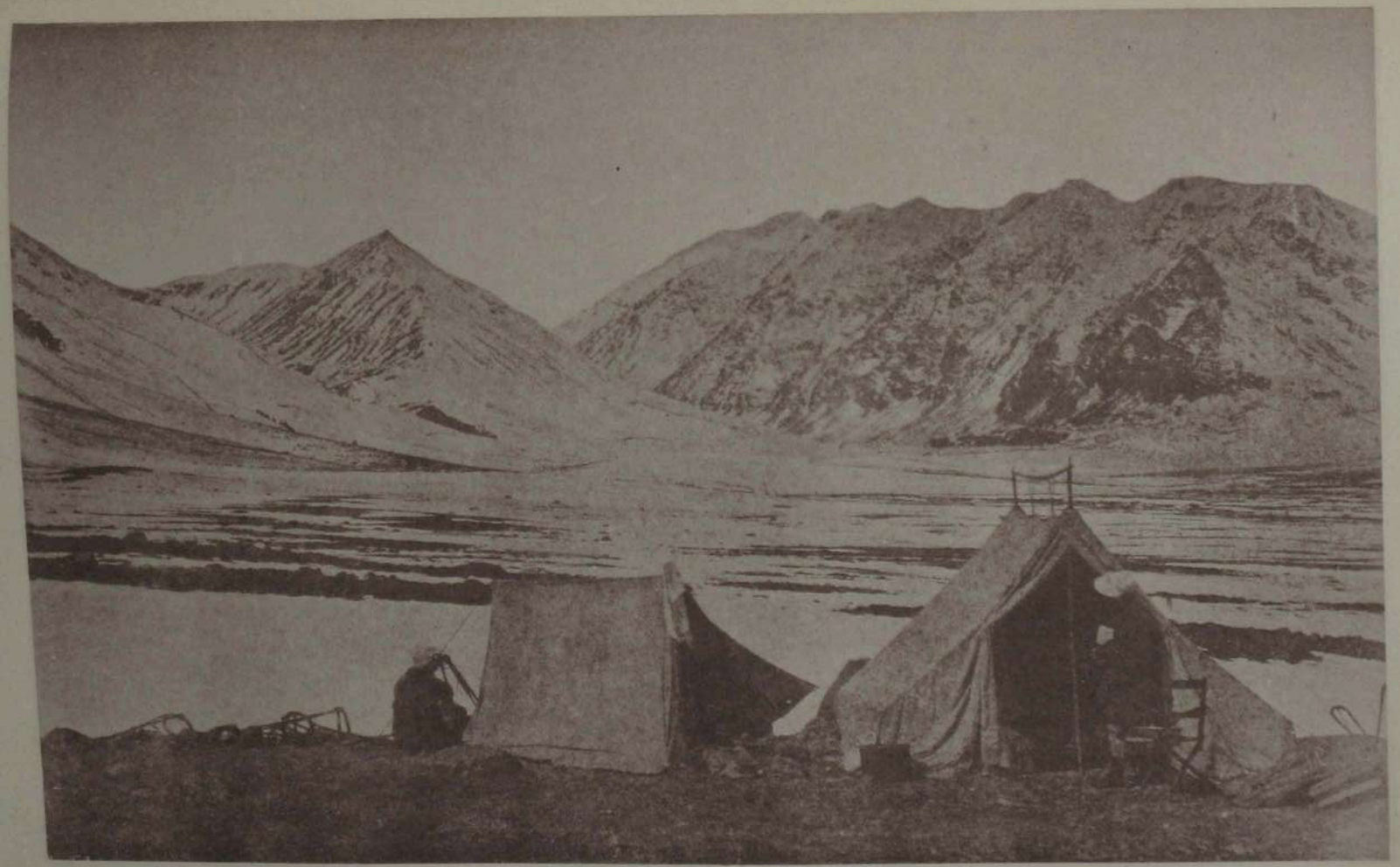
The story of the next few days is extracted from Colonel Lockhart's diary.

" 7th May, Ghil. Tághdumbásh Pamér [that seems to be how our word *Pamir* is pronounced]. 7½ miles. 14,880 feet.—Horses started with Alí Gauhar and Gujálís at 3.30 a.m., so as to get through the snow whilst still hard. We marched at 4.45; rear-guard reached crest of Killik, three miles, at 7.45. Very easy ascent. Height of Killik, 15,600 feet. On further side of crest—about two miles—gave Muhammad Nafís Khán's men their money, 250 rupees, and the *rázináma*. The division of spoil wasted a precious hour, during which I could not tear away either Sultán Bég (Alí Gauhar's cousin and colleague) or Alí Gauhar. There was a terrible wrangle, and the money was apparently scrambled for at last. By this time the sky had become overcast, and before we had gone far, heavy snow fell, and a biting



CAMP—BUN-I-KOTAL-I-KILIK

(LOOKING TOWARDS HUNZA).



CAMP GHIL, JÁGHDUM BÁSH PAMIR

(LOOKING TOWARDS THE WÁKHUJRÍU PASS).



FROM THE CREST OF THE KILIK PASS

(LOOKING TOWARDS HUNZA).



ON THE CREST OF THE KILIK PASS

(LOOKING NORTH).



FROM THE WÁKHUJRÚI PASS

(LOOKING EAST).

wind blew. The Baltís and ponies floundered through the snow with great difficulty. My horse and that of Sultán Bég fell into deep drifts, and it was impossible to free them. They were therefore left for the night, with some grass beside them, and blankets thrown over, to be brought down to-morrow before sunrise, when the snow is still hard, if they survive. This is a miserable ground, Khirghiz are said to frequent it in *winter*, which is incomprehensible, for the place does not seem to afford pasturage even for *yáks*. However, they say a Khirghiz band only left this 20 days ago. I fancy this is a real debateable land, and that if, as they say, the wandering Khirghiz pay tribute to Hunza, they also pay it to Saríkul. Where we now are, a wide valley runs N.E. to Saríkul; our to-morrow's road, towards the Wakhujrúi, runs S.W., whilst the Killik is due south. From the Killik to this point the road is called Kirish, and the Kirish Pass of the map is evidently a pass into Saríkul, over a spur on *this* side of the Killik. Traces of Ovis Poli about here. On the Killik crest found an ibex skin and other remains, surrounded by the marks of wolves. From Bun-i-Kótal to this place the Killik Pass is the easiest we have yet encountered. The difficulty of its approaches, however, make it quite valueless.

" 8th May. Camp near mouth of Wakhujrúi Pass. 3 miles. 15,000 feet.—Cold night, Baltís suffered. Halted till afternoon, to rest people, and gather roots and scrub for fuel. Sowár Kishen Singh (soldier-surveyor, a Sikh of the 13th Bengal Lancers) and some Hunza men went back to the Killik from Ghil at 3 a.m. with shovels. Found Sultán Bég's horse alive, and dug him out safely. Mine was dead. Marched three miles in afternoon, to reduce to-morrow's work, and encamped a mile from mouth of pass. Saw a herd of Ovis Poli on the march. Scared by our array, but Woodthorpe got a distant and unsuccessful shot. Thermometer at night 12° outside, 20° inside tent.

" 9th May. Camp north of Wakhujrúi Pass. 10½ miles. 15,000 feet.—The ponies went off at 2 a.m. We marched at 4.30. On arriving at the plateau on the top—more than two miles long—we found the ponies stuck. Alí Gauhar said the snow was too soft, and that he had tried to cross before sunrise, but had failed. I left him a tent, a carbine, and six rounds of ammunition, with orders to take the beasts over at midnight, or if he fails, to shoot them, and bring in a hoof of each as testimony. The four ponies belong to Woodthorpe, Barrow, Giles, and the native surveyor. It has been a terrible march. Ascent, six miles, easy enough, then two miles or rather more, through deep snow, then at first a gradual and then a steep descent to this ground. The crest was found to be 16,200 feet, but was hardly perceptible

on the plateau, across which our Baltís struggled painfully, sinking sometimes to the knee, sometimes to the waist, in rapidly softening snow. Several Baltís broke down, and refused to go on, even although their loads were taken from them and left on the ground, and although in the afternoon the sky became overcast and threatening. The rear-guard came in at dusk. One Baltí dead and another left at the last gasp by the picked Baltí team I sent back to help on arrival here. They excused themselves by saying it was impossible to carry him down before the snowstorm should have overtaken and destroyed them all. The Sikhs had rolled the poor creature up in blankets, and left him in the shelter of a rock.

"10th May. Camp 6½ miles west of yesterday's, and of about the same elevation. At 9 a.m. Alí Gauhar, Sultán Bég, and their 20 servants, brought in the four ponies, contrary to our expectations. They began to cross the plateau as soon as they found the snow sufficiently frozen, but it was slow work, and they say that in some places they had to lay down their felt blankets to give the beasts a footing. (All four ponies are badly cut about the legs, and quite knocked up.) They saw the Baltís' corpses. Gave Alí Gauhar and his servants some biscuit, and they went off again at once and pitched their tent here. Fourteen of the servants go on to-night to Langar. If they find supplies there they are to bring them to meet us; if not, they are to go on to Sarhad and hurry them. Ábad Sháh, Afzal's man, I sent off this morning with the same orders. Yesterday's march would have been impossible to-day, as it has been snowing all day on the pass; at any rate we should have lost most of the party.

"11th May. Pamér-i-Wakhán, 14 miles. 13,600 feet.—Positions of Langar and Sarhad on the map seem wrong, so we don't quite know how far we are off. Road lay through Pamér, on right bank of stream. To-day's march tried the Baltís, but there is grass here, also some scrub in the river-bed, so they can have fires. There are many cases of snow-blindness, and some of frost-bite among them. Our position is ticklish. Supplies for to-morrow *nil*, except the five little goats, and what people may have saved from their scanty rations during the last few days.

"12th May. Dasht-i-Mirzá Murád, 17 miles. 13,000 feet.—Marched 7 a.m., rear-guard in at 5 p.m. For the first six miles our path lay through typical Pamér steppe, which in a few weeks will be covered with grass and flowers, but is now a mass of yellow withered tussocks, with snow lying in patches. Bozai Gumbaz, at about six miles, marked the end of the Pamér, at the junction of two branches of the Wakhán river. Bozai was



FROM THE WÁKHUJRÚI PASS

(LOOKING WEST).

a Kirghiz chief, killed some 40 years ago by a force sent out against him from Hunza under Abdulla Khán, brother of Ghazanfar Khán (father of the present Mír Ghazan Khán). By the way, *Tham* is purely a Kanjúti word, Mír being the only title given to their chief by his Gujáli subjects. Alí Gauhar said that the raid was made when he was a child of three or four, hence my estimate of the date, and that it was designed to crush the Kirghiz marauders, who intercepted travellers between Hunza and Wakhán. The result was the slaughter of most of the Kirghiz men, and capture of 400 tents, the women and children being sold into slavery. Alí Gauhar's father was wounded in this action (the old man we saw at Gilmit on the 28th ultimo). We were met half-way by Shér Zamán, Woodthorpe's Kolai man, sent from Gilgit months ago. He brought letters from Ghafár Khán (Jamadár of Wakhán), and from Muhammad Sarwar Khán and Captain Khair Muhammad Khán sent to meet us. The letters bade us have no anxiety about provisions, as everything awaited us at Langar.

"13th May. Langar, 5 miles. 12,800 feet.—The party marched at 8 and arrived at 11.30 a.m. After a mile and a half of level across the Mirzá Murád plain, the road descended abruptly into the Warm valley; the stream was rapid, deep, and full of boulders, and was crossed with some difficulty by the worn-out Baltís and ponies. There was then a short steep climb up to the Langar plain, at the further end of which, two miles distant, camp was pitched."

Colonel Lockhart's letter to the Foreign Secretary, written on the following day, is here given, nearly in full.

"Langar, Wakhán, 14th May 1886.

"We reached this place yesterday, arriving without a fragment of goat's flesh or an ounce of flour; so it was a close affair. I am halting to-day to let the people enjoy a good rest in the midst of Afghán plenty, after their great hardships and starvation scale of diet. I wrote to you on the 9th after crossing the Wakhujrúi Pass, and the letter will doubtless reach you all right. In it I reported the death of two Baltís, or rather that one had died, and that the other had been left at the point of death on the approach of night and of a snowstorm, the Baltís sent back to carry him in declaring the task to be impossible. During the night Alí Gauhar, Sultán Beg and their men brought the four ponies across the plateau, contrary to all our expectations, and arrived in camp at 9 a.m., 10th. The old snow had frozen, but some inches of fresh snow had fallen, and their success seems to me very wonderful. They say they managed it by laying

down felt and blankets on the very bad pla es for the beasts to pass over, and were at work all night, the distance over *difficult* snow being three miles, although of course the whole of the march was over snow. The ponies were all badly injured, dead lame, and half starved. The dead bodies of the Baltís were passed by Alí Gauhar. You will give me credit for not having heartlessly abandoned the man. Barrow and I were with the rear-guard, and ea h took charge of one of the two deceased until it appeared hopeless, when Barrow went forward for assistance, unloaded some Baltís whom he overtook and sent back to me, sending another man on to overtake the main body of baggage coolies and bring back twelve more, with blankets. Every effort was made by the Sikh Havildár and four men, who endeavoured to crawl with the dying men on their backs, but both legs and arms disappeared in the soft upper snow, and the exertion at 16,200 feet above sea was more than could be endured. The two poor creatures fainted continually, and, although I am pretty strong, I found that I was quite exhausted by midday from lifting an insensible man from the snow, reviving him, getting him on a few yards, and then having to lift him again. On the arrival of the first batch of Baltís I overtook Barrow, who was waiting for me a mile or so further on, and we went on to camp 1,500 feet below, passing the second batch, to whom I promised Rs. 5 each and Rs. 10 to the *trangfá* if they brought their comrades in. The rest you know. I have been thus particular in detailing these circumstances lest some story should get about distorting facts. Giles, in spite of wearing coloured glasses, managed to get snow blind. Woodthorpe was of course on ahead doing his own work. At midday the thermometer on the plateau read 26° in the shade.

"On the 10th, after Alí Gauhar &c. had gone on with the unfortunate ponies to get them lower down, we struck camp and marched in a snowstorm (no firewood, and therefore unable to give the people tea or food) to a sheltered spot six miles off, on right bank of a stream, called locally Áb-i-Pamér, really the origin of the Áb-i-Wakhán and of the Panja river. Many of the Baltís suffered from snow blindness and several from frost-bite.

"On the 11th we marched 14 miles west to Pamér-i-Wakhán; on the 12th we made the Dasht-i-Mirzá Murád, 17 miles, and yesterday my exhausted people did the remaining six miles to this place, and are now forgetting their sorrows as well as falling snow and a cutting wind—the 'Bád-i-Wakhán' of evil repute—will allow them. Before reaching the Dasht-i-Mirzá Murád, Shér Zamán (whose account of his doings since he was sent off from Gilgit on 1st February I am having taken down in Persian, and hope to be able to

enclose in this) met us with letters from the Governor of Wakhán (Ghafár Khán), and from two of Sardár Abdulla Ján's people, Muhammad Sarwar Khán and Captain Khair Muhammad Khán, sent to Langar to arrange for our supplies. Finding the coolies incapable of marching further—even in the hope of getting food, I sent on Shér Zamán from the Dasht-i-Mirzá Murád to tell the Afgháns that we could not make Langar that night. Whilst pitching our camp Muhammad Sarwar Khán and the Captain rode in, and all at once our troubles fell from our shoulders. It was too late for them to send us supplies, although they offered to, but there was lots of firewood and the last ration was cooked and eaten. Yesterday we marched at 8, and got the rear-guard in by 11.30 a.m. Four saddled ponies met us two miles from Langar, and we had our first ride for many days. My own beast perished in a snow-drift, as you know, and the others are all cripples. I told Muhammad Sarwar Khán not to ride out to meet us, so we found him and his people waiting for us on the ground. I was once nearly wrecked, and remember the joy of reaching St. Helena and sitting down to dinner in an hotel after a fortnight on biscuit and peasoup in insufficient quantities, and the same gross delight was, I imagine, now experienced by us all when Muhammad Sarwar's people arrived with two large wooden bowls, one containing boiled mutton floating in grease, the other a pile of cakes of that excellent barley bread (bannocks) that you will remember as a feature of Kábal. Fat sheep, flour, sugar, everything in fact except milk and eggs, for the absence of which profuse apologies were offered, came pouring into camp. The Hunza people were snubbed by having no sheep sent them—Muhammad Sarwar Khán having heard of our short commons in that country—but I begged that they might be treated as belonging to our party until we reached Sarhad, and this was at once altered.

"In the evening Muhammad Sarwar Khán and the Captain called (by the way Muhammad Sarwar Khán is the official who brought me a letter from the Amír of Kábal to Chitrál on 25th August last), and had tea with us. Found out that Muhammad Sarwar Khán was in all the fights round Kábal in December 1879, and got a bullet through both his cheeks at the second Chárásiá fight, and lay *perdu* for nearly a month until his wound healed. He was at the fight in the Chárdeh on 11th December, and took an active part in our investment in Shérpúr, was present at Maiwand with Ayúb Khán, and finally ran away from General Roberts at Kandahár. He is a Tokhí Ghilzai. I am sending off an express to Ridgeway to say that Muhammad Sarwar Khán has laid down supplies for his party from the Khairábád border to Sarhad on a great scale. The number he has been told to provide for are 220 men and 160 horses—inclusive of 80 Afghán horsemen, and the amount he has laid in at each stage provides for several days, *viz.*, five kharwars

barley, two kharwars flour, 40 sheep, 10 Kábal seers ghee, salt, &c., in proportion [nine seers English = one seer Kábal, eighty seers Kábal = one kharwar]. What the Boundary Commission have to do here I can't understand, but trust that at any rate no Russian will accompany them and take stock of the passes. The geographical work has now been done by Woodthorpe; there can be no boundary work *here*, and I can't recommend the neighbourhood as suited to sight-seeing or pleasure-making. If not ordered to do anything else, I'll march now to Kala-i-Panja and Zebák—picking up our Chitrál detachment at the latter—and then perhaps go on to Faizábád if necessary. Meanwhile I'll get into communication with the Káfir colony at Minjgán, and call up some of our old friends of last year—Shtáluk, &c. Of course *en route* to Zebák, and from that place we shall do the north side of all the Chitrál passes. Once in Káfiristán, free of Afgháns, we shall, I doubt not, succeed in seeing the country, and making friends with the people. I remember, however, that our primary functions are to be of use to Ridgeway's party, and you may depend on my loyally carrying out whatever may tend to their interests, subordinating all our own ends to theirs. It will be hard on us, though, if you give them Káfiristán to do, and it will be hard on Chitrál if you let them go through that country."

"A Shinwárí refugee in Gilgit has followed Woodthorpe's fortunes in this trip. He told me yesterday that his friends in Gilgit did their best to dissuade him from coming with us. The dangers they anticipated were Hunza treachery, snow, or starvation, and the saying (Pír Gul tells us) at Gilgit was, that our chances of getting through to Wakhán safely were as good as would be those of a criminal condemned to death in a British court in his passage between the jail and the gallows. Now it is all over it is clear that our Gilgit friends had some grounds for their apprehensions. I cannot, I think, be accused of rashness in not anticipating treachery at Hunza in the form it presented itself. Surely the hostages taken seemed a sufficient security. The second danger—snow—was a real one. Had we not crossed the Wakhujrúi on the 9th we could not have done it on either the 10th or 11th as it snowed hard on both days, and had we been caught in a heavy snow storm on the top the greater part of us must have perished. Again, had we not crossed on the 9th we should have been imprisoned between the Killik and Wakhujrúi, and subjected to the third danger—starvation."

The courier who carried this letter took also one for Colonel Ridgeway, announcing the arrival of the party and repeating Colonel Lockhart's warning against a route through Chitrál being adopted for any of the Afghán Boundary Commission. Colonel Ridgeway was also told of the supplies laid out in Wakhán for his people, and reminded that the geographical work in that country would be completely done by Colonel Woodthorpe. Colonel

Lockhart further sent letters of thanks to the Amír of Kábal, Sardár Abdulla Ján and the Jamadár of Wakhán for the hospitable reception given to his Mission.

On May 15th Saor was reached—14 miles; 11,500 feet. The road had several steep rises and falls, and lay down the right bank of the river. At the eleventh mile there was a sudden descent of 1,000 feet to the river, and shortly after that a broad stream was forded, a steep hill was climbed, and then the path ran down into the Saor ravine, where camp was pitched amid birch and willow. A bitterly cold wind blew all day, the renowned *bád-i-Wakhán*, in comparison with which the *bise* of Switzerland is a soft breeze. Muhammad Sarwar Khán wounded an ibex on this march, firing into a herd at a distance of 600 yards. He had a long climb after the animal, no easy affair, considering his costume—lamb's wool hat, frock-coat, riding-breeches and jack-boots—and returned unsuccessful.

On May 16th the Mission reached Sarhad-i-Wakhán, or more accurately Chihalkand—9½ miles; 10,800 feet. To avoid the river road, reported as very difficult and as entailing *eleven* crossings, the path over the Dalíz Pass was followed. When Muhammad Sarwar Khán had passed along this route ten days before, he had been unable to cross the Dalíz by reason of the deep snow lying on it, but most of the snow had now disappeared, as was ascertained early in the morning by men sent on over night. The march began at 7 a.m., and the rear-guard got in a little before 6 p.m. The height of the Dalíz is 13,500 feet, and the climb and subsequent steep descent told greatly on the Baltís. At the foot of the pass, near the deserted village of Sarhad-i-Wakhán, the officers were met by Ghafár Khán, Jamadár of Wakhán, his deputy, his son, and several followers, all mounted, and were escorted through the fields to the camping ground, three miles further on, by the village of Chihalkand. An excellent breakfast was served for the officers in a large Afghán tent, and supplies of every kind were sent in profusion. The Jamadár himself, Ghafár Khán, is a Kirghiz by descent, his grandfather having been the first to settle in Afghánistán, where for three generations the family has done good service under various Amírs. He is a grave, dignified man with Kirghiz features (although these are evidently modified by an Afghán strain), and a very kindly expression. His deputy was a Wakhí, with downcast looks and an unfailing assent to whatever was propounded by his superior, as regarded the benevolent treatment of his compatriots under Afghán rule, and everything else. Ghafár Khán said that there had been great distress in Wakhán owing to the flight of the inhabitants to Chitrál, Hunza and Saríkul; but that the people were beginning to return, except in

the case of Alí Mardán Sháh and his followers. A bad harvest and a murrain amongst the *yáks* had, he said, again thrown the country back. Wakhán is probably the bleakest inhabited country in the world. The scanty population presents fine specimens of well built, ruddy men, of a good-looking Aryan type, clad like the tribes on the southern slopes of the Hindú Kush, except that their *choghas* are of much thicker material, and are grey or white in colour, instead of brown. The cutting bád-i-Wakhán blew all day from the west, but fell at night.

The 17th was a day of rest. Alí Gauhar had received his reward, 200 rupees for himself and 50 for his servants, and a *rázináma*, but he said they were all too much exhausted to face the return journey, so received permission to remain a few days in Wakhán and recruit. His manner towards the Governor and all other officials had been most offensive and insolent, which resulted in a very natural retaliation. As soon as the money had been paid him and it was known that he was discharged, all further supplies were refused for himself and his band, and Colonel Lockhart had to request Ghafár Khán to relent, as a personal favour, for otherwise Alí Gauhar and his men would have been in sore distress. As it was, Ghafár Khán, on Colonel Lockhart's intercession, immediately ordered sheep and full rations of everything else to be issued to the Gujálís, and gave them quarters in the fort, whilst Muhammad Sarwar Khán remarked, "The "greatest savages on earth would be treated as honoured guests if they "came here on the recommendation of an English officer." The Baróghal Pass had been seen from the top of the Dalíz the day before, and it was now determined to visit it.

The following extract from Colonel Lockhart's diary-letter to the Foreign Secretary covers the next two days' narrative.

"18th May, N. foot of Baróghal.—Started at 8 a.m., made Baróghal crest, 11 miles, returning four miles, and camping at foot of pass in a willow grove. Pass at summit under snow, but got above the crest on the west hillside, which was pretty free from snow, the latter only lying deep on the floor of the valley. Splendid day. Got a good view of the surrounding hills, and traced Darkót and Yárkhún routes, *i.e.*, their beginnings, but the Sawár Shúi route remains a puzzle. The latter was described to Woodthorpe on his visit to Darkót last year, as an alternative to the Baróghal route, the bridge on which was destroyed by Alí Mardán Sháh three years ago in his flight from Wakhán, and which no one has thought it hitherto worth while to restore by throwing a few logs across a chasm. The Sawár Shúi, however, or what was pointed out to us as that route, runs over a steep

and lofty pass, between two high peaks, which is covered with permanent ice, and is said to be fit for foot passengers some four months, for ponies from two to three only, in autumn, *i.e.*, in the short interval between the melting of one year's snow and the next season's fall. The Baróghal Pass has a scarcly perceptible crest, and, looking from above, it is difficult to realise that the two streams are running different ways, and that the water is not all going to Wakhán. You will hear all about this and similar geographical matters from Woodthorpe hereafter when his reports are produced, and I am not qualified to write profitably on them. We need not trouble ourselves about the Baróghal. As a pass it is very easy, so is the Killik, but like the Killik it does not lead you far from its summit by any at all pleasant paths, *i.e.*, the route from it to Chitrál by the Yárkhún valley is, owing to its swollen stream, unfit for pack-animals during the months in which the crest is sufficiently free of snow for the passage of troops, whilst the road to Yásín is always barred by the Darkót—an obstacle that no army would attempt to overcome. As I have before shown, the alternative Sawár Shúi seems to be attended by at least equal difficulties.

"Biddulph was stopped by the deep snow, one of our guides told us, from gaining the top of the Baróghal. He has fallen into an error about the grazing-ground near the crest which he calls Showashir. There is no such place. It seems likely that a voluble Wakhí was indicating the Sawár Shúi direction to him, and was misunderstood. We have found it very easy to misunderstand the people about natural features, and all travellers meet with the same difficulties in this respect. I fancy even English travellers in England itself.

"19th, Sarhad-i-Wakhán,—Rode back after breakfast. Muhammad Sarwar Khán gave me some particulars about Maclaine, R.H.A., killed after the fight before Kandahár, September 1880. Ayúb Khán had, he says, a great admiration for Maclaine, and used to call and sit with him every day, Maclaine speaking a mixture of Persian and Hindústání. Ayúb Khán asked Maclaine once if he would join his own fortunes, and serve as an officer under him, to which Maclaine replied, 'I have no objections 'at all to fight on your side, always provided that your enemies are not 'Englishmen or the friends of the English.' Muhammad Sarwar Khán saw Maclaine the afternoon before his death, and discussed with him the next day's probabilities. Ayúb Khán, he says, was beside himself with rage when he found his prisoner had been killed. Muhammad Sarwar Khán says the deed was certainly done by soldiers, not by *badmáshes*, the soldiers acting in panic and confusion."

Shortly after returning to Chihalkand, on the 19th May, Colonel Lockhart received a letter from Sardár Abdulla Ján, Governor of Badakhshán, forbidding him to enter the Amír's dominions on any account, until regular permission should have been granted. This letter, dated simply *Rajab*, without the day of the month, enclosed what purported to be the copy of a letter from the Amír to the Indian Foreign Secretary, in which Colonel Lockhart's visit to Káfiristán, by way of Badakhshán, was vetoed until its objects should be made clearer. As the packet had gone to Chitrál, and then back by the Baróghal route, Colonel Lockhart assumed the prohibition now received to have been cancelled by the Amír's unreserved permission, received at Chalt on the 20th April. He accordingly acknowledged the Sardár's letter, as a matter of form, alluding to its contents as now obsolete and superseded.

The best introduction to the concluding portion of this narrative will be to give an abstract of the correspondence which passed between the Indian Foreign Secretary and the Amír of Afghánistán in the months of February, March, April, and May 1886, on the subject of Colonel Lockhart's mission.

2nd February.—The Foreign Secretary wrote to the Amír, asking if His Highness had any objection to allowing Colonel Lockhart to pass by Wakhán and Badakhsháu into Kafiristán as soon as winter should be over.

25th March.—The Foreign Secretary wrote to the Amír, reminding him of the above letter, and requesting His Highness to issue the necessary orders to his frontier officials on the subject.

23rd March.—The Amír acknowledged receipt of the Foreign Secretary's letter of 2nd February, and consented to Colonel Lockhart's entering Káfiristán from Badakhshán, adding that he had instructed his frontier officials to look after the party.

22nd April.—The Foreign Secretary thanked the Amír for his letter of 23rd March, and stated that Colonel Lockhart had been informed accordingly.

10th April.—The Amír acknowledged the Foreign Secretary's second letter, dated 25th March (in which His Highness was reminded of the first one, dated 2nd February), intimated that he could not understand the object of the mission to Káfiristán, and withdrew his consent until this was made clear.

22nd April.—The Foreign Secretary, in reply to the Amír's letter as above, informed His Highness that the object of the Káfiristán Mission was simply to gain information about the country and people, and that the British Government never had entertained any thought of occupying Káfiristán.

7th May.—The Amír acknowledged the above letter, and adhered to his decision not to let Colonel Lockhart's party enter Káfiristán from Badakhshán.

On May 20th the party marched to Rachao, 10½ miles, 10,500 feet.—An easy march, except for the high wind which blew all day. The road lay down the right bank of the river, a branch of which, pretty deep, had to be forded twice. At 2 miles Patúch was passed, a village on the right bank containing 20 houses; at 6 miles the hamlet of Niris, 10 houses, on the left bank; at 9 miles Rakót, also on the left bank, 8 houses. Some ibex were seen on this march, a hare was coursed, and a few teal were shot. The wind played havoc with the tents, but subsided at sunset.

On the 21st Bábá Tangí was reached; 18 miles, 9,700 feet.—The road was easy, down the right bank for 13½ miles, when the river was forded. There are 30 houses altogether in Bábá Tangí, which consists of three small detached hamlets, viz., Kharát, Ghazgít and Patír, all on the left bank About half way the village of Yur was passed, on the left bank.

Ghaz Khán (14½ miles, 9,300 feet) was reached on the 22nd. Shortly after leaving Bábá Tangí the river was forded, and the remainder of the march lay down the right bank. The road ran, at first, across a bare stony plain, then through meadows, with patches of low bush. At half way, on the opposite or left bank, Kala Yost was passed, from which a road goes to the Rích Pass.

On the 23rd May the party marched to Kala-i-Panja, 7¼ miles, 9,050 feet. Shortly after leaving Ghaz Khán the confluence of the Great Pamér branch of the river was reached, up the valley of which goes the summer road to Yárkand. Kala-i-Panja is a fort of the usual type, dominating a cluster of half-deserted hamlets. It takes its name from the impression of a hand (*panja*) left by some saint on a rock on the hill above; at least, so say the natives of the country. This is the head-quarters of the Governor of Wakhán. It has a garrison of one *bahrak* (100 men) of irregular infantry and a few local horsemen. Camp was pitched near the fort, and was nearly

all blown down again by the wind, much injury being done to tent-poles. A dust storm raged all day. In the evening some horsemen brought a letter from Sardár Abdulla Ján, in which the Sardár told Colonel Lockhart that he had acted improperly in advancing thus far without permission, and required him to retrace his steps. The substance of this letter, which was dated May 21st, was as follows:—

"I have received your letter from Langar, dated 14th May, in which you discuss your visit to the frontier of this God-granted kingdom. I have already forbidden you to set foot in Wakhán, and have told you to wait until I receive the Amír's orders concerning you. I have also furnished you with a copy of the Amír's letter to your Government, asking them to stop you, but in spite of all this you have come on. You must now return whence you came, from this God-granted kingdom, and await the orders of His Highness and of your own Government. Your Káfiristán intentions are useless. His Highness has told your Government what evil would result from your visit to that country. His Highness has ordered me to keep you back, and not instructed me to provide supplies for you. The supplies collected on your road are for the Boundary Commission, not for your party."

24th May, Kala-i-Panja.—The subjoined letter was despatched to the Foreign Secretary. Colonel Lockhart at the same time wrote to Colonel Ridgeway and requested his help, more especially in the matter of that portion of the escort and baggage which was at the time marching to Chitrál, under command of Kót Dafadár Muhammad Nawáz Khán, with orders to rejoin in Badakhsháu, by way of the Dúráh Pass. It seemed certain that, without some pressure being brought to bear on the Sardár, he would prevent the Kót Dafadár's party from entering the Amír's dominions.

"Kala-i-Panja, 23rd May 1886. — We arrived here to-day, and this afternoon I received the enclosed; my reply attached. The letter from Sardár Abdulla Ján of which I told you in my last from Rachao, dated 20th instant, and its annexure, which I did not at the time pay much attention to, as they had reached me by Gákúch and the Baróghal, and I understood them to have been cancelled by your telegram conveying the Amír's sanction to our entering Káfiristán *viâ* Wakhán and Badakhshán, turn out to be the result of a change in the Amír's views. As Muhammad Sarwar Khán and another official were sent especially to meet us, to arrange for our supplies quite apart from those of the Boundary Commission, and to bring us to Badakhshán in an honourable manner, and as Muhammad

Sarwar Khán had meanwhile received no counter orders, my hasty conclusion, drawn without looking closely at the dates, was natural, but not excusable. In any case, I could *not* have gone back by Hunza, and, once in Wakhán, was bound to go on. It is absurd of the Sardár to say that the supplies were not meant for us.

"Muhammad Sarwar Khán, whom I sent for on receipt of the letter, says he got his orders distinctly on the subject, and that now he has received a severe reprimand, which he showed me, for obeying the Sardár's orders, from the Sardár himself. He offered to take us on to Zebák, or further if we wished, saying he would take the responsibility, and answer to the Amír with his head if necessary, but of course I can't go on until I get permission. Neither can I go back, but I trust to your having made matters smooth for me before many days elapse. You will have realised my position completely long before now, and a day or two should bring a happy solution. If the Amír really means to stop our going into Káfiristán, then I fear it won't be for us, the honour of properly exploring that country, as the Chitrál Mehtar will probably adopt the same views openly or otherwise; but if you will support, you can rely on a good deal of stolid perseverance here, and a refusal to take 'No' from anyone unless I am ordered to do so by you. I am writing to Ridgeway to tell him the turn affairs have taken, and asking him to act in whatever way he sees best, so that the men and baggage coming *vid* the Dúráh to Zebák for us may not be stopped. They are not due for more than a fortnight according to last arrangements.

"24th May.—I add a line before sending off this to say that Sardár Abdulla Ján's messenger, who takes back the packet, has come to me now and given me a friendly message from the Sardár, regretting his having to write as he has done, and asking for some written authority. I am sending him a translation of the first part of your telegram, conveying your orders on the Amír's sanction, and have said verbally that I want permission to go on at once to Zebák, but have no intention of doing anything against the Amír's wishes in the matter of Káfiristán or in any other matter; that I can do nothing on my own account without the orders of Government, and that I cannot retrace my steps."

The courier also carried letters to the Amír of Afghánistán and to Sardár Abdulla Ján. The first briefly reviewed the situation, and explained how His Highness' prohibition as regarded the Mission entering Wakhán and Badakhshán had been assumed to have been cancelled by the permission received on 20th April. It concluded by announcing Colonel Lockhart's intention to go on to Zebák, there to await further instructions from his

Government, or whatever the Amír might choose to communicate. To the Sardár Colonel Lockhart wrote in the same sense, and announced that, if there were no objections, he intended to advance to Zebák. This letter was written very civilly and temperately, because, in the first place, the affront that had been offered was assumed to be of a purely personal nature, and secondly, because the Sardár's friendly verbal message proved that he was acting under compulsion. A dust storm lasted during the greater part of the day, and it was resolved to shift camp on the morrow to a less exposed place.

On the 25th camp was shifted to a ruined village three-quarters of a mile south of the fort. Here the tents were pitched within the walls of roofless houses, and a good deal of shelter was thus procured against the terrible west wind. As soon as camp had been re-pitched, the officers rode to the fort and breakfasted with the Governor, on an invitation sent the day before. Muhammad Sarwar Khán partook of the same excellent repast, as well as his old wound would allow him. Surgeon Giles had extracted some teeth and some bone splinters, but neuralgia still made him a martyr. After breakfast a pony and some rolls of woollen cloth were presented to the officers.

26th May, Kala-i-Panja.—A small post arrived, containing no communication from the Foreign Secretary. Colonel Lockhart sent back by the courier a letter to the Foreign Secretary and one to Colonel Ridgeway. A newspaper, brought by the post, had stated that Colonel MacLean was about to join the Boundary Commission, and those letters suggested that he might be sent to join Colonel Lockhart, as a valuable additional member of the Mission in Káfiristán. In his letter to the Foreign Secretary, Colonel Lockhart wrote:—

"It is usually sultry in the morning here, with a bright sun, and one is inclined to take off one's coat. If there has been a cloudy appearance in the west at sunrise, we know that by noon we shall be wrapped in great coats, and holding on to our tent poles amidst a storm of first dust and then sleet, that shall last till dark. * * * * * *
I can't understand not hearing from Ridgeway. It is strange if Sardár Abdulla Ján has not informed him of the nearly hostile letter he sent me. Muhammad Sarwar Khán says war is a much more satisfactory game, even when you are hit, than this kind of business, for in the first you know who is attacking you and how you are to meet him, but here it is all hidden, and the movements are incomprehensible, whilst the danger (to himself personally) is just as great. The Governor is coming to-day to

have a serious operation performed on his eye. Giles says unless this is done he will go blind shortly. * * * * Don't let us be thwarted about Káfiristán. The chance may never occur again, and the Amír has no right to be a dog in the manger in regard to this matter. His Highness could not, I presume, have had anything to say to our Hunza troubles? All the same, Ghazan Khán sent, as you know, a letter to Abdulla Ján by one of our companions, and such intercourse must be very rare."

On the 27th a letter arrived from Mr. Ney Elias. It was dated the 24th, from Faizábád, and stated that he was returning to India in ill health, and wished to go by way of Gilgit. On the 28th and 29th nothing occurred. On the last named date Colonel Lockhart wrote to Mr. Ney Elias, recommending him to return by way of Kábal, as the Chitrál route to Gilgit would be a bad one for an invalid to take.

On the 30th Colonel Lockhart wrote to Sardár Abdulla Ján, announcing his intention of marching towards Zebák on June 1st. He gave as his reasons for this determination that, first, time was being wasted, and he dreaded incurring the displeasure of his Government on that account; secondly, the Amír's prohibition referred only to Káfiristán. In conclusion he wrote:—

"For these reasons I am going to leave this on June 1st for Zebák, where I shall await further instructions. You have it in your power to prevent me from going there, but I have clearly shown you my motives, and if you now force me back as you would an enemy of the Amír, I shall be blameless. Please yourself in the matter."

Colonel Lockhart sent a copy of this to the Amír of Afghánistán, merely remarking that he hoped his Highness would not find anything objectionable in the terms he had used to the Sardár. Copies of these letters were despatched to Colonel Ridgeway and the Foreign Secretary.

Colonel Lockhart's letter to the Foreign Secretary ran:—

Kala-i-Panja, 30th May 1886, to H. M. Durand, Esq., C.S.I.

"I have determined to move forward the day after to-morrow, unless something unforeseen happens meanwhile. My reasons are set forth in the enclosed, and another strong reason I have, at Muhammad Sarwar Khán's request, omitted, viz., that we are uselessly consuming supplies, and that a prolonged stay here would produce distress amongst the people. I trust my letters of 24th and 26th May, sent separately to you, will duly reach you. In case they should by some devilry have miscarried, I had better repeat briefly their contents.

"1. On 19th May, at Sarhad-i-Wakhán, I received a letter from Sardár Abdulla Ján, enclosing what purported to be the copy of a letter from the Amír to you, in which our Káfiristán trip was objected to. The Sardár, in forwarding it, said I had no right to enter the Amír's dominions, and further that he would be obliged to oppose my onward movement. This letter I treated as ancient history, for it had gone round by Chitrál and Gákúch, and I replied accordingly.

"2. On 23rd May I received here, at Kala-i-Panja, a second letter from Sardár Abdulla Ján in reply to my letter of 14th May, from Langar, in which I had acknowledged his kindness in sending Muhammad Sarwar Khán to meet us, and to arrange for our supplies. In this I am told I have done wrong in coming on after receiving his letter, enclosing copy of Amír's letter, and that I ought to go back; that the supplies were not intended for my party, &c., &c. At the same time the Sardár sent me a verbal apology for being obliged to write as he did, and begged me to send him some written authority for my having come on.

"3. On the 24th I replied, and sent him a translation of the first part of your telegram, 22 C. E. 'Amír has sanctioned your entering Káfiristán *viâ* Wakhán and Badakhshán, &c.' I also wrote to the Amír explaining matters. Said I wished to go on to Zebák, there to await events. Muhammad Sarwar Khán expected an express in reply to my letter to the Sardár yesterday, but, as it has not come, I have resolved not to stop here beyond to-morrow. Elias writes, dated 24th, from Faizábád, to say that Abdulla Ján is sore about something, and that he told him, Elias, that we were not coming this way at all. I confess I should like to *make* the Sardár sore about his own person, but the poor creature is evidently acting under bodily fear, his master having taken some fresh freak into his head, and sent him a threat. Muhammad Sarwár Khán is all that I could wish for. He declares openly what his instructions were in our regard, and defies the Sardár to deny them. By the men taking my letter to the Sardár (on the 24th), Muhammad Sarwár Khán tells me now that he sent a reply to the reprimand sent to himself, and that in this he told him that it would be of no use his trying to get me to move back from here; that I was quite resolved to go on; that I had read him out my orders in Persian from the English telegram, and that there was no mistake, and no fault whatever here. . . . . You will surely put pressure on his Highness and force him to let us do what we want. It seems to me the most monstrous piece of impertinence on his part, this sudden change in his views, and this deliberate thwarting of your wishes."

On May 31st an express arrived from Kashmír by the Baróghal, containing the following telegram, dated 4th May, to the resident in Kashmír, from the Foreign Secretary :—

"Please send special messenger to Lockhart with receipt of (reference to?) his telegram, 14th April. I telegraphed to him on fourth that he might start, since Amír had given permission. I hope telegram reached safely. Send copy of foregoing to Lockhart by special messenger, and telegraph having done so."

The hopes raised by this message were speedily dispelled by two letters which arrived in the forenoon from Sardár Abdulla Ján. The first, undated, acknowledged Colonel Lockhart's letter, written on arrival in Wakhán, and intimated that he must go back.

"Mr. Ney Elias," it ran, "visited this country with his Highness' permission, and due honour was shown to him by his Highness' command. Had you been similarly authorised, and had you sent me your authority, I should have treated you with the same distinction. Now, as you have no authority to enter this country, and as I have no orders on the subject, how can I permit you to remain within the frontiers of this God-granted kingdom? There is no use in your asking me to let you advance. You must go back and await his Highness' orders. I cannot allow you to either advance or to remain on the border without his Highness' permission."

The second, dated 28th, acknowledged Colonel Lockhart's letter of the 24th May, and briefly intimated that the road to Zebák was closed against him until such time as the Amír should consent to his going there. The Sardár added that Colonel Lockhart must well know what the consequences would be to himself (the Sardár) if he disobeyed his master in this matter.

As Colonel Lockhart stood in front of his tent, puzzled as to the next move to be taken, a Wakhí brushed past him, and slipped a note into his hand. It purported to be from some one named Mubárak Kadam, bore no date, and was to the following effect:—

"Letters arrive here daily from the Sardár, saying that the English officers are to be charged for their supplies, and that they are to be forced back by some means or another. But do not go back. They cannot force you. They are afraid lest you should go to Faizábád. The Amír has told the Sardár that he must make you go back, on any pretence. They fear that you should discover their intrigues with the Russians. Do not show this letter to any one, because we are in the clutches of the tyrant. Burn it when you have read it. Pray be advised by me, and do not go back."

Soon after this incident Muhammad Sarwar Khán sent up for Colonel Lockhart's perusal a letter that had reached him from Sardár Abdulla Ján. The letter bore the Sardár's seal, and was addressed to the Governor, to Captain Khair Muhammad and his subaltern, as well as to Muhammad Sarwar Khán. Its substance was as follows:

"I have received your letter. I have already written to you more than once that Colonel Lockhart should be made to return, and that he should not start for Zebák until I receive our master's orders, and that, should he refuse to return, something untoward may befall him. If he stays in Wakhán, pending our master's orders about him, then let him have provisions on payment only. Write every day as to what he is doing. I have told the Amír all the circumstances. Be very careful that he does not start for Zebák until I receive His Highness' reply."

Colonel Lockhart now wrote a reply to the Sardár's two letters. In this he stated that, as he did not wish the Sardár to suffer on his account, he agreed to remain at Kala-i-Panja a day or two longer. He enclosed the communication received that morning from Kashmír, in the original, and with it a translation of its purport into Persian, adding that the men who had brought it from Kashmír were now on their way back by the Baróghal Pass, with a copy of the entire correspondence between the Sardár and himself, so that the Supreme Government would soon be in possession of all the circumstances. He then asked for 2,000 rupees to be sent to him from the sum he believed his Government had remitted to Badakhshán, and expressed the hope that, although the Sardár was endeavouring to stop his progress, he was not detaining his letter bags. In conclusion Colonel Lockhart wrote :—

"It now appears that you desire me to pay for my supplies, whilst you keep back my money. I cannot understand you. As for myself I shall leave the Amír's territory when I receive the Amír's own letter telling me to do so, not before, and this very day His Highness' consent to my being here has been again communicated to me, as the enclosed will show you."

Affairs looked now so serious that Colonel Lockhart felt compelled to take a step most repugnant to himself. He wrote to Bakhshí Mulráj, setting forth the straits he was in for money, and requested that official to let his Government know how payment for supplies had been suddenly demanded, whilst no money was allowed to reach him. The letter, in case of interception, was written in the Gurmukhí character, and the Bakhshi was told to communicate its contents to the British Resident in Kashmír by telegraph over such section of the wire as might have been restored since its yearly destruction by the winter's snow. The letter went in duplicate by separate messengers, at several hours' interval, in case of interception. A diary letter was also sent by one of the messengers, addressed to the Foreign Secretary. This was to be thrown away or destroyed should there seem to be any chance of its being seized. The entry for May 31st ran thus :—

"31st May. Post from Kashmír *vid* Gilgit and the Baróghal Letter from Ramsay, dated 5th May, forwarding copy of your telegram of 4th May to St. John, reporting Amír's sanction to our coming here. Two letters from Sardár Abdulla Ján. They and my reply enclosed. I need not enlarge on the situation. It is about as nasty a fix as a man could well be in, but I am confident you are putting pressure on now, and will support me. The money must be lying waiting for us, and this payment scheme is simply to squeeze us out of the place, as the Sardár knows we have little money left, and was asked from Sarhad (I think) to send us Rs. 2,000 from the amount paid by you to my credit. His Excellency the Viceroy must be annoyed at all this, and vexed, perhaps, that we were ever allowed to enter Afghán territory, but I feel sure he would not wish me to give in to the insolence of any Sardár, and to turn tail. If the Amír will send me his orders to go, I'll go, but to be driven out of Afghán into Chitrál limits cannot but have a bad effect, and I trust your energetic protest will have spared us this indignity. The more I think of it, the more likely it seems to me that Hunza was instructed to stop us at any hazard,—instructed I mean by Abdulla Ján. As I before pointed out to you, the fact of Ghazan Khán sending off a letter with us to the Sardár looked suspicious. There can't be much correspondence between those countries usually. A little anonymous slip was thrust into my hand to-day by a Wakhí, who disappeared without giving me a clue to the writer. I enclose it. I am sending a telegram to Bakhshí Mulráj (or his *locum tenens* at Gilgit) in Gurmukhí, as no one knows English there (and Persian is dangerous) for despatch to you. This goes in duplicate, one copy by a man of Woodthorpe's, who goes on to night, the other by the two Gilgitís in broad daylight. One should arrive with luck. Clouds will clear away doubtless in time, but at present the outlook is not pretty."

Nothing of importance occurred on June 1st, except that in the evening a letter, dated May 18th, arrived from Kábal, the writer being an Afghán gentleman, by name Ata-ullah-Khán, a native officer in Colonel Lockhart's former regiment, the 10th Bengal Lancers, who had now been appointed British Agent at the Amír's capital, with the honorary rank of Lieutenant-Colonel. Ata-ullah-Khán wrote that he had sent some packages for Colonel Lockhart a fortnight before, to Mazár-i-Sharíf, with the Afghán Boundary Commission mails. He offered his services at Kábal, asked when the mission was to enter Káfiristán, and sent some Indian newspapers which he said he would gladly send regularly in future, as he knew the Amír had restricted the rapid postal service to the carriage of letters only, for the Boundary Commission.

Colonel Lockhart now thought of a plan by which he might expose the game of his opponents, and possibly force them to modify their obstruction. His plan was to let the messengers of the day before have another day's start, and then to send to the Sardár a copy of an imaginary telegram sent to the Foreign Secretary, reviewing the situation and criticising the Sardár's action.

The message, thus concocted, ran as follows:—

"Dated the 31st May 1886. From Colonel W. S. A. Lockhart, C.B., to Foreign Secretary.

"I reached Amír's limits 12th May. Received with all honour by His Highness' servants sent on by Sardár Abdulla Ján, from whom I received a verbal message of welcome. Was provided with every kind of supplies. On 19th received unsigned letter from Sardár, dated only Rajab, without any day, forwarding a paper said to be copy of a letter from the Amír to you, in which His Highness remonstrated about my going into Káfiristán, but said nothing against my entering his territories. The Sardár at the same time said we had arrived without permission, and should go back. As this letter had gone round by Chitrál and Gákúch, I took it for an old one and replied to the Sardár accordingly. On 23rd I received another letter from the Sardár, saying I had no business in this country, supplies not meant for me, &c., and that I should go back. On 24th replied sending translation of your first telegram conveying Amír's sanction. On 30th wrote to Sardár saying I intended to move forward on 1st June. On 31st, that is to-day, received your orders of 4th May by way of Gilgit and Baróghal repeating the Amír's sanction. To-day also I have received two letters from Sardár Abdulla Ján. He refuses to acknowledge the copy of telegram sent him, and begs me not to move as he has no orders from the Amír, and my movement would involve him in trouble. Replied that I would halt here some days longer on his account, but that without the Amír's orders I could not go back. I am now told that we are to pay for supplies and also for the supplies used since our arrival, but no money is sent me, although I understand you have placed a large sum to my credit in Badakhshán. My letters do not reach me from you, although a post is sent twice weekly from Pesháwar to Kábal for me. From this it is plain that the Sardár is trying to force me out of the country. I need not tell the great Government that, being here by its orders and with the Amír's approval, any action of the Sardár's without his own master's written authority will have no effect upon me, but I desire to inform the Viceroy of what is going on, by some other route than Badakhshán, for I fear

that, as your letters do not reach me from there, those sent by me may not reach you. I have written to you on the following dates since reaching the Amír's dominions, 14th, 20th, 24th, 26th, 30th, and 31st May.

"To-day I have sent the Sardár the letter just received through Kashmír, dated 4th May, repeating Amír's consent, but I do not expect him to accept it."

Three copies of the above were made out in Persian for despatch on the following day to the Amír, the Sardár and Ata-ullah Khán.

On the 2nd a packet was made up of the three letters and their enclosures, and sent down to Muhammad Sarwar Khán with the request that it might be despatched by a horseman riding post (post horses were laid at stages all the way to Faizábád, it appeared). The letters for the Amír and the Sardár were in substance the same, viz., "2nd June. "(After the usual compliments.) Before sending off the two servants of "the Maharájah of Kashmír to Gilgit, with copies of all the correspondence "between Sardár Abdulla Ján and myself, I had already in the night "despatched a trusty servant of my own, who by the grace of God has "already reached Yásín territory. This messenger bore a telegram from "me to the great Government, which is to be despatched from Gilgit, "and I enclose a translation of it for your information."

To Lieut.-Colonel Áta-ullah Khán Colonel Lockhart wrote as follows, telling him in a private postscript to impart its contents to the Amír, should he find an opportunity to do so.

"I was much pleased to receive your letter of the 18th May last night. Many thanks for it and for the newspapers you were kind enough to send with it. It is a great pleasure to me to find an officer of my old regiment, the 10th Bengal Lancers, in such a high position as that which you now hold, and I should much like to meet you again. I send you a copy of a telegram I despatched on 31st ultimo to Gilgit for the information of His Excellency the Viceroy at Simla. I also enclose copy of a letter I am now sending to Sardár Abdulla Ján. The Sardár is acting under some mistake, and I doubt not that all this will be satisfactorily explained hereafter. Meanwhile I am quite unable to understand what his meaning is. Before this letter reaches you, I feel sure His Highness the Amír, to whom I have already sent a copy of the telegram, will have ordered the Sardár to let me pass. I had great difficulty in getting out of Hunza, owing to the treachery of the Kanjútís; I have now equal difficulty in getting out of Wakhán, owing to the mistake of Sardár Abdulla Ján, and I have no doubt I shall have many more difficulties in getting into Káfiristán and getting out again, but thank God I am an English soldier, and English soldiers are not to be frightened by

difficulties. As soon as you hear that His Highness the Amír has ordered Sardár Abdulla Ján to let me pass into Badakhshán, will you kindly send an express to Pesháwar, so that a telegram reporting the circumstance may be at once sent to the Foreign Secretary. This is very necessary, because His Excellency the Viceroy will be astonished when he hears of my having been stopped in Wakhán."

A copy of the letter to the Sardár and its enclosure was now shown to Muhammad Sarwar Khán, who expressed the liveliest satisfaction, both he and Captain Khair Muhammad declaring that Colonel Lockhart was absolutely right, and that they would stick to him, whatever might happen. As to the payment for supplies, Muhammad Sarwar Khán said they would be carrying out their instructions if a note of hand were given for value received until the money should arrive from the Sardár. The Governor assented to this plan, so that the fear of being starved out of the country disappeared for the time. In the evening of the 2nd a letter arrived, *viâ* the Nuksán pass, from Kót Dafadár Muhammad Nawáz Khán. His party had been stopped, and he enclosed two letters from the head mán of Zebák, which had been sent to him by the Mehtar of Chitrál, and which he had read. One letter was to Colonel Lockhart, whom this head man apparently believed to be marching in person with the baggage from Chitrál: it ran as follows:—

"I hear you are coming to Zebák by way of Sanglích, and therefore write to say that no provisions have been stored for you here. You will accordingly be starved if you come here. Stay where you are. If you advance, the road across the frontier of this God-granted kingdom will be closed to you. As this is the order of my master (Abdulla Ján) there can be no further discussion on the subject. By God's grace all is well here. Know for certain that if you come here you will receive no supplies."

The other letter, to the Mehtar of Chitrál, warned him that he had better stop Colonel Lockhart in Chitrál, as otherwise he would be starved. Colonel Lockhart merely wrote, on receiving these, to the Mehtar, saying that Abdulla Ján was, no doubt, labouring under some mistake, which would speedily be cleared up on the Amír's orders arriving. Another cause for anxiety had now appeared, and nothing could be done to remove it, at least Muhammad Sarwar Khán could suggest nothing for the present, and there seemed to be quite enough on hand already to perplex the British officers, whose own chances of ever reaching Zebák did not seem very great. On June 3rd Colonel Lockhart told Muhammad Sarwar Khán and the other officials concerned that he intended to advance on the morning of the 5th, should no direct orders to the contrary arrive meanwhile from the Amír, or from the Indian Government. He gave them a letter to the Sardár intimating this intention, and asked them to despatch it, together with one for the Amír.

The letter to the Amír forwarded a copy of that to the Sardár, and simply expressed a hope that it would meet with His Highness' approval. The letter to the Sardár ran :—

"I wrote to you on May 31st to say that I agreed to remain at Kala-i-Panja a few days longer. Since then I have heard from Colonel Áta-ullah Khán, British agent at Kábal, who makes no mention of any objection on the Amír's part to my onward journey. In fact he evidently imagines that I am now on my way to Káfiristán. I have stayed here some days on your account, but have now resolved to move forward the day after to-morrow. If you oppose my advance, I shall simply halt and pitch my camp, and again await orders."

On June 4th the four officers went down early in the morning to bid farewell to Ghafár Khán, but found that he insisted on accompanying the party to his border, although suffering from the effects of a serious operation performed on his eye a few days before by Surgeon Giles. He said he feared that, without his presence, there might be trouble about supplies. A handsome *chogha* and turban were presented to him, and the offer of his company was very gladly accepted. In the afternoon a letter arrived from Mr. Ney Elias, dated June 1st, from Chattah, near Faizábád. He said that 14,000 rupees had reached Sardár Abdulla Ján for Colonel Lockhart on May 13th. The feeling of the Afgháns was, he wrote, daily becoming worse towards the English. This he attributed to the intrigues of Muambar Sháh, whose people, the Kháka Khél of Naoshéra, Colonel Lockhart had long before believed to be intriguing in Chitrál and elsewhere against the British, although they themselves are British subjects, and enjoy peculiar privileges in their settlement in the Panjáb.

The baggage was sent off at daybreak on the 5th, the officers leaving Kala-i-Panja at 5.30, accompanied by the Governor, Muhammad Sarwar Khán, and a number of mounted followers, Afghán and Wakhí. The first few miles were over boulders, but the latter and greater portion of the road lay through a succession of fine meadows, on which grazed numerous brood mares with their foals. Camp was pitched at 4 p.m. on good turf near the village, which has 200 inhabitants. Forage and firewood, as well as all other supplies, came in abundantly, and everyone was exhilarated by the feeling of renewed action after so long a halt.

It was an especial relief to have accomplished one day's march without the interruption threatened by Sardár Abdulla Ján. Muhammad Sarwar Khán urged long marches, so that Zebák might, if possible, be reached before the Sardár should have made up his mind to stop the party. Meanwhile, every rise in the ground was regarded with suspicion, as it seemed possible that behind it an Afghán detachment might be drawn up to bar the way.

Midway (where a road goes off towards the Uchil Pass) a post-bag was delivered, which contained an old letter from the Foreign Secretary, on the subject of the slave trade between Chitrál and Badakhshán, and nothing else of any interest. Muhammad Sarwar Khán rode the march with Colonel Lockhart, and talked the whole way. He had been among the Russians, in the retinue of Sardár Abdulla Ján, who, he said, could read and write their language perfectly, although he disliked them cordially. "Everyone must "dislike the Russians," he remarked, "who knows them well; but, neverthe- "less, everyone must admire their infantry soldiers. Their officers are "devils: corrupt, debauched, and tyrannical; but the men themselves march "all day, and all night too, on black bread that an Afghán, by God, would "not give to his horse, all they ask in return being permission to get drunk "once a week."

Regarding the Boundary Commission, he asked if he might speak his mind without offence, and on Colonel Lockhart assenting, he did speak very plainly indeed. "I look upon the whole thing," he said, "as *tiflána bází* "(childish play). No man of sense believes that the Russians will respect "any line laid down by this Commission. What will happen is this. They "will make all their arrangements and assemble their troops at points "behind the line, and then they will suddenly concentrate, cross it, and "seize us by the throat."

The *bád-i-Wakhán* blew for some hours, but it did not now carry so much dust with it as at Kala-i-Panja.

On June 6th the party marched to Urgan, 19½ miles. Everything was off the ground by 5 a.m., and Muhammad Sarwar Khán provided ponies for two tents, which were brought on by some Wakhís, and pitched on the officers' arrival, so that they had shelter from the bitter wind at once. A messenger arrived in the afternoon with a letter from Kót Dafadár Muhammad Nawáz Khán, dated 4th June, from Sanglich. He had disregarded orders from Zebák, and had crossed the Afghán border, reaching Sanglich on the 2nd. From Sanglich he had been peremptorily ordered back, but had refused to move, and now wrote to say that his supplies had been cut off, and that his people were in danger of starvation. Muhammad Sarwar Khán at once wrote to the Zebák headman, abusing him roundly for having admitted the Kót Dafadár's party (so as to save himself, as he explained), but ordering him to issue supplies at once. "The blame is "entirely yours," he wrote, "but now that you have let them enter your "district you must feed them, or there will be evil consequences."

"If he does not give your people food after that," said Muhammed Sarwar Khán, as the messenger galloped off with his letter, "I swear I will have a

" hundred blows with the stick laid on him in your presence, whatever " may come of it."

At Urgan the valley widens a great deal, and there is much more cultivation than higher up. One of the Baltís showed symptoms of lockjaw at Urgan. (He died a few days later.) When camp had been pitched, and the Afgháns had all gone off to the village, a Wakhí appeared at Colonel Lockhart's tent, and begged for admittance. He said he was the *mírzá*, or clerk of Ghafár Khán, the Governor, and had written the note thrust into Colonel Lockhart's hand at Kala-i-Panja on May 31st, warning him of the machinations then going on. He asked for news of his exiled Mír, Alí Mardán Sháh, and said the people of Wakhán were looking to Colonel Lockhart to have him restored to them. The Wakhí *naib* (deputy-governor) had ridden the march with Captain Barrow, and poured out his bitter feelings against the detested Afgháns. In the evening a post arrived, bringing the copy of a cypher message from the Foreign Secretary, which had been telegraphed to Colonel Ridgeway on April 27th, and which ran as follows :—

" If you are in communication with Lockhart, send him the following secretly: ' It is possible that Government may agree to a frontier that would ' exclude Khámiáb district from Afghánistán, and it is almost certain that ' if they do, Afgháns will be greatly incensed. It may not then be safe for ' you to stay in Afghán territory. Another matter; be careful not to force ' your way into Káfiristán against the wish of the people. Amír has openly ' expressed in letter to me suspicion that we are trying to occupy Káfiristán, ' with aid of Chitrál.' "

On June 7th an early start was again made, and camp was pitched at Warg, the distance being 16 miles. Digargand, Warap, Langar and Shigarf were passed on the way. The road was easy enough, but the length of the marches began to tell on the Baltís, many of whom suffered from sore feet. On arrival a letter was delivered from the Kót Dafadár. It was dated the 5th, and reported that his party had been without food for two days, and that the headman of Zebák had proclaimed that he would burn down the house of any one caught selling provisions to them. The Kót Dafadár had informed the headman that he would not go back without orders, whatever hardships might be in store for him. He reported his Baltís as being in a wretched state, many cases of frost bite and snow-blindness having occurred. The Kót Dafadár forwarded cordial letters from the Mehtar of Chitrál, his sons Afzal-ul-Mulk and Murid Dastgír, and his *Díwán Bégí*, all offering services and professing devotion. It became apparent during the day that Ghafár Khán had fallen out with

Muhammad Sarwar Khán. At night the latter got a letter to say that supplies had been issued to the Kót Dafadár.

On the 8th Ishkashm (or Shikashm) was reached, distance 15 miles. An easy road. Ishtrágh was passed at four miles (100 inhabitants), and at the tenth mile Patúr (60 inhabitants), the last hamlet in Wakhán, was reached. Here Ghafár Khán took his leave. Before parting he took surgeon Giles aside to show him his eye, and seized the opportunity to whisper, "Tell the Colonel to beware of the man with the hat. He is a *shaitán*, and understands English." As both Muhammad Sarwar Khán and the captain wore lambswool hats, it was doubtful whom the Governor meant, but the coldness which had arisen between himself and Muhammad Sarwar Khán seemed to point to the last-named. Ishkashm was the pleasantest place that had been seen north of the Hindú Kush, and camp was once more pitched amid trees—*chinárs* and poplars. Badakhshán had now been entered, and still no opposition was offered. Muhammad Sarwar Khán had been, or had pretended to be very apprehensive during the march that something unpleasant might happen, and had looked anxiously at each mounted countryman who approached, quoting in justification the Persian proverb, *Már gazída az rísmán daráz metarsad* (One who has been bitten by a snake dreads a bit of rope). On the road many very fine magpies were seen, known in Afghánistán as *mullá gak* (worthless teachers). At night a letter arrived from Mr. Ney Elias, dated the day before from Bahárak. He wrote to say that he would join the party at Zebák, should it arrive there, and expressed a hope that Colonel Lockhart would have no conflict with the Sardár's people, as Captains Gore, Talbot, and Peacocke of the Royal Engineers, were surveying in detached parties in Kataghan, and might be placed in an awkward position. "The strange thing," he wrote, "is that no Afghán official will " admit that he knows anything of your whereabouts or movements. The " same at Faizábád—all pretend that nobody knows anything about you " but the Sardár."

On June 9th Zarkhán was reached, 13 miles. The Sardáb pass was crossed near Ishkashm, 1,000 feet above the plain, but the rest of the march was easy, through meadows. The officers marched at 5.30, and arrived at 9.45 a.m., the baggage reaching the ground at 3 p.m. It was a wet morning, but the sky soon cleared. Muhammad Sarwar Khán began to speak hopefully. "I think now that you will not be stopped until you reach Zebák," he said. "As for myself I shall get a month's imprisonment when I rejoin the Sardár; nothing worse than



ZÉBÁK

(LOOKING NORTH).

that probably." A rather villanous-looking Afghán cavalry officer awaited the party at Zarkhán (a village of 45 houses), and issued supplies. Zarkhán is in the Zebák district. On June 10th a short and easy march, 6 miles, was made to Zebák, and camp was pitched near Kala-i-Sháh Abdul Rahím Khán, the fort of the unfortunate Saiyid on whose behalf Colonel Lockhart had interceded with Sardár Abdulla Ján in the preceding October, and who was now in prison at Kábal for alleged intriguing with Russia. On arrival Colonel Lockhart wrote to the Amír and Sardár. To both he expressed regret for having been obliged to disregard the latter's prohibition, and now asked leave to enter Káfiristán with only a few men. He added, in his letter to Sardár Abdulla Ján, that he wished meanwhile to visit Jirm, if there were no objection, to inspect from that place one of the passes into Káfiristán, and concluded by requesting that the money which had arrived for him might be sent forthwith to enable him to pay for supplies. The courier who took these letters carried also one for Lieut.-Colonel Áta-ulla Khán at Kábal, requesting him to send an express letter to Pesháwar, thence to be telegraphed to Simla, announcing the safe arrival of the mission at Zebák.

On the 11th the junction of the Agram and Dúráh passes was visited, and on the following morning the Kót Dafadár's party marched in.

An extract from Colonel Lockhart's diary letter to the Foreign Secretary, dated 12th June, relates what occurred on those days.

"We arrived here all right on the 10th, and I at once sent off an express to Áta-ulla Khán at Kábal, telling him to send to Pesháwar requesting our arrival to be telegraphed thence to you. Yesterday we went up to the junction of the Agram and Nuksán Passes, and Woodthorpe connected his work, begun from the Chitrál side, most satisfactorily. We got back after a 30 miles' ride and climb, and got across the rapidly swelling stream (united waters of the passes) just in time. It was an extremely hot day, and there must have been a general melting up above, for to-day not only is the river here swollen quite early in the day, but the tributary streams that yesterday morning were dry are now respectable little torrents. Had we not made the trip yesterday, we should probably have been unable to make it at all. We were met just out of camp by a Badakhshí, who told us that a couple of villagers had been carried off by Káfirs on the 9th from the ground we were going over, so Muhammad Sarwar Khán would not advance until we had sent back for more weapons—express rifles, &c. It was a successful day, except for Muhammad Sarwar Khán, who, in his heavy lamb's wool hat, got a touch of the sun

walking up the pass, and had to get under a bush for a time. It is a good long way for the Káfirs to have come—we saw the spot. The men it seems were rescued by their comrades after all, but the Káfirs got off. They say here that the Káfirs always kill their adult male captives, and that the two prisoners were only being taken up to some remote place to have their throats cut, so that the trail should not be taken up soon. Last night I got a letter, dated 10th, from Elias saying he is to be in here to-morrow, 13th. This morning the Kót-Dafadár arrived with our Chitrál convoy, all right. Glad to see them again. The party marched across Lake Dufferin which was hard frozen—pretty late this. They suffered but little hardship from Afghán boycotting. Muhammad Naváz Khán has managed capitally. He has been both firm and politic in his dealings with obstruction, and he deserves commendation from you. I would not wish to have a better man for this kind of work. Murid Dastgír, the Mehtar's eldest son, accompanied the party to the crest of the Dúráh, and both he and the old Mehtar sent us kind messages, begging us to go back by Chitrál, and to regard the country and people as our own. The Kót-Dafadár also brought a friendly message from the Khán of Asmár, and I see my way to doing Káfiristán now from the S. should the Amír not hear of our entering the country from his border. It would be charming to go in from opposite Jirm, all the same, and to return by Jalálábád, if not by Kábal-Ghazní-Dáwar. Not a line from Ridgeway, so I fear my letters to him and his to me are steadily burked. I'll go on with this letter to-morrow, after Elias has arrived and given his news. Last night a Wakhí arrived from Kala-i-Panja, and came to my tent in the dark. I had to go with him and interview the son of the Panja Naib (Deputy Governor), who was sitting crouched in a ditch, and who gave me a letter from his father. The Naib had let me know that all our supplies had been seized without payment or remission of taxes to their value, so I had promised to give him an order on Gilgit for the amount if he sent me a bill. His letter said that no money was wanted, but that he asked for a certificate to say he had done good service for us, 'so that I may be known to the English when they come and make 'us glad by taking our country from our devilish tyrants, as they surely 'will some day. We all look for this and are contented to wait.' I gave the young man a *rázínáma* for his father and a present of 20 til'as, and he and his companion disappeared in the moonlight, fearful of being seen by our Afghán friends.

In the evening of the 12th a horseman rode up with three letters from Colonel Ridgeway, dated respectively 28th April and 4th and 13th May,

and one from Mr. Ney Elias, dated 11th May. It was clear that these must all have been stopped at Faizábád by Sardár Abdulla Ján. Colonel Ridgeway sent a copy of the telegram from the Foreign Secretary, dated 26th April, which Colonel Lockhart had already received at Urgan on the 6th June *viâ* Kashmír, and in which he was warned that the exclusion of Khámiáb from the Afghán boundary might incense the people and make it unsafe for the Mission to remain in Afghán territory. Colonel Ridgeway announced that 14,000 rupees had been sent to Sardár Shér Ahmad Khán at Faizábád, and suggested that Colonel Lockhart should tell that official his wishes regarding the disposal of the money. He further wrote in his letter of 13th May:—

"The Amír has sent orders that you are not to be admitted into Badakhshán. I hear this confidentially, but Abdulla Ján has written to the same effect. It appears, from a copy of a letter from the Amír to the Government of India, which I have seen, that he thinks you are contemplating the occupation of Káfiristán. I have telegraphed to the Government of India how the matter stands, and they may be able to persuade the Amír to waive his objections. Meantime the Afgháns would not hesitate to use force if you tried to proceed against their will, and then there would be a general blaze up. I can sympathise with you for we are much in the same boat. When the Amír took fright at your expedition, he issued orders that none of our party were to proceed beyond Balkh, and consequently all my arrangements for the survey of Roshán and Shighnán, and (more important still) for the exploration of the Ghorband passes are suspended, if not entirely stopped, and my surveyors have been necessarily recalled. It is very disheartening."

Colonel Ridgeway added that he had sent a certain Sardár Ibráhim Khán with a letter to the Mehtar of Chitrál, inquiring about roads and about forage for the horses and mules of the Commission. Colonel Ridgeway proposed to "stock the road from Sarhad to Gilgit" with all other supplies. The circumstance of these letters having been delivered after a long retention, seemed to signify that obstruction was now to cease, but Colonel Ridgeway's letters implied that Colonel Lockhart's movements were interfering with the work of the Boundary Commission, and that officer had therefore to consider whether it was not his duty to retire altogether from the scene.

Early on the 13th Colonel Lockhart sent for Muhammad Sarwar Khán and told him that Colonel Ridgeway had written to the effect that the Amír had himself issued orders that the Mission was not to be admitted into Badakhshán. He replied:—"I have written many letters to the Sardár, and

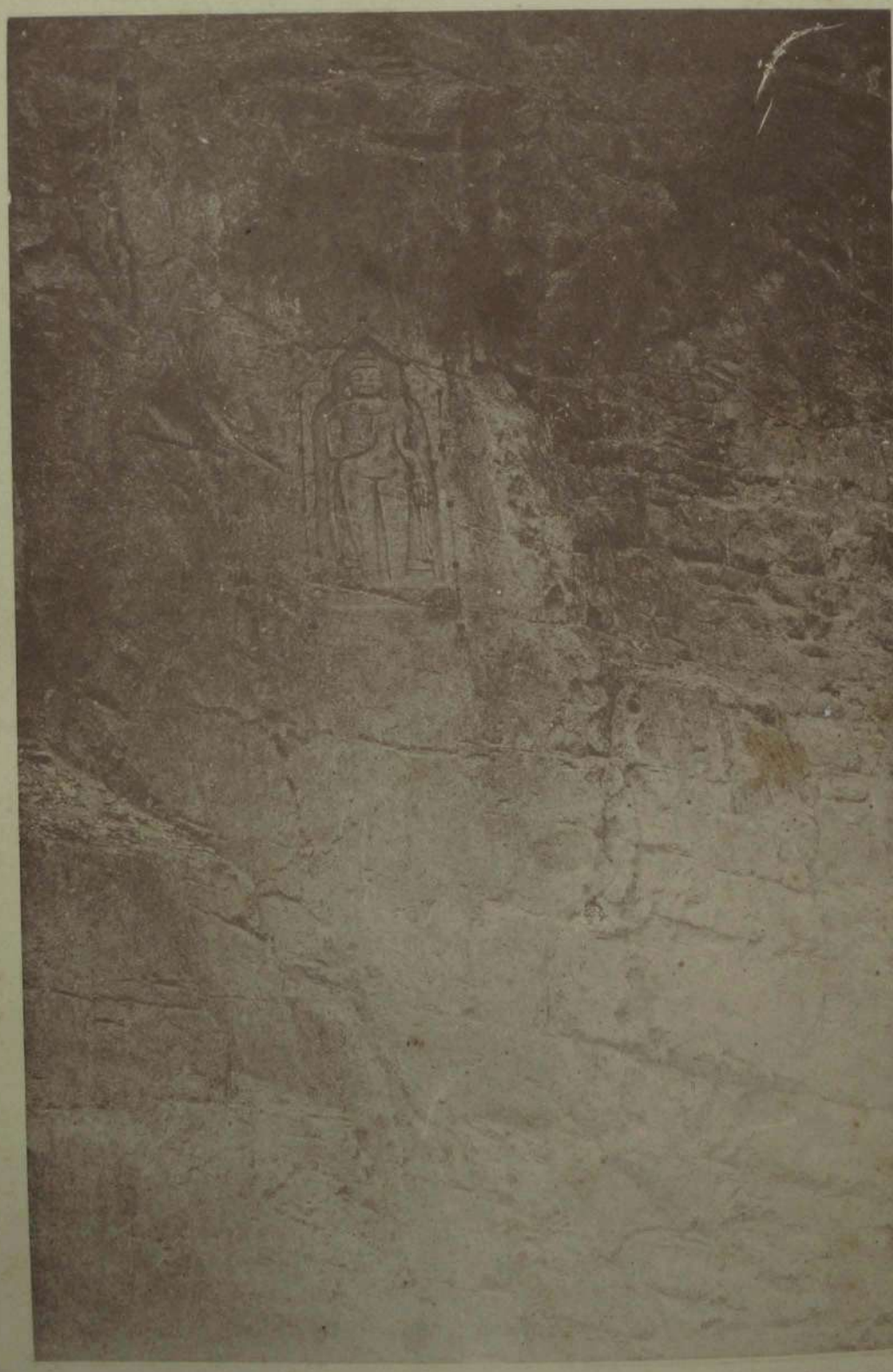
" in each have told him that you could have done nothing else but go on " until the Amír's own prohibition reached you, as you had your own " Government's orders telling you to advance, and as those orders were " issued with the Amír's consent."

Mr. Ney Elias appeared at noon, and shortly afterwards an express arrived from Chitrál, Mehtar Amán-ul-Mulk sending an urgent recommendation to Colonel Lockhart to withdraw into his country without further delay. In his diary letter to the Foreign Secretary, Colonel Lockhart asked, in this day's entry, if there would be any objection to his entering Káfiristán once again from Chitrál. He had only promised the Amír not to enter that country from Badakhshán without His Highness' consent, but Káfiristán was not subject to the Amír's rule, and it seemed preposterous that he should be allowed to object to British exploration in that country if the explorers entered it from another state equally independent of Afghánistán.

Colonel Lockhart wrote :—

"The Kót-Dafadár says the Káfirs are all looking out for us with eagerness. On the way to Asmár he met some Kamdésh Káfirs and had an adventure. Shortly, it ended in his being recognised by a man who had come to our camp, and he was let go with a message for us to be sure and visit the country, and the Káfirs spared the lives of two Asmár men with him on his account. The people in the north, he says, have also been sending in to ask when we are going there. Our trip through Hunza and over the two passes is spoken of as a great feat in Chitrál. Everyone thought we should either be stopped or killed, and our 'ikbál' is now considered to be invincible."

On June 14th Muhammad Sarwar Khán begged Colonel Lockhart to shift camp across the stream to some higher ground, as the people thought his tents might be washed away by a freshet brought down by the melting snow. The ground proposed for the new site was bad in a military sense, and the suggestion was rejected. The atmosphere seemed full of intrigue, and it was impossible to trust any one. The Afghán captain (a Tájik) warned Colonel Lockhart against his colleague Muhammad Sarwar Khán (who was a Ghilzai), whilst Muhammad Sarwar Khán warned him against Mr. Ney Elias' "*munshi*," who, he observed, "az shaitán shash kadam pish merawad" (is six paces ahead of the devil himself). Horsemen were seen going and coming at night, evidence of correspondence between Abdulla Ján and his underlings, but never a line from the Sardár reached Colonel Lockhart. The only plan seemed to be to stimulate Sarwar Khán's cupidity. If a *shaitán*, he was a light-hearted one and friendly enough—in fact most cordial, so far as manner and words went—and, like all Afgháns, he was



ROCK CUT FIGURE OF BUDDHA

(NEAR GILGIT).

avaricious, so it was not difficult to keep him straight by a few delicate hints of reward, and to disregard the others. He had been requested to purchase four days' supplies for the party, to be paid for on receipt of the money from Khánábád. The stores were procured from Ishkashm, and their possession gave the power of moving at once. One of Colonel Woodthorpe's Pathans was now sent out three marches on the Faizábád road, ostensibly on his way to Mazár-i-Sharíf, with orders to return at speed should he hear of any troops moving towards Zebák. It seemed just possible that an attempt might be made to cut off the party, but, with a couple of hours' warning, the baggage could have been sent off towards the Dúráh, and pursuit over that difficult ground might then have been laughed at. As this was the fifth day at Zebák, and the Sardár had made no sign, it was determined to move towards Chitrál on the 17th. The Mission would then have been a clear week at Zebák, and its retirement could not be regarded as a flight, whilst the Boundary Commission would be disembarrassed, and any anxiety that might be felt by the Indian Government would be dispelled. This resolution was arrived at unwillingly, because it implied the defeat of what had been the intentions of the Government, and because it placed four British officers in the humiliating position of being forced out of a country ruled over by a vassal of their Sovereign, because that vassal was suspicious of their motives, and disregarded the assurance he had given to the Viceroy of India that he would receive them hospitably and further the ends they had in view. Muhammad Sarwar Khán was told that, failing a reply from the Sardár, camp would be shifted to Iskatól, 10 miles up the Dúráh road, on the morning of the 17th, in order to avoid the consumption of supplies in the Zebák neighbourhood, and that the party would thence proceed by regular marches towards Chitrál, and await instructions in that country.

On June 15th, 14,000 rupees in silver arrived from Faizábád under an Afghán guard, the commanding officer of which presented a letter from Sardár Abdulla Ján, without date. This acknowledged Colonel Lockhart's letter of the 2nd June from Kala-i-Panja, and declared that he, the Sardár, had had nothing to do with stopping the mail-bags of the Mission. There was not a word about the disregard of his own letters demanding the retirement of the party from Afghán limits. Colonel Lockhart gave the officer a reply to take to the Sardár, in which he acknowledged the receipt of the money and intimated that, unless permission to visit Jirm reached him meanwhile, he intended to march towards Chitrál on the 17th in order to avoid consuming supplies stored for the Boundary Commission. He added that he would return to Badakhshán as soon as permission reached him to

visit Jirm, and that from Jirm he would then reconnoitre a pass which he understood led into Káfiristán from opposite that place.

At night a small post arrived from Khánábád containing a letter from the Foreign Department, dated 22nd May, referring only to some stores for the party; also letters from the Amír, dated 5th, and the Sardár, dated 13th June. The Amír enclosed a copy of his letter of 7th May to the Foreign Secretary, already quoted, in which he adhered to his decision not to allow the party to enter Káfiristán from Badakhshán. In forwarding this the Amír told Colonel Lockhart that he was a man of sense, and could please himself, but that if, after this warning, Government should still sanction the enterprise, he (Colonel Lockhart) ought to think twice before committing himself, because the Káfirs were notoriously faithless, and any accident to the Mission would involve both England and Afghánistán in a troublesome matter. The Sardár excused himself for the delay in sending letters and money, and again denied having wilfully detained them.

On June 16th Colonel Lockhart wrote to the Amír. He regretted the trouble he had given, and announced his intended departure for Chitrál on the following day, so as to relieve the strain on the resources of the country. He was now, he wrote, about to send the bulk of his men and baggage to India by way of Chitrál, retaining only six sepoys, 50 baggage coolies and servants, and four ponies, until instructions should reach him. As regarded Káfiristán, he remarked that the Foreign Secretary had doubtless told his Highness what the aim in exploring that country was, but he now repeated the explanation. The object in view was to study the natural defences and approaches of an unknown country, and to acquire knowledge that would be of equal benefit to Afghánistán and to England. To the Sardár, Colonel Lockhart wrote civilly, and expressed regret for the tone he had been forced to adopt at Kala-i-Panja. In the evening two letters, dated 4th June, arrived from Colonel Ridgeway. He had written on the first of the month to someone named Kází Saad-ud-dín to remonstrate about Colonel Lockhart's detention in Wakhán. He now wrote—

"I am telegraphing to-day to the Government of India that I do not think your party should enter Káfiristán from Chitrál while this Mission is in Afghánistán, as it would greatly irritate the Amír, and might have very mischievous results if we were marching back by Kábal. I have told them I have informed you of my opinion, and that it is for them to issue orders."

In another letter of the same date Colonel Ridgeway hoped that Colonel Lockhart would not enter Káfiristán, even from the Chitrál side, as the

Amír would be angry, and the Boundary Commission might suffer in consequence.

On June 17th camp was moved to Iskatól, 10 miles. Before marching Colonel Lockhart paid the amount due for supplies from the date on which they had first been charged for, but he had little faith in the money ever reaching the poor people who had provided them. Muhammad Sarwar Khán guaranteed the payment in his usual light-hearted manner, and marched with the party, saying that he was bound to see them safe to the frontier. The march was an easy one. The Dehgul stream was forded a mile from the old ground; there was then a tract of meadow-land for two miles, after which six miles of stony plain. At the 8th mile the right bank of the river was gained by a wooden bridge 60 feet long, and the left bank was regained, 1½ mile further on, by a bridge 30 feet long. At Iskatól there was much cultivation, and supplies were brought into camp in abundance. The village had 60 houses, and camp was pitched just beyond it. On arrival Colonel Lockhart wrote another letter to the Amír, prompted by Colonel Ridgeway's communication of the 4th, to say that it did not appear likely, from a post just received, that the Viceroy would sanction his visit to Káfiristán at that time. He therefore asked to be allowed to go down to Jalálábád from Chitrál by way of Asmár, and thence through the Khaibar to Peshawár. He wrote also to Colonel Ridgeway, informing that officer of his movement, and reported the same to the Foreign Secretary.

On June 18th Sanglich, 9½ miles, was reached on the right bank, the river being crossed by a bridge. At this point a footpath leads to the Uní pass, turning the Dúráh, but the pass was said not to be open until August. Sanglich has 60 houses, and stands in the midst of cultivation. Before leaving Iskatól, a wonderful waterfall was visited near the village. In the afternoon, when the snow on the mountains has been under a hot sun, the volume is increased many fold, but the officers only saw it in early morning. A post arrived at night containing a cypher letter from the Foreign Secretary, dated April 14th, in which the Amír was said to be very ill. It was evident that Sardár Abdulla Ján was now sending off a number of accumulated mail bags by instalments.

On June 19th the party encamped at Gazikistán (*i.e.*, the place of tamarisks), distance 7½ miles, over an easy road. At the fourth mile the river bed widens out, and the plain thus formed is named the Gaugird Dasht, from the sulphur found on it. At the sixth mile the Dúráh stream was forded, and the path then ran up its left bank to the encamping

ground. The name seemed to have been bestowed on the *lucus a non* principle, as no tamarisks were visible. At night Colonel Lockhart sent for Muhammad Sarwar Khán and Captain Khair Muhammad Khán, and gave them each a handsome present, *separately*, so that they might be able to deceive each other as to their respective rewards to their hearts' content. A suitable sum was also given to be distributed among their followers. They were much gratified, and Muhammad Sarwar Khán said he was grieved that the officers had experienced so much trouble, and was certain that the cause would be made clear, and satisfactorily explained some day. During this day a great number of trout were caught in the stream, which was first dammed, and then the fish were driven down from above, and taken out in blankets. Everyone in camp had as much excellent fish as he could eat.

On June 20th the officers parted on the best of terms with their Afghán companions, who received letters to the Amír and to Sardár Abdulla Ján setting forth the excellent service they had rendered to the Mission. Camp was moved four miles further up, firewood being carried on from Gazikistán, and again a great part of the day was spent in catching trout. The idea was conceived of carrying a number across the Dúráh on the following day, thus introducing fish from the Oxus basin into that of the Indus, but arrangements were faulty, and none survived the transit. In the afternoon a Persian speaking Káfir, by name Malai, walked into camp, a young girl carrying the baggage of himself and four other Káfirs. Malai had been seen by the officers in the preceding year (either at Chitrál or at Lut-dih) and was treated as a guest, but not one of the party would touch the trout offered to them, and showed signs of the liveliest disgust at the idea of eating fish.

Camp had been pitched on the 20th, at 12,800 feet above sea, and on the 21st a severe march was made across the Dúráh to Sháh Salím, 10,900 feet, the Mission being once more in Chitrál territory, and on ground occupied just nine months before. The march began at 3.15 a.m., and the rear-guard got in at 2.30 p.m, distance 12 miles. The ponies had been sent off at midnight, so as to cross the pass on hard snow. Lake Dufferin was found frozen over, and the path for 1¼ mile skirted it over large boulders, after which it zig-zagged abruptly to a plateau 900 feet above the lake, thence reaching the crest by a gentle ascent. The snow rapidly melted as the sun rose, but Baltís and other followers were so overjoyed to find themselves on the way home, that they laughed at fatigue, and floundered about singing snatches of songs and cracking jokes. From camp to crest the distance was four severe miles, and from the crest to Sháh Salím eight comparatively easy ones, except for the snow.

The Káfir Malai walked the march with Colonel Lockhart, and turned out a very bright and intelligent companion, his Persian being good and fluent. When reasoned with about the treatment of the young girl who carried the bundles of himself and his male companions throughout the long and fatiguing march, he simply looked astonished, but when Colonel Lockhart pointed out the esteem in which the English held their women, and how the Amír of Afghánistán, the Maharájah of Kashmír, and many other rulers, were all the humble servants of the Queen of England (herself the Sovereign of the bravest men in the world), he shook his head, and said he did not understand the subject in the least. "There is no doubt," he said, "that the "English and the Káfirs are of the same race, but our customs are unlike "yours. We only regard our women as useful drudges, to till the fields and "to carry our loads, whilst you look upon yours as your equals, or even as "your superiors—for you say that you allow a woman to govern you. "There is no arguing about this, as none of us could understand your "method."

At Sháh Salîm, Gumára, Jánú, and a good many other Káfirs met the officers and hung about their tents all day. On June 22nd Parabeg (13 miles) was reached, and the Baltís were quite knocked up by the heat, for the day was clear and the sun powerful, and the descent from Sháh Salím was 3,000 feet. They had started tired, moreover, from their exertions of the day before.

The Káfirs came into prominent notice during the day. Early in the morning the intelligent Malai distinguished himself by carrying off the brass cooking utensils of his host of the night before, Sawár Kishen Singh, the soldier-surveyor, who had shared his rations with him. He explained, as he ran away with them to the little adjacent Káfir settlement of Dighari, that he wished to keep them as a "nishán," or souvenir of the worthy Sikh. Murid Dastgír, who had arrived in camp, undertook to recover the things, and did so after a good deal of trouble. Gumára, Colonel Lockhart's adopted son, expressed his strong disapproval of Malai's conduct, but, whilst holding forth on the subject, was suddenly attacked from behind by a ferocious dog, which rushed out of a hut on the hillside, and inflicted a fearful bite on his calf. Surgeon Giles sewed up the wound, whilst Gumára talked throughout the operation, to show his contempt for the pain. He was told that it would be impossible for him to move for many days, and was sent to Dighari and cautioned to lie down and keep absolutely quiet, some sort of lotion being left with him; but he strolled into camp at Parabeg a few minutes after the officers had arrived, and appeared to be none the worse for the accident.

The party marched to Drushp on the 23rd, to Shoghót on the 24th, and entered Chitrál on the 25th. The hospital-compounder, Azíz-ud-dín, who had been complaining for some days, but who had been able to walk across the Dúráh, died on the way in, at Parabeg, of jaundice, but the rest of the party were in good health, and a couple of days' rest at Chitrál quite restored the Baltís. The remainder of this narrative can be told in a few words. It has already been mentioned how the Amír of Afghánistán, in a letter, dated May 7th, to the Indian Foreign Secretary, adhered to his decision not to permit Colonel Lockhart to enter Káfiristán from Badakhshán. On the 9th June the Amír was informed that Colonel Lockhart had already marched for Wakhán, and was told that the Viceroy trusted His Highness would now alter his decision. On the 22nd, His Highness acknowledged this letter, and said, in reply, that he declined to allow Colonel Lockhart to enter Káfiristán whilst the question of the Turí tribe remained unsettled. The Turís had been removed from Afghán control by the Indian Government in the year 1879, and the Amír now asserted that he had received complaints of Turí aggression from neighbouring tribes.

"I have written a good deal," his Highness observed, "on this subject, and have asked the representatives of the British Government to remedy this evil, but they have not applied the proper remedy. I know for certain that the British authorities have no control over these people. The proper punishment for a stiff-necked and ignorant tribe is to slaughter them, to burn down their houses, and to give up their property to plunder. The British will never punish the Turís, therefore as long as the Turís are allowed to disturb the peace, I will not allow Afghánistán to incur the danger of trouble from the Káfirs."

On June 16th the Deputy-Commissioner of Pesháwar was ordered, by a telegram from the Foreign Secretary, to send an urgent message to the Amír about the difficulties in which Colonel Lockhart's Mission stood, owing to the want of money and supplies.

On June 26th the Deputy Commissioner of Pesháwar forwarded to the Foreign Secretary a letter from the Amír, promising to assist Colonel Lockhart on his return journey, but adhering to his refusal to let the party visit Káfiristán

Colonel Ridgeway had written to Colonel Lockhart from Khámiáb, on June 9th, as follows:—

"I suppose by this time you have reached Zebák. If so, if I may offer you advice, I would say that you will help our work here and prevent a

serious misunderstanding between the Amír and the Government of India by returning to Chitrál by the Dorah."

On reaching Chitrál on June 25th, Colonel Lockhart received a letter from Colonel Ridgeway, dated the 16th of the same month, in which he wrote :—

"I enclose a copy of a telegram just received from Simla. I suppose you are at Zebák. . . . . ."

The telegram ran as follows:—

"From Foreign Secretary, Simla, to Sir West Ridgeway. Telegram No. 1037 F., dated 9th June 1886.

"Your. No. 215.—Please tell Lockhart a fresh endeavour is being made to persuade Amír, but that he now seems much opposed to expedition. Meanwhile Lockhart had better stand fast, if possible. No other instructions. Have received his letter *viâ* Kábal."

At Chitrál the Mission was hospitably received by Mehtar Amán-ul-Mulk, who was, however, in a disturbed state of mind. Roshan, he said, had been taken by Mulk Amán, who was now threatening Yásín, whilst the fanatical priest' Sháh Bábá, or Bábá Sáhib, was bringing about a combination of tribes against him from the direction of Dír. His reception of an English Mission was, he believed, the cause of all this hostility. Not only had *káfilas* been prevented from visiting Chitrál from Pesháwar by way of Dír, but now all trade with Badakhshán had been stopped by the Afgháns. Colonel Lockhart offered to ride down to Roshan and turn Mulk Amán out of the place, provided the Mehtar mounted the escort and added 40 mounted men of his own armed with the Snider rifles which had been presented to him, but the old man vacillated and procrastinated. The Ramazán fast was telling on him (for he was an enormous and frequent eater), and he was altogether a different man from what he had been in the previous autumn. At last, after four days' halt, the party left Chitrál for good and marched towards Mastúj, trusting that orders from India might reach them on the way, and ready at any moment to go by forced marches to Roshan in support of Afzal-ul-Mulk (who had meanwhile been sent down to attack Mulk Amán), or to return to Chitrál and enter Káfiristán. Whilst at Chitrál Colonel Lockhart received a letter from Sardár Abdulla Ján, dated 20th June. In this the Sardár told Colonel Lockhart that from 500 to 1,000 families of Káfirs embraced Islám every year, and that their country had belonged to the Afgháns for centuries. He also gave him some advice about his (Colonel Lockhart's) self-seeking disposition, and forbade him to enter Zebák,

although he knew quite well when he wrote the letter that the Mission had stayed there for a week, and had left it for Chitrál some days before. It was a silly, childish letter, and was doubtless written to please the Amír, to whom, of course, a copy must have been sent, and who was evidently in a humour to be gratified by the lie regarding Afghán supremacy in Káfiristán, and by the general tone adopted towards an English officer.

Before leaving Chitrál Colonel Lockhart gave the Mehtar a present of 2,000 rupees, and obtained his ready consent to permit the party to re-enter Káfiristán from Chitrál without any interference, and unaccompanied by any Chitrálís. In return for this concession the Mehtar was promised the sum of 5,000 rupees, and a letter from Colonel Lockhart relieving him from all responsibility for the safety of the Mission among the Káfirs.

On July 1st, when two marches out of Chitrál, Colonel Lockhart received a telegram, through Colonel Ridgeway, in which he was told by the Foreign Secretary that the Commander-in-Chief, Sir Frederick Roberts, wished him to act as Quarter-master General in India during Major-General Chapman's absence on six months' sick-leave. He was therefore to hand over charge of the Mission at once to Colonel Woodthorpe, and to return to India by the quickest route.

The party marched by regular stages to Mastúj, halting one day at Sanóghar.

Colonel Lockhart made over charge of the Mission to Colonel Woodthorpe on the 7th and went down by forced marches to India, reporting himself at Army Head Quarters, Simla, on the 26th July.

The only things of any importance to notice on the march between Chitrál and Mastúj are that at Reshún, on the 2nd, news reached the Mission that Afzal-ul-Mulk had succeeded in turning Mulk Amán out of Roshan, killing ten men and taking the same number prisoner, and that at the same place Colonel Lockhart received a strong protest from the Mehtar against Afgháns accompanying any portion of the Boundary Commission which might take the Chitrál route towards India, and also remonstrating strongly against any such portion entering his territory at all without his permission being first obtained.

Colonel Ridgeway was informed of this, and the Mehtar was told that Colonel Lockhart had made himself security to the Viceroy of India for the good reception of any of Colonel Ridgeway's people who might pass through Chitrál, because he was convinced that Amán-ul-Mulk would gladly seize this opportunity of proving his loyalty to the British Government. At

Sanóghar, on the 5th, Afzal-ul-Mulk met the party, and was full of his exploit at Roshan. He had recognised Mulk Amán through the telescope that had been presented to him on the arrival of the Mission in August 1885, and had seen one of that chief's followers fall close beside him under the long range Snider fire which had been brought to bear upon the group. He requested Colonel Woodthorpe to take the Mission into Yásín, there to await further orders, as his own supplies had been consumed on the Roshan expedition.

Colonel Woodthorpe experienced a great deal of trouble in the Mehtar's dominions after Colonel Lockhart had left, as the following extract from his letter to the Foreign Secretary, dated Yásín, July 15th, will show:—

From Colonel R. G. Woodthorpe to H. M. Durand, Esq., C.S.I.

"Your telegram No. 213 of the 16th June to Ridgeway reached me to-day only. I am sending a telegram to you in Persian *viâ* Gilgit and Astór, and also another in English from Srínagar. I have also received letters from Ridgeway and the British agent at Kábal. The latter encloses copy of a letter from the Amír to him *à propos* of our movements, and from all these I gather that there is no chance of our obtaining the Amír's sanction to our going into Káfiristán, and I suppose without such sanction we could not now enter that country even from the Chitrál side. At least Ridgeway seemed to think that any attempt to do so would complicate matters seriously for him, and we could hardly hope for the Mehtar's assistance under such circumstances, as he seems to be fully alive to the fact that it is his interest to keep friends with the Amír as well as with us. I enclose a letter from the Kót Dafadár, in which he says the Mehtar has just received a present of three horses from the Amír, and we know that communications frequently pass between Chitrál and Faizábád. The Mehtar may even have received his cue from the Amír as to the treatment of us. Certainly our treatment by the Amír can hardly have raised our prestige in the eyes of the Mehtar, and after having to retire from Afghánistán to Chitrál, we are at once placed as far from Káfiristán as possible.

"Moreover it seems to me that it would now be inadvisable that we should again promenade through Chitrál territory. We are now, no doubt, being turned out of the Mehtar's dominions. We were only four days in Chitrál, when we were sent on to Mastúj, as food was said to be scarce in Chitrál.* We found we were not to be allowed to remain in Mastúj for the same reason, and during the time (about 10 days) that we were in the Mastúj

* Colonel Woodthorpe made a slight mistake in this statement. In begging Colonel Lockhart to go to Mastúj, Amán-ul-Mulk did not urge, as his reason for the request, any difficulty about supplies. The reason he gave was that the presence of the British officers at Chitrál at that time made his own position there very precarious from the handle it gave to the fanatical priest, Bábu Sáhib, in preaching a religious war against him amongst the neighbouring Pathán States.—*W. S. A. Lockhart.*

district, our men only twice received full rations, and they sometimes had to put up with quarter rations even. The same excuses were made in fertile as in sterile districts, viz., that the country is very poor, that last year's stores had all been eaten and this year's harvest not yet gathered in, &c., &c., and although we saw large flocks of sheep and goats, and I impressed on the hákims and others who accompanied us that with a few more sheep we could do with less grain, yet we seldom got as many as we wanted, or as we were promised. The day before yesterday we crossed the Túi pass—a long and tedious journey, and we had only quarter rations to give our men at night. Yesterday we arrived at Naltí and found everything waiting for us in very full measure. We had sent on ahead to give notice of our wants, and Alí Mardán Sháh may have done something for us. Nizám has not yet returned to his district. It is evening, and we have not yet received our supplies, so I do not know if the blessed change to full rations is to continue.

"It seems to me either that the Chitrálís are suffering from scarcity as they allege, or that we are being starved out of the country. If our want of supplies is due to the first cause, it would be cruel, even with a greatly reduced party, to make yet another promenade along the well-worn route, especially with a chance of some of the Boundary Commission coming this way. If, on the other hand, we are being starved out of the country, it would, in my opinion, be imprudent politically to return with the probable chances of again being obstructed in our attempts to penetrate Káfiristán. The Mehtar has promised assistance, should we go back, as far as Virran, but he might find it to his interest to obstruct us beyond that.

Although hospitably received in Yásín, still the difficulty about supplies compelled Colonel Woodthorpe to move into Kashmír teritory. He marched his party into Gilgit on July 27th, and then on to Astór on August 6th. On August 9th the Foreign Secretary telegraphed to the Resident in Kashmír:—

"Please send following message to Woodthorpe:—You should now march your party back to India, as it is evident that, for the present, nothing can be done in Káfiristán. The Kót Dafadár should remain at Chitrál until relieved. I hope to send a man up shortly."

The Kót Dafadár had reported meanwhile that an Afghán envoy had arrived at Chitrál from Sardár Abdulla Ján. He had brought with him a present of horses for the Mehtar, and was to remain at Chitrál for some months. The duty of this official was, in all probability, to report to the Sardár any movement of the Mission in the direction of Káfiristán.

On the 26th of August the Resident at Srínagar telegraphed the arrival of Colonel Woodthorpe and his party at that place, and on the 28th the Foreign Secretary telegraphed orders for Colonel Woodthorpe to go to Simla.

The work performed by the Mission was thus acknowledged in a letter from the Foreign Secretary to Colonel Lockhart, dated 12th August 1886 :—

"The political duty for which you were deputed beyond the Kashmír frontier having come to an end, the Governor-General in Council desires to record his appreciation of the services rendered during the past year by yourself and the officers under your orders.

"2. My confidential letter of the 6th June 1885 explained that the Government of India wished you to obtain full information regarding Chitrál and Káfiristán, and to establish friendly relations with the Chiefs and peoples of those countries. So far as Káfiristán is concerned, you have been unavoidably prevented from making a thorough exploration; but you succeeded in penetrating further than any European had ever gone, and it may be hoped that you have laid the foundation of a future good understanding with the Káfir tribes. In regard to Chitrál, your efforts have been successful, and you have, moreover, accomplished an interesting and adventurous journey from Gilgit to Hunza, Wakhán and Badakhshán.

"3. The results of your mission are of high value to the Government of India, and the Viceroy desires me first to inform you, as the responsible head of the undertaking, that he has noticed with much satisfaction the firmness, temper, and discretion which you have shown in circumstances of unusual difficulty and hardship.

"4. Further, the Government of India observe with pleasure that you have been able to commend very highly the conduct of Colonel Woodthorpe and Captain E. G. Barrow. The services of these officers will shortly be replaced at the disposal of their departments, but in the meantime I am to request you to inform them that their work has not been overlooked."

Some important events have taken place in the region visited by the Gilgit mission, since its withdrawal in July 1886, and these may be told in a few words.

Early in August 1886, Muhammad Sharíf Khán of Dír was attacked by Umra Khán of Jandúl from that quarter, and defeated with considerable slaughter. The Mehtar of Chitrál sent four of his sons to co-operate, and these forced the Raolí (Lahorí) pass and routed the Dír men holding it. On August 12th, Muhammad Sharíf Khán (who, by the way, is Amán-ul-Mulk's nephew) arrived at Chitrál with 300 followers, and sued for peace, being shortly afterwards dismissed. The Khán of Asmár paid the Mehtar of Chitrál a visit at the same time. This chief was killed by a gun accident four months later.

The Mehtar's success, as reported by himself and confirmed by Kót Dafadár Muhammad Nawáz Khán, received a very different complexion

in the report submitted by the Commissioner of Pesháwar, and gleaned doubtless from Pathán sources. According to the latter account the Chitrál levies dispersed on the arrival of Muhammad Sharíf Khán at the Raolí pass, after which Amán-ul-Mulk sent an agent to negotiate for peace. The Khán of Dír accepted the terms offered, and started on a visit to Chitrál, but was suddenly attacked by a greatly superior force of Chitrálís in the Raolí pass, and driven back to Dír. After this Muhammad Sharíf Khán demanded two of the Mehtar's sons as hostages, and, on their arrival at Dír, he himself proceeded to Chitrál and remained there for nine days, returning home after he had made terms.

In October 1886, Kót Dafadár Rab Nawáz Khán, 15th Bengal Cavalry, was sent up as British agent to Chitrál, in relief of Muhammad Nawáz Khán, of the same regiment, promoted to the rank of Jamadár.

At the end of 1887, Afzal-ul-Mulk visited India, on the Viceroy's invitation, and both he and his father were gratified by the reception given to him.

Shortly after the Gilgit Mission had left Chitrál, Bahrám Khán, Kashmir agent there, was murdered by one of the Maharájah's sepoys attached to him, in mistake for another man. The murderer was sent to Kashmír for punishment.

About the same time Safdar Alí Khán, eldest son of Mír Ghazan Khán of Hunza, murdered his father and ruled in his stead. He communicated the circumstance to the Kashmír Government in the following terms:—

"By the will of God and the decree of fate, my late father and I recently fell out. I took the initiative and settled the matter, and have placed myself on the throne of my ancestors. I have now made friends with my mother's brother, Rájah Jáfir Khán of Nagar, and we are of one mind in all things. Nagar is Hunza, and Hunza is Nagar, and we are united in the service of the Maharájah of Kashmír."

In April 1887 the two young sons of the late Muhammad Khán of Nagar, nephews of Safdar Alí Khán of Hunza, escaped from Gilgit and fled to their uncle in Hunza.*

* The compilers of this report have no recent information about Hunza and Nagar, nor any particulars of the collision which took place not long ago between the united forces of the two states and the Maharájah of Kashmir's troops, in which Colonel Makkan Singh (commanding the latter) lost his life. Chaprót appears now to be in the possession of Hunza and Nagar, and the allies will no doubt be attacked before long by a strong Kashmír force.

# APPENDICES.

## APPENDIX I.

### Battle of Yárkhún.

In Chapter III. mention is made of a great defeat inflicted by the Chitrálís on the Badakhshís. It may be useful to record the circumstances. Jahándár Sháh, Mír of Badakhshán, had been deposed and Mahmúd or Muhammad Sháh reigned in his stead. Jahándár Sháh accordingly sought refuge in Chitrál and obtained the protection of Amán-ul Mulk, Mehtar of Chitrál. The narrative may be continued in the words of Abdúl Rahim.

"After this Mahmúd Sháh, by order of the Amír of Kábul, went against Amán-ul-Mulk with an army of 12,000 men. As they were starting spies brought intelligence to Amán-ul-Mulk that the army of Badakhshán had started in order to fight with Chitrál and seize Jahándár Sháh. Mihtar Amán-ul-Mulk fortified the passes. Mahmúd Sháh left a few troops in Zébák, and taking the remainder with him, started in the direction of the Baroghil Pass by way of Wakhán. Amán-ul-Mulk came up with his army, having Jahándár Sháh with him; half his force he placed at Shoghot and the other half with Jahándár Sháh he took with him to Shagrám. Pahlwán Bahádur and his followers having come to Yárkhún with Sháhzáda Husén, fortified the pass. At length Mahmúd Sháh crossed the Baroghil Pass, came up to Topkhána-i-Ziabeg, and there stood fast until the army which was behind should also come up. Then Mahmúd Sháh sent some of his troops on to the tops of the mountains, and taking some with him went up the pass.* Pahlwán's men had hidden themselves, and Mahmúd Sháh, under the impression that the pass was unoccupied, and would fall into his hands without difficulty, ordered his force to go on quickly. When they got up to the walls † in the pass Pahlwán's men all at once opened fire on them, and 200 of the Badakshánis were killed; some of Pahlwán's men threw down large stones from the mountains on to the Badakhshánis, and the infantry who had gone to seize the hills suffered severely. In short, Mahmúd Sháh was thrown into great disorder, but in an hour's time he made another assault on the pass, and this time about 1,000 Badakhshánis were killed, and Mahmúd Sháh retired. He made yet another attack for the third time, and again lost some men, but was not able to take the pass. After this he remained for four days without

* I think the Shapirán defile is here meant.

† The walls referred to are those of Darband.

fighting. Owing to want of food and forage he was in great straits, and on the fifth day he prepared ladders, intending to place them by force against the towers and walls, and take the pass by storm. Some one, however, informed him that an army of Chitrál had started from Turikho, on the road towards Sháh Janali, and would come out near Topkhána-i-Ziabeg, then advancing from there would seize the pass of Shapirán which is about three miles north of the Yárkhún Pass: thus his own army would be shut in between the two passes and defeated.

On hearing this information fear came on Mahmúd Sháh, and leaving all his property and equipment in the pass, he fled in the night. In the morning when Pahlwán saw that no one was in view, he followed up Mahmúd Sháh with his men and came up with them in the jungle of Dobargar Kúch, and a severe fight took place. Mahmúd Sháh received five wounds, and many horses and men fell into the hands of Pahlwán, and the remainder of the army with Mahmúd Sháh went to Badakhshán."

I have been over the whole of the ground referred to, and a more suitable spot for opposing an enemy can hardly be imagined; the narrow rock-strewn defile, the stupendous cliffs and beetling crags render the Shapirán defile and the Darband-i-Yárkhún as nasty a trap as an army could well fall into.

E. G. Barrow.

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## APPENDIX II.

In Biddulph's "Tribes of the Hindú Kush," there is a drawing of a rock-cut figure of Buddha near Gilgit. It has not been well lithographed, and gives but a poor idea of the figure. I have, therefore, thought it might be as well to give a more correct drawing here.

Biddulph's description of the figure is as follows:—"Near the village of Nowpoor, not far from Gilgit, is a large rock-cut figure of Buddha. The angle of the fork of two ravines is formed by an abrupt perpendicular rock several hundred feet high. In the very point of the angle the rock has split so as to leave a broad smooth surface 50 feet from the ground. On this a deep slot has been cut in the form of a pentagon, within which the figure has been cut in intaglio; the face is exactly as represented on well known figures of Buddha, with ear ornaments and head dress, thick compressed lips, smooth face, and impassive countenance. The figure is erect, and is about 9 feet high.

The upper part, which is in excellent preservation, is well finished, the lower part is not so well executed. The right arm is held across the body with the hand open, palm outwards; the left hand hangs by the side, and holds a staff or some kind of weapon. The whole figure is exposed, but the edge of a robe or some hanging drapery is portrayed; which, with the smooth face, has given rise to the modern belief that it is intended for a female figure. The lines of the pentacle are accurately drawn and deeply cut. On the edge are deep square niches cut at regular intervals, which may have been used to hold timber supports of a frame to protect the figure from injury." Biddulph is wrong about the height of the figure. It was measured with a subtense instrument by Sub-surveyor Bápú Jádu who found it to be 18 feet in height; the pentacle being 24 feet in height. I think that Biddulph is also wrong in supposing that the left hand holds a staff or some kind of weapon. I think it merely holds back the drapery, which is probably a cloak. Buddha is frequently represented as holding some portion of his robe in his left hand.

The legend about this figure in Gilgit is, that long ago a female demon lived up this ravine, whence she sallied forth to seize passers by; she had been brought up in an old school of manners, and invariably devoured only half of her prey. For instance, if she found two victims she ate one only, leaving the other; if she seized one man she ate only half of him. At length a holy man arrived, who, when the demon endeavoured to seize him, by his power turned her into stone and fixed her to the rock. He told the Gilgitis that when he died it would be necessary to bury him beneath the rock, or the spell would be broken, and the demon would be restored to life and power. He then intimated his intention of journeying into distant lands, enforcing on his hearers the necessity for bringing back his bones should he die on his travels. The Gilgitis, fully impressed with what he had said as to the importance of his being buried beneath the rock, and not wishing to have the trouble of bringing his body back from a far off land, killed him there and then, and buried him in the spot he had indicated.

Biddulph, in the same book, mentions a figure cut on a rock opposite Baranas on the right bank of the Mastúj river He does not give a drawing of this, and, therefore, I do so here, with the inscription. The figure is on a rock by the roadside. Biddulph says of it: "Opposite the village of Barenis is a figure with an inscription in ancient Sanskrit rudely cut upon a rock. General Cunningham has kindly favoured me with the following reading of the inscription: *Deva dharmaya Raja Jiva Pála*—"The pious gift of Raja Jiva Pála.' This inscription refers, in all probability, to a building of which the figure is a facsimile, erected somewhere near. General Cunningham tells me that from the character used it cannot be'ong to an earlier period than the

third century A.D., and the date of it is probably a good deal later. The name Jiva Pála is, no doubt, the Jeipal of early Muhammadan writers. According to Al-Birúni, the fourth king of Kábal, who succeeded Kank, whose period was about A.D. 900, was named Jaipal, and his rule may have extended to Chitrál. The figure is Buddhistic, and interesting as helping to show that Buddhism existed in Chitrál before Muhammadanism." The form of the building recalls the Buddhist Topes in the Kábal valley.

Just below the junction of the Várkhún and Turikho rivers, and not far from Kusht, on a conspicuous point on the right bank of the river is an object which from a distance looks like a mud ruin. We had no opportunity of examining it closely, and my guides could tell me nothing about it. I imagine, however, that it is the remains of the Chogten, mentioned by Drew, who says it is still spoken of as "the idol."

R. G. Woodthorpe.

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TO

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IN

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