

*(Confidential.)*

# CENTRAL ASIA.

## PART VII, SECTION II.

A CONTRIBUTION TOWARDS THE BETTER KNOWLEDGE

OF THE

TOPOGRAPHY, ETHNOLOGY, RESOURCES, & HISTORY

OF

L A D A K.

COMPILED

(FOR POLITICAL AND MILITARY REFERENCE)

BY

LIEUTENANT F. MAISEY,

30TH NATIVE INFANTRY.

**m**

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1878.



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## A

AGHAM OR UGHAM—Lat. Long. Elev. 10,500.

A village in the Nubra district, on the left bank of the Shyok, at the junction of the Digar stream. It is the third march from Leh (31½ miles) on the winter route by the Karakoram pass to Yarkand. (*Drew*).

AKSAI CHIN—*Vide* LINGZITHANG.

AKTAGH—*Vide* MALIK SHAH.

ATTA BAGH—Lat. Long. Elev. 12,200.

A camping ground, rest-house, and supply depôt, near the village of Marsalang, on the left bank of the Indus. (*Montgomerie*.)

## B

BALDÉ—*Vide* PADAM.

BALTI-BRANGSA OR BRANGZA, KARAKARAM OR KARAKORAM  
BRANGSA—Lat. 35° 37' 42". Long. Elev. 17,180.

A halting-place 170 miles north of Leh, on the Karakoram route, and at the north end of the Karakoram pass. It merely consists of a rock which is used as a shelter by travellers, situated on the left of the sandy ravine which comes down from the Karakoram pass to the south. No grass or fuel procurable.

It is 28 miles from Aktagh and 22 from Daulat-Beguldi. (*Trotter—Johnson*.)

BALTI-PULU—Lat. Long. Elev. 16,167.

Encampment 128 miles north of Leh. There are three small stone huts here, situated about 10 miles south-east of the Karakoram pass.

No water, wood, or grass procurable. (*Johnson*.)

BALTISTAN OR BALTI, OR LITTLE TIBET—

One of the outlying governorships in the territories of the Maharajah of Jummoo and Kashmir, lying to the north-west of Ladak.

BARA LACHA PASS—Lat. Long. Elev. 16,060.

Leads over the Himalayas, and is crossed in entering Ladak by the southern or Kulu road, between *Zingzing bar* and Kanunor Kilang stages.

A steep path rises from the Lake of Chukam and leads to the rounded back of the pass, and to the summit, which is tolerably level. The peaks about rise 1,000 feet higher than the pass, and in all the slopes and crests of the chain the snow lies in vast undisturbed masses. To the right of the road is a plain at least 2 miles in extent, skirted by a rivulet. Beyond the plain the path is rugged and follows the left bank of the stream to the Yunam Lake. There is a pile of stones (*mani*) at the summit of the pass. It is closed by the snow from October to the end of June. The road leading across it from Kulu and Lahoul to Leh was much improved in 1870. Dr. Cayley crossed the pass in the middle of June 1870, and says it was quite practicable for laden horses. (*Moorcroft—Cayley*.)

## BAR—BUL

**BARD-AR PASS**—*Vide* UMASI LA.

**BASGO**—Lat. Long. Elev.

A village on the right bank of the Indus, 15 miles below Leh, situated in a hollow at the foot of the Bazgo *thang* or plateau. Bellew says: "This undulating plateau is the first bit of open ground we have seen since crossing the Photo La." It is an arid waste, with hardly a blade of vegetation to vary the bare nakedness of the soil. From the plateau we descended to the Bazgo hollow; it is a fertile and populous tract, and picturesque in the clusters of its Bhuddist monuments and neatly-built dwelling houses amidst a general spread of fields and fruit trees.

Owing to its sheltered situation Bazgo is reckoned the warmest winter residence in Ladak. It has a large *shahran*, or polo ground, now rarely used.

The monastery is built on a towering rock.

Two routes from Khālsi to Leh meet here. Cultivation on banks of stream in the hollow. (*Bellew—Drew.*)

**BHAO**—*Vide* SHUMMAL LUNGPA.

**BHOT KOL PASS**—Lat. Long. Elev. 14,370.

Leads from the head of the Wardwan Valley into the Suru district. It is a glacier pass, but one over which it is possible to take a horse, though not practicable for laden animals. The road is closed for about six months on account of the snow. (*Drew.*)

**BILERGU**—Lat. Long. Elev.

A village in the Dras valley, on the right bank of the Dras river, 5 miles above Oltingthang. Round it there are a good many poplar, willow, and apricot trees. (*Thomson.*)

**BOGH DAN**—Lat. Long. Elev. 11,700.

A village in the Nubra district, situated in a narrow lateral ravine on the right bank of the Shyok. The ravine is well wooded with poplar, willow, and bushes, chiefly of *Hippophaë* and *Myricaria*. The village is deserted in winter, when the inhabitants move down to Chulunka, 9 miles distant. (*Thomson.*)

**BOLOR**—*Vide* KARAKORAM MOUNTAINS.

**BRANGSA SASER OR SASER POLU**—Lat. 35° 2' 43" Long. Elev. 15,240.

A camping ground on the summer Karakoram route, at north foot of the Saser pass. It is a small collection of stone-wall enclosures to protect the traveller and his cattle from the icy blasts that blow down from the Saser pass, and looks down upon the broad bed of the Shyok. No supplies, fuel, or grass here. The Shyok is forded opposite the camp. (*Bellew—Trotter.*)\*

**BULAKCHI**—Lat. Long. Elev. 11,500.

A camping ground on the right bank of the Karakash, 13 miles east of Shabdula. Grass and fuel procurable.

There are some jade quarries near here, at the base of the Kuenlun range. The excavations extend over several small knolls or spurs, and are all superficial. These spurs are covered with a loose, gravelly detritus, beneath which is concealed the rock in which the jade forms veins of very varying thickness, colour, and quality. The quarries have been abandoned

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\* NOTE.—There are two routes from *Brangsa Saser* to Daulat-Begūldi.—

1. Direct or summer route, east *viâ* Bulak-i-Murghai and Dipsang plain.
2. Winter route, west *viâ* Kumdan and Gapsan, up Shyok river.

## BUL—CHA.

since the overthrow of the Chinese rule in Kashgar in 1863. (*Bellew—Trotter.*)

**BULAK-I-MURGHAI OR MURGHI**—Lat.            Long.            Elev. 15,200.

A halting place between Brangsa Polu and Kizil Angur, on a stream which flows from the Dipsang plains into the Shyok river. Between Murghi and Kizil Angur the road is very difficult, and crosses the stream repeatedly.

Dr. Stoliczka died here on the 19th June 1874, on the return journey of Sir D. Forsyth's Mission from Yarkand, after having crossed the Karakoram pass and the bleak Dipsang plains.

The winter and summer routes from Leh to Yarkand unite here. (*Trotter—Bellew.*)

**BURCHATHANG**—Lat.            Long.            Elev. 17,425.

A halting place on Changchenmo route, between Nischu and Tso Thang. No wood or grass procurable.

Camp on small stream which flows from the south. Road from Nischu good, following the left bank of the stream. (*Johnson.*)

**BURTSI**—Lat.            Long.            Elev. 16,000.

A halting place on the Karakoram route to Yarkand, between Bulaki Murghai and Kizil Angur, on the Dipsang plain. (*Drew.*)

**BURTSI**—Lat.            Long.            Elev.

A halting place on Hayward's route by Changchenmo valley, about 30 miles from Nischu and 24 from Kizil Jilga, and north-west of Tso Thang. (*Drew.*)

## C

**CAYLEY'S PASS OR CHANGLANG YOKMA**—Lat. Long. Elev. 19,280.

Is crossed on the eastern route from the Changchenmo valley to the Karakash river, between Gogra and Nischu.

Dr. Henderson crossed this pass when proceeding with the first mission to Yarkand in 1870. After leaving the hot springs, which are 8 miles north of Gogra, he says: "We now found it difficult at times to keep to the proper route, for the valleys all looked very similar to one another. We were greatly assisted by small piles of stones, erected at every quarter of a mile or so by Dr. Cayley's men, who had preceded us.

On July 30th we started to cross a pass to Gnischu, 16 miles distant, The thermometer was at 13° F. The ascent was very gradual and easy, except for 2 miles near the top.

This pass, a new and easy one, having been discovered by Dr. Cayley, we afterwards distinguished by the name of "Cayley's Pass." It is to the east of that taken by Messrs. Shaw and Hayward. There was no snow on the pass itself, and very little on the hills near it. (*Henderson.*)

**CHADARTASH OR "TENT STONE"**—Lat.            Long.            Elev.

A camping ground on Karakoram route north of the Karakoram pass, situated between Kizil Tagh and Wahabjilga, on a tributary of the Yarkand river, close to its source. No water or grass between this and Malikahah.

The river bed is almost dry. - (*June 26, Shaw.*)

## CHA.

**CHAGRA**—Lat. 34° 5'      Long. 78° 30'      Elev. 15,090.

A halting-place, near the north end of the Pangong lake, on the Changchenmo route, 106 miles from Leh. There are one or two stone huts here and a serai. Grass plentiful, and fish in the stream.

There is a well known grazing ground near Chagra, and thousands of sheep and shawl-wool goats are kept here all the year round.

Wild lavender bushes are very plentiful. All cultivation ceases here. (*Trotter—Johnson*).

**CHAJOSHJILGA**—Lat.                      Long.                      Elev. 15,963.

An encamping ground, 161 miles north of Leh, on the Karakoram route to Khotan, 23 miles from Malikshah and 10 from Balti Brangsa.

No grass or fuel procurable. (*Johnson*.)

**CHAKR TALAO CAMP**—Lat.                      Long.                      Elev. 13,890.

On Changchenmo route, between Tankse and Lukung, a small shallow pond, sometimes dug in summer. Coarse grass on further side of it.

(*Trotter*.)

**CHANAGUND OR PILISKIMBO**—Lat.                      Long.                      Elev. 8,675.

A village on right bank of the Dras River, on the route from Srinuggur to Leh. It is situated between Tashgam and Kargil, and is 127 miles from Leh. Travellers either halt here or at Kirkitchu, on the opposite bank. The village stands on a high bank of granite boulders. Fruit trees flourish here, and there is a little cultivation (wheat and barley). It is called Piliskimbo by the Tartars. (*Bellew—Drew*.)

**CHANDA**—*Vide* ZANGLA.

**CHANGCHENMO ROUTE**—For details, *vide* ROUTES.

**CHANGCHENMO VALLEY**—Lat.                      Long.                      Elev.

“A long valley, tributary to the Shyok, which extends nearly east and west for more than 70 miles as the crow flies. The height of its junction with the Shyok must be about 12,000 feet; at the middle of its length it is 15,000 feet high, and from here it rises gradually to a pass which makes the boundary of the Rudok District.” The bottom of the valley is a stony tract, with the river flowing through it in many channels. On the north side is a bold line of mountains, rocky in surface, and rising to a rugged ridge, about 6,000 feet above the river.

Drew says—“I have not followed the river below Pamzal, but believe it in that part to be a rapid stream flowing between narrowing rocky mountains. Above Pamzal the valley is partly occupied by the wide gravelly river bed, and partly by alluvial terraces, all stony and bare. The hills that bound this vary much in height and steepness; some are smooth-sided and comparatively low, others both lofty and steep. A branch valley leads up to the north, to the Lingzithang plateau. Above Gogra the valley divides into *Kuqrang*, the west branch, and *Changlung*, the north-east branch.” (*Drew*). For hot springs of Changchenmo valley *vide* *Kiam* and *Changlung*.

The valley gives its name to one of the routes from Leh to Yarkand. From Gogra there is a choice of three roads, all leading on to the Lingzithang Plain, *viz.* :—

- (1) By the Changlung Pangtung pass.
- (2)     ”                      ”                      Burma                      ”
- (3) By either the Changlung Burma or by the Changlung Yokma pass (also called “Cayley’s Pass”).

## CHA.

The 1st is the western and best route; the 2nd joins it at Kizil Jilga; The 3rd, or eastern route, besides being the longest, crosses both the Lingzi-thang and Kuenlueu plains.

It was taken by Mr. Johnson and Dr. Henderson. They left the Changchenmo valley by the Lumkang and Cayley's (or Changlung Yokma) passes, respectively. On the 14th July the river was forded without difficulty between Pamzal and Gogra. Grass is plentiful 20 miles above the latter. (*Trotter—Henderson—Johnson.*)

CHANGLA--Lat. Long. Elev.

A pass leading from the Indus valley on to the Chang plain. It is on the borders of Ladak and Chinese Tibet, and lies north of the *La Ganskiel* pass.

CHANGLA PASS OR SATKI PASS—Lat. 34° 4' 9". Long. Elev. 17,590.

Is crossed on the Changchenmo route between Zingral and Tsultak camps. Marching from the former camp, you proceed up the most northerly of the two valleys. An easy but stony ascent of 2 miles brings you to the top. Descent of 4 miles very gradual. The steepest part of the ascent is from the village of Sakti for 3½ miles to Zingral. Though neither formidable in height nor steepness, this is a difficult pass for laden animals on account of the badness of the road, which is a mere track winding through rocks and boulders. Yaks should therefore be used. The pass is free from glaciers. Both in July and October very little snow was found on it. (*Trotter—Johnson—Henderson.*)

CHANGLUNG, OR CHARLUNG, OR CHONGLUNG—Lat. 35° 55' 43". Long. Elev. 10,760.

A small village of 8 or 10 huts, with a few fields around, situated on the left bank of the Nubra, about 80 miles north of Leh. It is the last inhabited place passed on the summer Karakoram route from Leh to Yarkand. There are some hot springs here. The temperature of the three upper springs was 140° F., 172° F., and 174° F. respectively; that of the three lower ones, 163° F., 169° F., and 170°. One of the upper springs issued in a small pool, the pebbles in which were yellow with a coating of sulphur. There was a bathing hut here, similar to those at the Panamikh springs. (*Trotter—Bellev.*)

CHANGLUNG OR CHENGLENG—Lat. Long. Elev.

A ravine in the Changchenmo valley, running up to the north-east from Gogra. "Eight miles north of Gogra are some hot springs; one of them was very curious. From the summit of what appeared to be a huge rounded boulder, about 8 feet high (composed of lime, and lying in the bed of the stream), a jet of water, having a temperature of about 150° F., rose to the height of a foot or more. This rock was in reality a large stalagmite formed of carbonate of lime. The spring, in addition to consuming lime, is surcharged with carbonic acid gas, and effervesces like soda water as it escapes into the air. There are numerous other warm springs in the vicinity with a temperature of about 90° F. All the ground about is covered with saline efflorescence." (*Henderson.*)

CHANGLUNG BURMA PASS—Lat. Long. Elev. 19,240.

The route to this pass leaves the usual route *viâ* the Pangtung pass a few

miles north of Gogra. It lies between the Changlung, Pangtung, and Changlung Yokma passes.

*Ascent of pass* from Shummul Lungpa. "Up valley about  $3\frac{1}{2}$  miles to fork, up ravine to eastward. At half a mile take up ravine north by west up steepish ascent across the pass.

"Descend low hill into broad shallow valley due east, down valley, which bends to north, and camp near black jagged hill. No grass or fuel. March throughout good for laden animals." (*Trotter.*)

CHANGLUNG PANGTUNG PASS, OR CHUNGLANG PASS, OR PANGTUNG PASS—Lat. Long. Elev. 18,910.

Is crossed in the most westerly of the routes leading from the Changchenmo valley to the Lingzithang plains. Ascent from Pangtung ( $15\frac{1}{2}$  miles from Gogra) steady, and not very steep to the top of the pass. "The road then passes over a high table-land for about a mile, after which it enters a ravine, along which it passes for  $9\frac{1}{2}$  miles of execrable road, crossing the stream in numerous places before reaching the camping ground of Sumzungling."

(*Trotter.*)

CHANGLUNG YOKMA PASS OR CAYLEY'S PASS—Lat.

Long. Elev. about 19,300.

The route over this pass leaves the Changlung valley 8 miles above Gogra. It lies to the east of the Changlung Burma pass, and is of about the same elevation. It is practicable for laden ponies. Road good.—*Vide Cayley's pass.*

(*Trotter.*)

CHANGTASH OR CHONGTASH—*Vide* KUMDAN, the Turki name for Kumdan, signifying "Willow Boulders." (*H. Strachey.*)

CHANG TASH OR GREAT STONE—Lat.  $35^{\circ} 36' 56''$ . Long.

Elev. 15,590.

A camping ground on the Changchenmo route,  $23\frac{1}{2}$  miles from Kizil Jilga and 14 miles from Shorjilga camp, under a big rock near where the bed of the Karakash is much narrowed by precipitous hills coming down near the river bank. No wood or grass. Khushk maidan would be a better camping ground, distant  $16\frac{1}{2}$  miles from Kizil Jilga, where there is a little grass and where fuel is abundant.

This place is called Chungtas in the Government map. There are hot springs 6 miles below camp on right bank of the Karakash. (*Trotter.*)

CHANGTHANG PLAINS—

In Rudok territory, lie west of the Lingzithang plains, and are divided from them by a range of huts. A good route from Rudok leads over these plains into Khotan, but cannot be used owing to the opposition of the Tartar shepherds. (*Johnson.*)

CHARAK—Lat. Long. Elev.

A small village on the route from Srinuggar to Leh, situated at the west end of the Namyik la pass, between Mulbek and Kharbu, 84 miles from Leh (*Cunningham.*)

CHARCHAR PASS—Lat. Long. Elev. 16,300.

Is crossed between Chipchuck at its north end and Zangla on one of the routes from Leh to Padam. A very difficult pass. On account of snow, only open in May and October, and even then sometimes impassable for laden animals. From Chipchuck the best route is by the western ravine.



## CHA—CHI

Descent on south side steep at the top, but otherwise easy. At the end of May the northern face down to Chipchuck was covered with snow, often deep. (*H. Strachey.*)

**CHARKANG**—Lat. Long. Elev. 16,700.

A halting-place on Changchenmo route, between Lukung and Gunle. The Marsemik pass is crossed between it and Gunle. It is 112 miles from Leh. (*Drew.*)

**CHATI**—*Vide* SATTI AND TSATI.

**CHELANG LABHO PASS**—Lat. Long. Elev. 14,850.

Between Zangla and Pangatse, on the route from Kishtwar to Leh, *via* Zankсар. (*Drew.*)

**CHERPA RIVER, OR SERAB, OR TSARAP**—*Vide* also LINGTI and ZANKSAR RIVERS.

One of the tributaries of the Zankсар river. It has its source near the Pankpo La pass.

A good bridge was built across it in 1869, below the Lingti plains. A route leads up this river from Lingti (or Sarchu) *via* the Punkpola pass and Tsomorari Lake to Puga. In summer the river is much swollen, and the route is closed. It joins the Yunam river at Lingti. (*Cunningham—Cayley.*)

**CHIBRA**—Lat. Long. 79° 10'. Elev.

A village on the right bank of the Indus, not far from the borders of Lhasa territory. The valley here is about 3 miles broad. The plain at Chibra is studded over with small ponds or lakes. One was 1,600 paces in circumference. Round the margin of each was a broad bed of soda. (*Cunningham—Moorcroft.*)

**CHIBRA CAMP**—Lat. 36° 7' 12". Long. Elev. 16,480.

A camping ground 12 miles east of Sugetdawan pass and 10 miles from Aktagh. No grass or wood, and water very scanty. Elevation of Chibra hill 17,910 feet. It is on the Karakoram route north of the pass. (*Trotter—Johuson.*)

**CHILING**—Lat. Long. Elev.

A village on left bank of the Zankсар river. General Strachey states that gold is found between it and the village of Pidmo higher up on the same river. The gold is collected by Lahoulis, who come over in the summer for two or three months. Each gold-washer pays a tax of Re. 1 to the Dogra Government for his year's license. In former days the river was also frequented by Balti gold-washers. (*H. Strachey.*)

**CHILINGCHU**—*Vide* ZANKSAR RIVER.

**CHIMCHAK**—Lat. Long. Elev. 11,600.

A camping ground on the winter route by the Karakoram pass to Yarkand, five marches from Leh, on the right bank of the Shyok river, between Pakra and Lamakzent. (*Drew.*)

**CHIMRAY OR CHIMRÉ**—Lat. Long. Elev. 11,890.

A village of about 500 inhabitants, with monastery. The second march from Leh on the Changchenmo route, between Tikshe and Zingral.

At 6 miles from Tikshe the Indus is fordable in September. There is cultivation about the village, which is situated a little distance from the right bank of the Indus. Camping ground bad. A rest-house and supply depôt. (*Trotter—Cayley.*)

## CHI—CHU.

- CHIPCHUCK**—Lat. Long. Elev.  
 A camping ground at north end of Charchar pass, on one of the routes from Leh to Padam. Snow here at end of May. (*H. Strachey*.)
- CHIRI OR SOWAR**—*Vide* SOWAR.
- CHONGTASH**—*Vide* CHANGTASH.
- CHORBAT**—  
 A district of Baltistan. "It extends along the Shyok river from Chulung on the frontier of Ladak to Daho (or Daū), on the boundary of Khapalu, a distance of 44 miles." (*Cunningham*.)
- CHORBAT PASS OR HANU PASS**—Lat. Long. Elev. 16,700.  
 On the range between the Indus and Shyok rivers. It is crossed on the summer route from Leh to Skardo, between Goma Hanū and Piün (or Chorbat).  
 Vigne crossed this pass from the Chorbat side in the middle of July. "The ascent to the summit was as desolate and dreary as possible, but not so difficult as many others. The *drūn*, or marmot, and the wild ring-tailed pigeon of the Himalayas were everywhere common. We crossed the snowy ridge at a very early hour, by which arrangement we obtained a secure footing for our horses.  
 "The descent was more troublesome, as the snow was a little more softened, and we were constantly sinking up to the middle." (*Vigne*.)  
 "The pass is the boundary of Baltistan in this direction. The Balti raiders used to come by it into Ladak in former days." There is a camping ground at the south foot above Hanū. (*Drew*.)
- CHULANKA OR CHULUNG**—Lat. Long. Elev.  
 A village on the right bank of the Shyok river, on the frontier of Ladak and Chorbat. It lies between Waris and Turtuk on the route from Leh to Skardo *viā* the course of the Shyok river.  
 "The village consists of three or four houses on a small platform about 50 feet above the river." (*Thomson—Cunningham*.)
- CHUMATHANG**—Lat. Long. Elev. 13,600.  
 A village on the right bank of the Indus, below the junction of the Puga rivulet. Hot spring here. Temperature of water at exit 170° F. Supplies procurable. (*H. Strachey—Reynolds*.)
- CHUMPAS, &c.**—*Vide* POPULATION.
- CHUMUR**—Lat. Long. Elev. 14,600.  
 A village in the Rupshu district, on the left bank of the Para river, which here turns south and eventually joins the Sutlej. (*H. Strachey*.)
- CHUMURTI**—  
 A sub-division of the Guge district of Nari-Khorsum. It lies south of Hanlé, and is under the jurisdiction of the Governor of Garo. (*H. Strachey*.)
- CHUNGA**—Lat. Long. Elev.  
 A village on the left bank of the Indus, between Marsalang and Leh. (*Moorcroft*.)
- CHUNG JUNGLE**—Lat. Long. Elev. 12,800.  
 A camping ground the seventh march from Leh on the winter route, on the right bank of the Shyok river, between Lumakyent and Dongaylak. A good pasture ground here. It is close to the great bend in the Shyok. (*Drew*.)

## CHU—DAU.

CHUNGTAS—*Vide* CHANGTASH.

CHUNGTHUNG OR CHANTHANG—*Vide* RENG—

The whole of Tibet is classified by the Tibetans into two portions, the "Reng" and "Changtang." "The first signifies a deep valley, low and warm enough for agricultural occupation, and generally a country containing such valleys.

Changtang literally means the "North Plain," but in common an elevated plain, or wide open valley, too high and cold for any but pastoral uses.

Changthang is the prevailing character in the eastern parts of the Ladak, and Reng in the west.

The *Changha* or Champa are the shepherds of the Chantang, while the inhabitants of the Reng country are called *Rengba*, or lowlanders (*H. Strachey*.)

CHURASA—Lat.

Long.

Elev.

A village on the right bank of the Nubra, between Tagar and Panamik.

"It is the residence of the former chiefs of the Nubra district, and has a small palace, fort, and monastery, all very picturesquely perched on some rocks, and conspicuous objects on the landscape. Copper is found here and affords employment to a dozen families or so." (*Bellw.*)

CHUSHOT OR SHUSHOT—*Vide* SHUSHOT.

CHUSHUL—*Vide* SHOOSHAL.

COMPAS LA—*Vide* DEHRA KOMPAS.

## D

DACHUNG OR DONGLUNG—Lat.

Long.

Elev.

A camping ground on the Spiti route to Changchenmo, between Nowi Camp and Shooshal, 21 miles south-east of the latter.

At 18 miles from Shooshal cross the Suku La pass 15,265 feet. Road good the whole way. No supplies procurable. Water from stream. Fuel and pasture plentiful. (*Montgomerie—Reynolds*.)

DAH—Lat.

Long.

Elev. 9,690.

A village on the frontiers of Ladak and Baltistan, on the right bank of the Indus below Hanu-Yogma. A sort of fort here which was built to protect the inhabitants from the Balti raiders. There is a colony of Buddhist Dards here. (*Drew*.)

DAHNI-MOORGHAI—Lat.

Long.

Elev. 14,400.

A camping ground on the left bank of the Shyok river, between Sultan-Chūskūn and Bulak-i-Murghai, on the winter route by the Karakoram pass. (*Montgomerie*.)

DAULAT-BEGULDI—Lat. 35° 22' 16".

Long.

Elev. 16,880.

"This camp, situated in the north-west corner of the Dipsung plain, marks the junction of the winter and summer routes, which unite here, and cross the Karakoram pass 11 miles above the camp." The camp is on "a singularly desolate and bleak plateau, at this season (October) bare of snow, but set about by low ridges and mounds of loose shales, about 20,000 feet high, on which last year's snow still lingers in thin patches. A very destructive wind is said to blow over this region at times."

DEB—DIP.

In 1527 Sultan Sa'id Khan Ghazi, of Kashgar, died here, on his return from an unsuccessful attempt to invade Tibet by the Sasser pass. (*Bellew—Trotter.*)

DEBRING—Lat. Long. Elev.  
A camping ground on the route from Kulu to Leh, between Rukchen and Gya, south-east of the Tagalung, five marches (72 miles) from Leh. No supplies; fuel plentiful. Grass and water scarce. Road from the Tsokar good, though sandy in places.

This place is also a halting-place on the Spiti route to Leh *viá* Tsomorari Lake, and on the route from Leh to Garo. (*Reynolds—Montgomerie.*)

DEHRA KOMPÁS CAMP—Lat. Long. Elev. 17,890.  
So called from having been used by a former survey officer, or "Kompás-Walla." It is passed on the most westerly of the routes leading from the Changchenmo to the Karakash. No grass or wood; a very little water obtainable by digging. It lies 19 miles from Sumzungling. (*Trotter.*)

DEHRA KOMPAS PASS, OR COMPASS LA, OR COMPASS-WALLA'S PASS—Lat. Long. Elev. 18,160.  
Is crossed on the most westerly of the three routes from the Changchenmo to the Karakash, close to the source of one of the head waters of the Karakash river. (*Trotter.*)

DEMO-CHU—  
A small valley at the foot of the Chang La pass, on the south-east side. (*Moorcroft.*)

DESKIT—Lat. Long. Elev. 9,950.  
A village on the left bank of the Shyok, opposite its junction with the Nubra river. (*Thomson.*)

DIBLA SHERGOL OR DUBSA SERTKOL—Lat. Long. Elev.  
A camping ground on the Karakoram route, between Balti Brangsa and Malikshah (or Aktagh). Sixteen miles from Malikshah and 17 from Balti Brangsa. A little grass here. It is at the junction of two tributaries of the Yarkand river. (*Johnson—Shaw.*)

DIGAR—Lat. Long. Elev. 13,080.  
A village on the winter route from Leh to Yarkand, two marches from Leh between the Digar La pass and the Shyok river. There is a colossal figure of *Chamba* carved here in a rock, and a considerable extent of cultivation. The Digar stream flows by through a ravine, down to the Shyok from the Waris La pass. (*Trotter—Bellew.*)

DIGAR LA PASS OR LAZGUNG PASS—Lat. Long. Elev. 17,930.  
Is crossed between Digar and Leh. Proceeding from Digar you go up a rising moorland amongst granite boulders and across peat beds and bogs for 5 miles to Polu camp, on a spur where the ascent increases. Then up a long stony slope, covered with snow patches, at end of June, and rise suddenly to the crest of the pass. Pass through a narrow gap, and drop by a very steep and rough path to the other side.

Pass very difficult. Yaks must be used. Dr. Thomson crossed this pass on the 12th October from the Leh side. The snow lay on the north face thickly for 2 miles or more.—(*Trotter—Thomson.*)

DIPSANG PLAIN—Elevation of Col. 18,450. General Elevation 17,500.  
Is crossed on the summer route by the Karakoram pass between Kizil Angur

## DOK—DRA.

and Daulato-Beguldi. Dr. Bellew calls it the "veritable top of the world." "All around appeared mountain ranges, none of which are less than 20,000 feet high, whilst to the west rose two lofty peaks of much greater height; yet in the distance they seemed below us, for the land around sloped away down on all sides. The Karakoram left behind us appeared like a mere crest on the undulating surface of the country. The plateau is about 8 miles across from north to south, and presents an undulating surface, the soil of which is a spongy saline-charged mixture of clay and gravel. When we crossed (June) there was very little snow left, and the path was strewn with the bones and skeletons of dead cattle. The descent from the plateau is down a steep *gully* into a deep and tortuous chasm, which is overhung by high cliffs of red clay and conglomerate." (*Bellew*.) Kizil Angur is about 6 miles from the plateau.

The intense cold of this bleak and dreary waste prevents this route (across the plateau) from being adopted in winter, during which season the caravans follow the Shyok river from Saser Polu up to Daulat-Beguldi.

No grass or fuel obtainable. The disagreeable effects of a rarified atmosphere are felt in crossing this plain. Chlorate of potash was found by Dr. Henderson to be a good remedy. (*Trotter*).

DOK—Lat. Long. Elev.  
A village on the route from Srinaggar to Leh, on the left bank of the Waka river, between Kargil and Mulbekh.—(*Cunningham*).

DONGAN— Lat. Long. Elev.  
A camping ground on the Spiti route to Changchenmo, between Narbu Sumdo and the Lanak pass. It is to south-east of Tsomorari Lake. (*Montgomerie*.)

DONG-AYLAK— Lat. Long. Elev. 13,000.  
A camping ground on the winter route from Leh to Yarkand, eight marches from Leh, on the left bank of the Shyok. Strachey says that Dong-aylak in Turki means "the wild yaks' summer pasture ground." (*Montgomerie—H. Strachey*).

DONG-LUNG—*Vide* DACHUNG.

DONG-LUNG—*Vide* SHINGLUNG.

DON ZHO—Lat. Long. Elev. about 14,040.  
A camping ground (?) 1 mile from the north-west end of the Pangong Lake, and about 100 feet above its level. It is the water-shed between the affluents of the Pangong Lake and those of the Shyok. (*H. Strachey*.)

DORA—Lat. Long. Elev. 13,800.  
A camping ground on the route from Leh to Garo, on right bank of the Indus, 55 miles from Tashigong.

This is where the Champas of Rupshu spend the winter. Hardly any snow falls here. Close by is a small shallow lake. It is about  $\frac{3}{4}$  mile long and a furlong wide, of clear fresh water. The boundary of Chinese Tibet, a day or two's march beyond Dora. (*Drew*.)

DORGU—*Vide* DURGU.

DRAS—

Cattle and coolies brought from Kashmir are changed here. Barley and the variety of it called *grim* are grown. Very few yaks seen, but the zho were common. There is a polo ground. (*Bellew—Henderson*.)

DRAS OR HEMBAPS (Tibetan), *i. e.*, "SNOW-FED"—

Is the most westerly district of Ladak, and lies along the valley of the Dras river. More snow falls here than in any other part of Ladak. This is owing "to the great depression in the Himalaya, at the head of the Dras river, which allows the constantly humid vapours of Kashmir to pass to the north of the mountains, where they become condensed by the cold, and are precipitated in rain or snow, according to the season of the year."

The district extends from the Zoji La Pass to Chanagund, near Kargil.

The inhabitants are "Shiā Musalmans professedly, but in physiognomy resemble the Tartars, with whom they consort freely. Moorcroft says they are great thieves. "The crops cultivated are Sherokh barley, wheat, and buck wheat; the first ripening in about three months, the second in five or six, and the last in about two months. The cattle are horses, cows, the hybrid between the yak and cow, and sheep and goats. The former though small are hardy, active, and tolerably well shaped. A good five-year old gelding cost £8 or £9. The neat cattle are small and generally black. The cattle of Dras were in much better condition than those in any other part of Ladak, owing to the abundant supply of *prangos* in summer, and its hay in winter. The houses are built of pebbles, cemented with earth, with terraced roofs. Eye-diseases are very common in the valley.—(Cunningham—Drew—Bellew—Moorcroft.)

DRAS PASS—*Vide* ZOJI LA.

DRAS RIVER—

A tributary of the Indus, formed by the united streams of the Waka, Suru, and Kuksar rivers. It rises near the Zoji La Pass, and has a course of 85 miles, running north-east.

"All these streams unite near Kargil, below which they cut the trans-Himalayan Range at the narrow gorge, called the '*Wolf's Leap*,' and join the Indus opposite Marol."

At the end of June, Dr. Henderson says that the river near its source was in many places bridged by enormous masses of snow. Near the village of Dras the river is not fordable, and is spanned at several points by rope bridges. Lower down, at Tashgam, it is crossed by a dilapidated wooden bridge.

The route from Srinaggar to Leh follows the course of this river as far as Kirkitchu. (Cunningham—Henderson.)

DRAS VILLAGE—Lat. Long. Elev. 10,144.

On the left bank of the Dras river, the second march after crossing the Zoji La Pass, on the route from Srinaggar to Leh, 15 miles from Matayan, and the same distance from Tashgam, the next march. "It is a collection of half a dozen hamlets dispersed over the inequalities of a spacious basin in these close set hills, and is the capital of the Dras district. In the centre of the basin is a small square fort, with a garrison of 50 men, and adjoining it is the *tahsil* or "collectorate" of the Governor of the district. It overlooks a garden surrounded by poplar and willow plantations. Snow lies on the ground for two to three months in the winter, to the depth of a foot or more, and sometimes completely closes the route through this valley."

## DUN—FOT.

### DUNGLUNG—*Vide* SHINGLUNG.

DURGU—Lat. Long. Elev. 13,500.

A small village about 60 miles east of Leh, and the fifth march from it to Changchenmo, between Tsultak and Tankse. "We here entered a well cultivated valley, which we followed for two marches (27 miles) to the Pangong Lake. A large stream, fordable with difficulty at this season (July 11th), flows down the valley into the Shyok river. It swarms with fish. Johnson calls this the Chushul river, the village being on its left bank. The fish in the stream, he says, were chiefly trout. There is a bridge across the stream. *Vide* Lungchu river. (Johnson—Henderson.)

DURGUKH VILLAGE AND STREAM—*Vide* DURGU.

## E

EKEKKA—Lat. Long. Elev.

A small village on right bank of the Indus, nearly opposite Khere. (Reynolds.)

ELCHI DIWAN—*Vide* YANGI DIWAN.

## F

### FARKA—

A sub-division of the Nubra district, it being the Nubra valley below Panamikh (left bank). (Drew.)

FATOKSIR—*Vide* FUTTOKSIR AND PHUTAKSA.

FOTASH—Lat. Long. Elev. 12,520.

A camping ground on the left bank of the Karakash river, between Gulbashem and Sumgul, and 33 miles above Shudūla.

Captain Trotter, in October 1873, from Fotash tried a new route across the mountains south of the Karakash river, by taking which the Suget pass is avoided. He does not, however, think that this route is likely ever to come into general use, for although it is perhaps a better route than that between Shahdūla and the Karakoram pass (*viá* the Suget pass), yet it is much longer. Should, however, the road *viá* Kizil Jilga and Karatagh come into frequent use, he believes the Fotash route might be employed with advantage, as there is very little difference in length of road, and grass and firewood are to be found in abundance all the way from Shahdūla up the Karakash river, and for 2 miles up the Fotash ravine, after which there is plenty of grass all the way to the pass, as well as any amount of *Boortsee*.

The road has evidently been occasionally in use, as it is marked in places where it might easily be lost in the snow, by small stones placed in an upright position here and there on large rocks. His guide said he had only once travelled by it when accompanying a caravan, on which occasion there being a great deal of snow on the Suget pass, they had resort to this alternative route to the Karakoram. Its existence appears generally unknown to the Bhots.

## FOT—GOG.

Dr. Cayley in August 1870 crossed this pass, leaving the Karakash at Gulbashem, and then turning south over the mountain range to the Malikshah plain (Aktagh).

“The pass proved to be both high and difficult, and the preferable route to take from Shahdūla is for three marches along the regular Karakoram road over the easy Suket pass to Malikshah.” (*Trotter—Cayley.*)

FOTU LA PASS OR PHOTO LA—Lat.                      Long.                      Elev. 13,446.

Crossed on the route from Srinaggar to Leh, between Kharbu and Lamayūru. An easy and gradual ascent to the crest, where there is a conspicuous *chhorten*.

View extensive from the summit. Lamayūru monastery visible.

The descent is by a gentle slope for 2,000 feet down a valley comparatively open to Lamayūru. (*Bellew—Drew.*)

FUTTOKSIR, OR FATOKSIR, OR PHUTAKSHA—Lat.                      Long.  
Elev. 13,900.

A halting-place and village, passed on the route from Kishtwar to Leh (*viā* Zankar), between Yelchung and Hofata.

It lies north-west of the Singa La and south-east of the Sirsir La Pass. The valley here is partially cultivated, the fields forming a narrow belt, parallel to the stream. (*Drew—Thomson.*)

## G

GANGANG—Lat.                      Long.                      Elev.

A small village on the left bank of the Dras river. It is passed on the route from Srinaggar to Skardo (*viā* Dras), between Kirkitchu and Olting Thang. (*Drew.*)

GANGRI—*Vide* KAILAS.

GANLES OR GINGLIS—Lat.                      Long.                      Elev. 13,500.

A hamlet at the south base of the Khardong pass, five miles from Leh.

GANSKIEL PASS—*Vide* LA GANSKIEL.

GAPSHAN OR GYAPTHANG—Lat.                      Long.                      Elev. 15,150.

A camping ground on the winter Karakoram route. It is situated on the right bank of the Shyok, close to the great Remo Glacier, and is passed between Kumdan and Daulut-Begūldi, distant 8 and 15 miles respectively.

Balti Pulu is 17 miles. The road from it follows the stream of that name to its junction with the Shyok. The latter in October was only 8 feet wide, and frozen over. There is a small stone hut here. Wood and grass procurable in small quantities. Dr. Bellew remarks—

“We camped amidst a crowd of horse, ass, and yak carcasses and skeletons in every stage of decay. A blighting south wind swept up the wide river channel with great force, and a large number of our party were affected by the rarified atmosphere.” (*Bellew—Johnson.*)

GNISCHU—*Vide* NISCHU.

GOGRA—Lat. 34° 21' 4"                      Long.                      Elev. 15,570.

A camping ground in the Changchenmo valley, 12½ miles above Pamzal. The river is forded half way between the latter and Kiam, after which the road proceeds north-north-west up the Kugrang valley to Gogra. Fuel



## GOG—GYA.

plentiful. Grass scarce. A serai has been built here. (*Trotter—Henderson—Cayley.*)

**GOLAB BAGH**—A camping ground. *Vide* Shushot.

**GOMA HANŪ**—*Vide* HANŪ.

**GOMPHA**—Lat. Long. Elev.

A village on the right bank of the Indus, south-east of Leh, and opposite Stakna. (*Moorcroft.*)

**GONG LA**—*Vide* KIŪNG GANGLA.

**GONGTAI LA PASS**—*Vide* KONGTA LA.

**GONH**—Lat. Long. Elev.

A village on the left bank of the Suru river, about half way between Sankho and Kargil. It is situated in a close valley about 3 miles long and  $\frac{1}{2}$  mile wide, and is intensely hot in summer. Goitre very prevalent. (*Moorcroft.*)

**GULBASHEM** or **GULBASHER**—Lat. 36° 17' 28" Long.  
Elev. 12,385.

A camping ground on the right bank of the Karakash, 10 miles above Bulakchi, between which and Gulbashem are some abandoned jade quarries. Grass and fuel abundant, except for 2 miles above Gulbashem. Road down valley good. Twelve miles above camp the river is much increased by springs. This is a favourite Kirghiz camp.

There is a Ziarat or Māzār (*i. e.*, tomb) of some saint here, on the top of a low hill. The Karakash is forded with difficulty between this and Bulakchi, not only on account of the depth of the water and force of the current, but from the existence of quicksands, which latter are common along the whole course of the river (August 4). (*Trotter—Henderson.*)

**GUMBAR**—

A tributary of the Dras river. Rises near the Zoji La pass and joins the Dras river a little above Dras. It is fed by a glacier.

**GUNLE**—Lat. Long. Elev.

A camping ground on the Changchenmo route between Rimdi and Pamzal, north-east of the Marsimik La Pass. (*Montgomerie.*)

**GYA**—Lat. Long. Elev. 13,500.

A village on the left bank of the stream of that name. It consists of some 40 houses, with a proportionately wide area of cultivation. Only naked barley (*grim*) ripens here. Peas are grown, but only for green-food. It is one of the most elevated villages in Ladak. There are some poplar trees here, some of considerable size. The monastery crowns a rocky hill on the opposite bank of the stream. The village is a halting-place on the route from Kulu to Leh, and lies north of the Tagalang pass. (*Thomson—Drew.*)

**GYA STATION**—Lat. Long. Elev. 22,300.

A trigonometrical station in the Himalayas, west of the Parang La Pass, and on the borders of Ladak and Spiti.

**GYA STREAM**—

Rises near the Tagalung pass, and flowing north enters the Indus at the village of Upshi. The route from Kulu to Leh follows its course throughout, and crosses it repeatedly. Of late years this portion of the road has been much improved.

GYANG—

An affluent of the Tsomorari Lake. It enters it from the north-west after a course of about 30 miles. *Vide* also Tsakshang. (*H. Strachey.*)

GYEN—

A sub-division of the Nubra district, being the part of the Shyok Valley above the junction of the Nubra, as far as habitation extends. (*Drew.*)

GYIK—

A small village on right bank of Indus, half-way between Upshi and junction of Puga rivulet.

H

HANADKU—*Vide* KANJI RIVER AND HESKU—

HANLÉ—

A sub-division of the Rupshu district. "It occupies the south-eastern extremity of Ladak." (*H. Strachey.*)

HANLÉ—Lat. Long. Elev. 14,276.

A village in the Hanlé district, on the left bank of the Hanlé river. There is a fine monastery here, "built on the summit of a steep hill which rises abruptly out of the plain." The Hanlé Plain is about 6 or 8 miles in diameter. Several streams, very tortuous and sluggish, wind over its surface. These were frequently 3 feet or more in depth, and contained multitudes of small fish, a species of carp. The surface of the plain was very saline, and, where not swampy, covered with coarse grasses. It was very uneven, being covered with knolls. In some parts there were extensive patches of *Dama* (Tibetan furze).

The streams all converge to a point at the north-east end of the plain, and uniting into one, continue their course down an open valley in a northerly direction towards the Indus. It can scarcely be doubted that it (the plain) has at one time been a lake, which has gradually silted up. (*Thomson.*)

HANLÉ RIVER—

"The waters of the lake (Hanlé Tso) find an outlet into the long and level plain of Mongkang, through which the Hanlé rivulet winds from side to side for a distance of 30 miles."

The road from Hanlé to the Indus follows the left bank of the stream, in the vicinity of which saline efflorescence occurred *every where* in great quantities. The banks of the stream were bordered by a belt of green herbage, more or less broad. The road leaves the Hanlé river a few miles before it joins the Indus. In this latter part of its course it is said to flow through a rocky narrow ravine.

HANLÉ TSO—

Cunningham calls the above described swampy plain the Hanlé Tso (or lake), and thinks it must be the largest sheet of fresh water in Ladak. "The extent of open water is not great, but the whole extent of swamp is between 3 and 4 miles in length. It is principally supplied by a rivulet called the *Kongrachu*, which drains the lofty range of mountains to the east of the Tsomorari Lake as far south as the Lemak Pass."

There are two routes from Hanlé to the Indus. The western follows the

## HAN—HEM

left bank of the Hanlé river, the eastern proceeds north *viâ* Moukang and Tara. (*Cunningham.*)

Elevation at junction with Indus, 13,900. (*Cunningham—Thomson.*)

HANŪ OR GOMA HANŪ—Lat. Long. Elev.

A village on the left bank of the Hanū stream. It is a halting place on the route from Leh to Skardo *viâ* Chorbat, 17 miles from Skirbichan and 10 from the foot of the Hanū or Chorbat Pass. (*Drew.*)

HANŪ PASS—*Vide* CHORBAT PASS—

HANŪ STREAM—

Rises near the Hanū Pass. "It is an impetuous torrent, that in some places rolls along the large stones in its bed with a noise resembling the report of a distant cannon, and afterwards leaps into the deep and more tranquil stream of the Indus in a cascade of some magnitude and beauty." (*Vigne.*)

HARDAS—Lat. Long. Elev.

A village on the left bank of the Dras River, about 10 miles above Olting Thang. It is passed on the route from Srinaggar to Skardo, *viâ* Dras valley. There is an artificial aqueduct, of 3 miles in length, near this village.

HARONG RIVER—*Vide* LUNGCHU.

HARONG LA PASS—South-east of Tankse, on left bank of Harong river. (Tibetan for snow-fed or "snow-descended.")

HEM-BABS—*Vide* DRAS.

HEMIS OR HEMIS GONPA—Lat. Long. Elev.

"The largest and wealthiest monastery in Ladak. It is on the left bank of the Indus, 18 miles above Leh, situated at the top of a singularly wild and solitary glen. The view from below the monastery is wonderfully picturesque. The white walls, with their dark squares of window and door, and thick red lines of coping, from which project here and there poles topped with the bushy *yak's* tail, spread over the cliffs tier above tier, and with great masses of bare rock protruding amongst them, appear isolated in the very crowd of their assemblage. The buildings cover a considerable surface, and form a small town. It is said to contain 800 monks and nuns. Snow lies here for nearly three months every year." (*Bellew.*)

HEMIS SHUKPA—Lat. Long. Elev.

"Named after a grove of a hundred or two large *shukpā*, or pencil-cedar trees, which here grow about on a stony mound. The girth of several of these trees is 6 or 7 feet, and some that have irregular trunks measure 10 feet or more; they taper quickly upwards, reaching to a height of about 40 feet. It is a holy grove protected by the gods, and disease and misfortune are said to overtake those who commit sacrilege against it. There are the remains of a fort or tower here, which was built by the Sokpo invaders of Ladak towards the end of the seventeenth century." Hemis Shukpa lies between Timisgam and Khalsi, some miles from the right bank of the Indus. (*Drew—Henderson.*)

HEMIYA—

A village on the left bank of the Indus, between Upshi and Puga rivulet. Supplies procurable. A wooden bridge, rickety and not safe for laden animals.

## HEM—IND

**HESKU OR HANADKU**—Lat.                      Long.                      Elev.  
 A small village on the right bank of the Kanji river. Is passed on the route from Kashmir to Leh, between the Hamik La and Fotu La passes.

The river is crossed here by a spar bridge. (*Bellew—Cunningham.*)

**HINDUTAK DIWAN PASS OR HINDU TAGH**—Lat.                      Long.  
 Elev. 17,000.

A pass leading over the Kuenluen mountains into Khotan. The road to it leaves the Karakoram route at Suket, and lies for two marches up the Karakash river. Robert Schlagintweit crossed this pass from a camping ground called Sumgal, on the Karakash river. He estimated its height to be 17,379 feet. At the top there is a much crevassed and extremely steep glacier. The road by this pass can only be used by foot passengers. (*Johnson—Trotter.*)

**HOFATA OR HONUPATTA**—Lat.                      Long.                      Elev. 12,400.

A village in the Wanla valley, north of the Sirsir La pass, on the route from Kishtwar to Leh *viâ* Zanksar. Cultivation, only a narrow strip along the bank of the stream. Lucerne plentiful. Some poplars and willows and large juniper-trees. (*Thomson.*)

**HUNDAR**—Lat.                      Long.                      Elev.

A village on the left bank of the Shyok, about 9 miles below its junction with the Nubra river. It is a halting place on the route from the Nubra valley to Skardo *viâ* the valley of the Shyok. The river is here divided into several channels. One branch of it, crossed by Dr. Thomson in October (22nd), was not less than 300 feet wide, at the ford above Hundar. The most populous village in Nubra. Very fine orchards of apricot trees here. (*Thomson.*)

**HUZAKHAR**—Lat.                      Long.                      Elev. 16,684.

A halting place on the Changchenmo route (eastern variation), situated 15 miles north of Tsothang and 16 miles south of Mapothang (or Thaldat). Camp about 20 yards to the east of a small lake, which is difficult of discovery, from its being in a deep hollow in a plain. Water of lake brackish, but a small spring of fresh water flows out of the high bank into the lake. The whole country, with the exception of that to the west, where the hills rise to a greater height, has the appearance of having been the bed of very large lakes of various levels, and seems to be subject at the present time to inundation in the months of April and May, during which period the snow melts on the hills." (*Johnson.*)

## I

### INDUS—

OR SINGE-KHA-BUB, "Lion's mouth descended."

OR SINGE-CHU, "Lion River."

OR SINGE SANGSPO, "Lion River."

OR YUMA RIVER—

Is the chief river of Ladak, its principal tributaries being the Shyok, Nubra, and Zanksar rivers.

It has its source in mountains to the north-west of the holy lakes of Manasarowar and Rawan Hrad (or Rakas Tal) in Great Tibet.

## IND—KAB

From its source to Ranak, an uninhabited place, a few miles above the junction of the Puga rivulet, it has a course of about 260 miles, running north-west.

From Ranak to Pitak, opposite Leh, the distance is 130 miles, and the direction still north-west.

Total length from source to Leh about 390 miles; direction north-west.

From Leh to junction of Dras river, 125 miles. The direction now changes to west-south-west.

From junction of Dras to junction of Shyok, 75 miles; course generally north-north-west.

From source to Ranak it has a fall of 2,600 feet, or about 10 feet per mile; from Ranak to Leh, a fall of 3,200 feet, or 24.6 feet per mile. Above Ranak it is generally fordable, but between Ranak and Leh can only be crossed by bridges.

At 8 or 10 miles from source in July 1812, 240 feet wide, 2½ feet deep.

At Garo, about 40 miles from source, it was "a clear, broad, rapid, but not deep river."

At Ranak, in September 1847, breadth 240 feet; mean depth 1.7916 feet; extreme depth 3 feet; Greatest velocity 3.658 feet per second, or 2½ miles per hour; mean velocity about 1 mile, 7 furlongs per hour.

"The stream was quite clear, but sluggish, running between grassy banks, half sand half mud, the sand being quick, and the grass coarse.

"The banks were flat and low, and the bottom generally muddy.

"Below Ranak the character of the stream changes, and the waters rush impetuously down a narrow channel full of huge boulders and enormous rocks.

"The current is now *rapid*, and its velocity about 6 miles per hour.

"From Ranak to the junction of the Zankar river it is a brawling rapid from 100 to 150 feet broad.

"From the junction of the Zankar river to the confluence of the Shyok it is a furious torrent, raving from side to side of a narrow ravine.

"At the Kallach (or Khalsi) bridge, the channel is only 50 feet wide below and 60 feet above.

"In the winter the lower part of the Indus is frequently frozen over. Zorawer Sing's force crossed it on the ice in 1841.

"Henry Strachey says that at Pitak, opposite Leh, the Indus is easily fordable at all seasons, being sub-divided into two streams, each 100 yards wide (in the middle of May) and at the utmost knee-deep or 1½ feet. Below this the river is unfordable. Sometimes expanded to a breadth of 100 yards, and sometimes contracted to no more than 10 yards, but always deep and rapid." (*Cunningham—Strachey.*)

## K

KABUTAR KHANA—Lat. Long. Elev.

A camping ground on the winter route to Yarkand by the Karakoram Pass, on the left bank of the Shyok, between Chung Jungle and Dong-Aylak, and just above the junction of the Changchenmo river.

KAF—KAN

**KAFIR DURRAH**—Lat. Long. Elev. 13,500.

A camping ground on the right bank of the Karakash river, 3 marches east of Gulbashem. (*Montgomerie*).

**KAILAS**, (Ice Mountain) or Gangri range of mountains, runs through the midst of Western Tibet, along the right bank of the Indus, to the junction of the Shyok.

The general direction is from south-east to north-west. The average height of the passes over it is 17,000 feet, so the general elevation of the range may be estimated at not less than 20,000 feet. The snow line is at about 19,000 feet on the southern and 18,500 on the northern face. Cunningham calls this the Kailas range, after the Kailas peak (Kailas Parbat 22,000 ft.), which is situated north of the Manasarowar and Rakas Tal lakes, and says that the range extends "in one unbroken line from the source of the Indus to the junction of the Shyok." Drew denies that this is one unbroken chain of mountains, and what he calls the "Leh Range" extends from the junction of the Hanlé stream north-west to the junction of the Shyok, a distance of 220 miles. "The geological structure of this range is chiefly clay, slate, gneiss, and granite. Near Leh it is wholly of granite, of a very coarse texture." (*Cunningham*.)

**KAKJUNG**—

A pastoral valley lying along the banks of the Indus between Nima-Mud and Chibra. Frequented by Rupshu shepherds from December to February. (*H. Strachey*—*Moorcroft*)

**KAMBO**—Lat. Long. Elev.

A small village on the left bank of the Purik river (Wakha-chhu). There is an artificial aqueduct here, about one mile in length. (*Cunningham*.)

**KANARI RANGE** of Mountains—Separates Zankar from Ladak. (*Bellew*.)

**KANDALA**—Lat. Long. Elev. 16,240.

A pass over the Kanari range, leading from Phi, opposite Leh to Skio. At the end of June, a deep bed of snow lay on the left of the pass. On the top was the usual votive pile of stones, decorated with rags and bits of cloth. (*Moorcroft*.)

**KANJI**—Lat. Long. Elev.

A small village on the left bank of the Kanji river, situated about half-way between the Kanji and Fotu La passes.

**KANJI PASS** OR **KUNGI LA**, OR **VINGGE LA**—

A pass situated close to the sources of the Kanji and Wakha streams.

**KANJI RIVER** OR **SHITANG RIVER**—

A tributary of the Indus, which flows into the latter river a little below the junction of the Hanu stream.

After crossing the Namik La Pass, the road from Srinaggar to Leh follows up the course of this river in a south-east direction to Kharbu (on its left bank). Five miles from here it is crossed by a spar bridge, opposite the little village of *Hanadku*. "Beyond this the river comes down from the Kanji valley through a deep dark cleft in the vertical cliffs of the slaty mountains to the right of the road." In Drew's map the river is shown to rise in a glacier due west of the Sirsir pass. (*Cunningham*—*Bellew*.)

**KANUNOR KILANG** OR **KILUNG**—Lat. Long. Elev.

A camping ground at the foot of the Bara Lacha pass (north-east of it).

## KAR

It is the first camping ground in Ladak territory, on the route from Kulu to Leh, and lies 164 miles south of Leh. There is a bridge here over the Yunam river. A rest-house and supply-depôt is much wanted. (*Drew--Cayley.*)

### KARAKASH RIVER—

The southern or main branch rises near the Kompas La pass at an elevation of about 17,400 feet, and on the western border of the Lingzithang plain (which here forms the water-shed between India and Central Asia). From its source the river, after rounding the Kompas La spur, flows north for 32 miles to Kizil Jilga (16,350) between which and the pass an immense ice-bed extends for 2 or 3 miles right across the ravine (which is about  $\frac{1}{2}$  mile broad). From Kizil Jilga to Changtash (15,590) the river flows north-west for  $23\frac{1}{2}$  miles, and is at this point joined by a tributary from the north-west. At Chang Tash it takes a bend to the north-east and continues in this direction as far as Sora. Near Sora it is joined by the eastern or shorter branch, which rises in the southern face of the Kuenlue mountains. From Sora the river flows nearly due west for 70 miles to Shahdūla (11,780), at which point it takes a bend to the north-east and keeps this direction till it reaches Khotan (or Ilchi).

Grass and fuel (the Burtze or wild lavender plant) are procurable at almost every camp in the Karakash valley. "Its natural vegetation resembles that of the Nubra valley, but it is uncultivated and uninhabited, except by the Kirghiz camps in the pasture season. Between Shahdūla and Balakchi the stream is a considerable one, but fordable at most parts, on a pebbly bottom, at this season (October 18)." Henderson describes the country in the Karakash valley from the junction of the main and eastern branches down to Shahdūla. "On either side rugged peaks of granite rose to more than 20,000 feet. The main valley was about a mile wide, and there was quite a forest of Myricaria bushes and plenty of good grass. At the next camp the valley varies from 1 to 2 miles in width, and the river flows over shingle, in a great number of streams. Here and there the ground is covered with saline efflorescence, and there are numerous springs, some of which are warm, along the foot of the ranges which rise abruptly and sometimes precipitously on either side. The lower peaks appeared to be composed of gneiss and slate."

There are small fish in the shallow side springs and pools, but none were seen in the main stream.

On July 31st, at 1 p. m., the thermometer was at 66° F., under an awning. At night it fell to 25° F., but there was hardly any ice on the water. Even in September the river was never completely frozen, although the thermometer was every night nearly at zero, and during the day was never above freezing point in the shade.

The main stream in August was about 30 or 40 yards wide, and fordable pretty easily early in the day. Velocity of current from 3 to  $3\frac{1}{2}$  miles per hour. Lower down fording was more difficult, even at 10 a. m. at the widest parts. But in the middle of September it had fallen so much as to be easily fordable everywhere. Patches of Tamarisk jungle are met with at intervals. One of the commonest plants was a wild onion, which when cooked is good eating.

## KAR

Near Balakchi there are quicksands, and fording is difficult work. Quicksands are common along the whole course of the river. At Shahdūla the Karakash is joined by the Kirghiz jungle and Suget streams, which rise at the Kirghiz and Suget passes respectively. (*Bellew—Henderson.*)

**KARAKORAM BRANGSA**—*Vide* BALTI-BRANGSA.

**KARAKORAM MOUNTAINS** or "black gravel" mountains, also called **MUSTAGH** (*i. e.*, "ice mountains"), and called the **BOLOR MOUNTAINS** by the people of **BALTI** (or **BOLOR**).

Form the natural boundary to the north of the districts of Gilgit, Hunza-Nagar, Baltistan, and Ladak, and extend from the source of the Gilgit river to that of the main branch of the Karakash, their general direction being from north-west to south-east, *i. e.*, about parallel with the Kailas range and the Himalayas. The highest peaks are found north of Baltistan, near the Mustagh pass, in the midst of immense glaciers. These peaks are K2, 28,278, and Gusherbrum 26,378 feet. The average height of the range is over 20,000 feet. The lofty peaks above mentioned and those at the head waters of the Nubra and Shyok are covered with perpetual snow, but in the neighbourhood of the Karakoram pass and to the east of it little or no snow lies on the range during summer, and not in any quantity in winter. The range in this portion forms the true water-shed between the affluents of the Tarim on the north and the Indus on the south. It is quite barren, the black gravel and shale of which it is composed being unfavourable to vegetation of any kind, no lichens being even found. There is also very little animal life; a few ravens are occasionally seen. (*Cunningham—Thomson.*)

**KARAKORAM PASS**—Lat. Long. Elev. 18,550.

Is crossed on both the winter and summer routes from Leh to Yarkand, being about 190 miles north of Leh by the summer, and 212 miles by the winter route. It lies half-way between the camping grounds of Daulat-Beguldi and Balti-Brangsa. Fa-Hian, the Chinese pilgrim, crossed it in A. D. 399.

Dr. Bellew describes the rise to the pass from Daulat-Beguldi (16,880) as being "gentle, except at the pass itself, where it is sudden and steep, but short both in the ascent and descent. At the foot of the pass (on the Daulat-Beguldi side) is a saddle-shaped water-shed across the valley, which divides two tributaries of the Shyok. The elevation of the pass affected our men and cattle severely. Several of the former tumbled off their ponies from the giddiness produced, and some fainted. Two of our baggage ponies died on the pass, and two others soon after reaching camp. On the other side of the pass we went down a loose, shingly, drainage gully, similar to that on the south." (*Bellew.*)

Dr. Thomson calls the top of the pass "a rounded ridge connecting two hills which rose somewhat abruptly to the height of perhaps 1,000 feet above me. They were quite without snow, nor was there any on the pass itself, though large patches lay on a shoulder of the hill to the right (going north—August 19th)." Vegetation was entirely wanting, the ridge was scattered over with shingle, chiefly a brittle black clay slate. "The road is marked with skeletons of horses; the rarity of the atmosphere and the absence of grass for many days' journey causing a



## KAR

great mortality among beasts of burden." (*Bellew—Henderson—Shaw.*)

**KARAKORAM ROUTE—***Vide* ROUTES.

**KARAKORAM STREAM—**

A tributary of the Yarkand river, rises north of the Karakoram pass.

**KARASU—**Lat.

Long.

Elev.

A camping ground on Hayward's route by Changchenmo to Yarkand, situated at the south foot of the Kizil pass, 10 miles north of Burtai, and  $14\frac{1}{2}$  south-east of Kizil Jilga. (*Drew.*)

**KARATAGH—**Lat.

Long.

Elev. 16,890.

A camping ground on the Changchenmo route, 9 miles west of Shorjilgha, and  $22\frac{1}{2}$  miles south-east of Malikshah (or Aktagh). The lake is situated in a large flat and open plain at the bottom (west of) the Karatagh pass. It was frozen over in September and October. Water obtained by making a hole in the ice. Plenty of *Boortsee*, but no grass visible. Plain covered with several inches of snow.

Lake about  $\frac{1}{2}$  mile across; water sweet. (*Trotter—Henderson.*)

**KARATAGH PASS AND MOUNTAIN RANGE.—**Lat.  $35^{\circ} 42' 54''$ .

Long.

Elev. 17,710.

Leads over a range of mountains that extends from the Karakoram pass north-east to the great bend in the Karakash river near camp Sora, where it joins the range that runs parallel with the left bank of the Karakash from Sora down to Shahdūla. The Karatagh pass is crossed between Shorjilgha and the Karatagh Lake. From Shorjilgha the road is bad, leading up a ravine; snow and ice nearly the whole way (October). Descent short, but sharp. (*Trotter.*)

**KARATAGH PLAINS—**

Extend from the pass of that name north-west to the source of the Yarkand river towards Kuliksha. (*Trotter.*)

**KARATAGH RANGE—***Vide* KARATAGH PASS, ALSO FOTASH PASS.

**KARAWAL DIWAN OR OUTPOST HILL—**Lat.

Long.

Elev. about 14,550.

A ridge to the south-west of the Saser pass, just above Changlung. Dr. Bellew describes the ascent from Changlung—"Our path led by a steep\* zig-zag up the face of a high range of granite hills. At the top of the steep there is a small ledge of flat land, and then another rise to the crest of the pass. Beyond the ledge the rise is more gradual up to the Karawal Dawan, or 'outpost hill.' It is the first Turki name we have met, and but an empty memorial of the Yarkand invasion by Sultan Sa'id. The Bhots call this place Hlasgya. Around the stage huts at the top of the pass, I found skeletons and bones of horses and yaks in every stage of decay, and amongst them some human bones. From the crest of the ridge the path led across a steep slope of loose shifting gravel down to a deep and rocky boulder bed, through which rolled noisily a tributary of the Nubra river. We crossed it by a ricketty spur bridge, the last met with on this route." (*Bellew.*)

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\* "The steepest bit of ascent on the whole journey to Yarkand, being a rise of more than 4,000 feet in a length of about 5 miles."

## KAR

### KARGIA—

A tributary of the Zankar river. It rises in a glacier close to and north-west of the Bara Lacha pass, and falls into the Zankar river some distance above Padam, opposite the village of Char.

KARGIA, OR KHARGYA, OR KURGEEA—Lat. Long.

Elev. 13,670.

A village on the left bank of the Kargia stream, in the Zankar district. Supplies and fuel procurable. Large flocks of sheep and yaks graze about here. The Bara Lacha pass lies to the south-east.

### KARGIL—

District of, "extends from the junction of the Thangskam with the Dras river to the Photo La pass." (*Bellew.*)

KARGIL—Lat. Long. Elev. 8,787.

A considerable village, and the capital of the Kargil district. It is picturesquely situated at the junction of the Sūrū and Pashkyum (or Wakha) rivers. There is a fort here, commanding the road at the junction of the rivers, and situated on an isolated boulder bed in the stream of the Sūrū river. It communicates with the shore by most rickety bridges, supported in spans upon unstable-looking piles of boulder and brushwood.

The collectorate is at the top of the village, and comprises some neat and commodious buildings. There is a polo ground here. "From Kargil the road crosses the river in front of the fort by three or four log bridges, which are connected by a line of embankment, and rising out of the hollow for 4 or 5 miles leads across a high undulating tract of gravel, which occupies the angle between the two rivers, and then descends into the Paskyum valley. The successive reaches on either shore are occupied by flourishing little hamlets; these are surrounded by their corn-fields and plantations of willow and poplar, and present a pleasing picture of prosperity, amidst the bare rocks around. There is less snow here in winter than at Dras, and a greater force of sun and warmth in summer to help on vegetation. Wheat and barley flourish, and also fruit trees (chiefly mulberry and apricot)." (*Bellew—Drew.*)

KARKPET OR KARKFE—Lat. Long. Elev. about 14,000.

A small village of three houses on the western shore of the Pangong lake, between Mang and Takang.

A few crops grown here; naked barley and peas. Mang is 11 miles distant. (*Drew.*)

KARSAR OR KARSHA—Lat. Long. Elev.

A town in the Zankar district, nearly opposite Thonde, and a few miles below the junction of the Zankar river, with a tributary from the north. "It is the largest town in Zankar, and lies in a ravine at a considerable distance from the river, and, from the steepness of the slope on which it is built, presents rather an imposing appearance. The level tract between the town and river was covered with cultivation." (*Thomson.*)

### KARTZE—

A small district lying between the districts of Kargil and Sūrū, in a valley tributary to that of the Sūrū river, and running into it from the east.

## KAR—KEP

- KARTZE OR LANG KURTZE**—Lat.                      Long.                      Elev.  
 Situated on the right bank of the Sūrū river, at its junction with the Pulumba Chu rivulet, and opposite Sanku. It is the chief village in the Kartze district. Goitre is very common here. (*Moorecroft—Cunningham.*)
- KARZOK OR KORZO**—Lat.                      Long.                      Elev. 14,900.  
 Is situated at the north-west end of the Tsomorari Lake, and is a halting place on the route from Spiti to Leh. There is a monastery here containing about 35 lamas, a house belonging to the chief man of the district, and 8 or 10 hovels, which are inhabited by the old and sick, who are left here when the camps and flocks move down to winter in the Indus valley. The summer camp is 2 or 3 miles distant, up the side valley, down which flows the Karzok stream. Naked barley is grown here to a small extent. It does not always ripen. (*Drew.*)
- KASHMIR JILGA**—Lat. 36°.14 54'.                      Long.                      Elev. 14,250.  
 A camping ground on the banks of the Yarkand river, situated 11 miles below Khafelung, on the winter (or Kugiar) route to Yarkand. (*Trotter.*)
- KATAI DAWAN PASS**—Lat.                      Long.                      Elev. 17,500.  
 Is crossed on the most easterly of the routes leading from the Changchenmo valley to Yarkand. It lies 8 miles north of Yangpa, and leads down to the eastern branch of the Karakash river. Both ascent and descent easy. (*Johnson.*)
- KAY LA PASS OR SKI-LA**—Lat.                      Long.                      Elev. 17,900 or 18,256.\*  
 Is crossed between Zingral and Tankse, on the Changchenmo route from Leh to Yarkand. The road *via* the Chung La pass is usually taken, being easier, though 6 miles longer, than by the Kay La.  
 This pass, though free from glaciers, is a very difficult one. Yaks should be employed to carry goods across. (*Trotter.*)
- KAY LOMBA RIVER**—  
 Has its source on the east of the Kay La pass, and joins the Durgu stream at Tankse. "It is fringed with grass and bushes for a considerable distance up, and at a height of 16,300 feet flows out of a lake about 400 to 500 yards long, of a very deep clear water. It owes its origin to a large landslide from the left side of the ravine. From the lake to the pass the scenery was as wild as wild could be." (*Godwin-Austen.*)
- KEMIS**—*Vide* HEMIS.
- KEPSANG**—Lat.                      Long.                      Elev. 17,200.  
 Lies north of the Kepsang pass and east of Lumkang, at the head of the Changchenmo valley, and close to the boundary between Ladak and Chinese Tibet. Captain Basevi, R.E., died here on the 17th July 1871.
- KEPSANG PASS OR NO PASS**—Lat.                      Long.                      Elev.  
 Is situated at the head of the Changchenmo valley, close to the source of a stream which flowing west from here joins the Changchenmo river at Kiam. The pass is on the boundary line between Ladak and Chinese Tibet. (*Johnson.*)
- KEPSANG PEAK OR KIEPSANG**—Lat.                      Long.                      Elev. 20,035.  
 A trigonometrical station lying just east of the Gong La (or Kiang Gang La pass) and on the frontier line of Kashmir and Rudok territory. Major

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\* Godwin-Austen estimates the height to be 18,256 feet.

Godwin-Austen went up to the summit of it in August 1863, on his way from Pal, at the east end of the Pangong Lake to the Changchenmo valley—

“I took the line of a ravine which led up to the ridge east of the Kiepsang staff; the ascent was most fatiguing over the loose angular *debris* that filled the steep bed of the ravine, whose waters were frozen into waterfalls of ice. On reaching the ridge, there was a long pull up to the pole, but the view recompensed all the labour to legs and lungs; the ascent was 3,200 feet, the peak being 20,035, while the camp below was about 16,800. Bleak wastes of hill and wide dry drainage-courses met the eye to the north-east, backed by some high mountains, whose loftier peaks were covered with snow and threw down some glaciers. To the south the great tributary of the Pangong, the Mipal valley, could be followed for many miles; high, rugged, angular mountains bounded it on every side. It was very cold, and I could scarcely do my work, or hold my pencil.” (*Godwin-Austen.*)

#### KESAR—

A small village on the right bank of the Indus, a little below Chumathang. (*Reynolds.*)

**KHAFELUNG OR KUFELONG**—Lat. 36° 8' 34' Long.

Elev. 14,810.

A camping ground on the left bank of the Yarkand river, at the junction of a stream from the south-west. It is passed on the winter route (*viâ* Kugair) to Yarkand, 20 miles from Aktagh (or Mulikshah) and 11 from Kashmir Jilga. Camp in a patch of jungle which extends several miles up and down the valley. (*Trotter.*)

**KHALSI, OR KÛLSI, OR KULLUCH KULATZE**—Lat.

Long. Elev. 10,130.

A village on the right bank of the Indus, about 50 miles below Leh. It is a halting place on the routes from Srinaggar and Skardo (*viâ* Chorbat) to Leh, the two routes meeting here. The Srinaggar road crosses the Indus by a good wooden bridge a mile or more below the village. The river here flows impetuously between steep rocks, the channel being only 50 feet wide below and 60 feet above. The bridge was built by the Dogra invaders, and is 77 feet long and 8 feet broad, with a stout railing on each side. Height above water (15th October) 45 feet.

The bridge is commanded by a small fort built on its northern and higher bank by Diwan Hira Sing, the first Governor of Ladak appointed by the Maharajah. The village, one of the largest in Ladak, is on a plateau about 250 feet above the river. There is a long strip of cultivated land watered from a side stream; crops and fruit trees grow on it well, and even luxuriantly, and walnuts and apricots ripen. (*Bellew—Drew—Cunningham.*)

**KHARBU, KHARBO, OR KARBU**—Lat. Long. Elev. 11,890.

A village on the left bank of the Kungi river, and lying between the Namyik La and Fotu La passes. It is a halting place on the route from Srinaggar to Leh. The Baltis under Ahmed Khan were defeated here with great loss by the Bhots in A. D. 1625.

“This is an apparently recently built village, at the base of a precipitous cliff, on the summit of which are the ruins of a former village,” and of a large fort. (*Bellew—Henderson.*)

## KHA

**KHARBU.**—Lat.

Long.

Elev.

A small village on the right bank of the Dras river. It is passed on the route from Srinaggar to Leh between Tashgam and Kargil. There is a police station here. The route from Srinaggar to Skardo (*via* Dras) also passes this village, which is 11 miles from Hardas and 5 from Tashgam and is situated "high up a steep lateral valley, with scattered groves of juniper on the sides of the hills above the cultivation." On the 11th December snow fell heavily to a depth of 15 inches. (*Bellew—Thomson.*)

**KHARDONG.**—Lat.

Long.

Elev. 13,500.

A village lying to the north of the pass of that name, 27 miles from Leh, on the summer route to Yarkand. It is situated on alluvial plateau, and is bound on one side by cliffs several hundred feet high. The onward path leads down to the stream at the foot of these cliffs and so on to the Shyok valley. "The stream flows between high banks of gravel and conglomerate. Its course is thickly set with a brush-wood of myricaria, tamarisk, rose, and buckthorn, and is crossed three or four times on little rustic bridges. (*Bellew—Drew.*)"

**KHARDONG PASS, ALSO CALLED LEH PASS AND LAOCHE LA.**—

Lat.

Long.

Elev. 17,900.

On the range of mountains lying between the Indus and Shyok valleys. Is crossed from a camping ground 7 miles north of Leh on the summer route to Yarkand, and is very difficult, being impracticable for ponies. Yaks are used in carrying goods across. Dr. Thomson crossed it from the Leh side on the 20th July. "The morning was intensely frosty. The path lay close to the stream, ascending somewhat rapidly. The last part of the ascent was extremely steep, among immense angular granite boulders, with here and there a little snow in the crevices. From the summit the view to the south was very extensive, embracing a great extent of snowy mountains with numerous lofty peaks, as well as a part of the Indus valley, and the town of Leh. To the north it was much more limited, as hills close at hand completely excluded all distant view, except directly in front, where one snowy peak could be seen a long way off, evidently beyond the Shyok. On the north side of the pass snow commenced at the very top, and continued for at least 1,200 feet of perpendicular height. The descent for this distance was extremely steep, over a snow bed, which appeared to cover an incipient glacier. About 1,200 feet below the top, I came to a small oval-shaped lake, completely frozen over. Beyond this the descent became more gentle and was partially free of snow." (*Thomson—Trutler.*)

**KHARNAK OR KHARNA.**—Lat.

Long.

Elev.

A small village situated in the upper Kharnak valley, close to the Yar La pass.

**KHARNAK RIVER.**—Lat.

Long.

Elev.

A tributary of the Zankar river, which rises near the Yar La pass, and, flowing north-west, joins the Zankar river a little above Skew (Skio). General Henry Strachey, at the end of May, found the breadth of the river between Kharnak Sumdo and Tilut Sumdo to vary from 5 to 15 yards, and its depth from 1½ to 2½ feet, the current very rapid. He had to ford it seven times, and wade across twice in 3 miles. In June it becomes quite unfordable. (*H. Strachey.*)

## KHA—KIA

- KHARNAK SUMDO OR KHARNAK**—Lat.            Long.            Elev. 14,170.  
 A camping ground situated at a little distance from the right bank of the Kharnak river, and at the foot of the Riberang La pass.
- KHAROI TALAO**—*Vide* TSOKAR.
- KHARTSAR OR KARSAR**—Lat.            Long.            Elev. 10,430.  
 A village 39 miles north of Leh, and close to the left bank of the Shyok. It is passed on the summer route from Leh to Yarkand, between Kardong and Taghar. It "lies in a deep ravine, excavated out of the clay formation by a considerable stream, on both sides of which for nearly a mile there is a belt of cultivation. Owing to the sheltered situation from the great height of the clay cliffs on both sides, the crops were exceedingly luxuriant, and fruit trees were plentiful." A road leads from here to Deskit, at the junction of the Nubra and Shyok. (*Thomson*.)
- KHARU OR KHURRO**—Lat.            Long.            Elev.  
 A small village at the entrance of the Chimré valley, passed on the Changchenmo route. (*Reynolds*.)
- KHERE OR KYARE**—Lat.            Long.            Elev.  
 A village on the left bank of the Indus, below the junction of the Puga rivulet.
- KHORO OR KURU**—Lat.            Long.            Elev. about 10,300.  
 A village in the Nubra district, 43 miles below the junction of the Nubra and Shyok rivers, and on the right bank of the latter. The Shyok here "enters a deep gorge, walled in on both sides by lofty and almost perpendicular cliffs of black slate. It is a noble stream, with a rapid current, and is usually divided into many channels." It is fordable in winter, but not in summer, owing to floods. (*Thomson*.)
- KHOTAN**—Lat.            Long.            Elev.  
 A province in the dominions of the Amir of Kashgar, lying to the north of the Eastern Kuen Luen Range, which here forms the boundary of Ladak.
- KHUNDAN**—*Vide* SHYOK RIVER.
- KHUSHK MAIDAN OR KHUSH MAIDAN**—Lat.            Long.  
 Elev. 15,590.  
 A camping ground in the Karakash valley (Changchenmo route), 17 miles north-west of Kizil Jilga. At 5 miles from the latter, the water disappears in the ground. None to be found for 11 miles, where there are numerous springs. Camps on south side of valley. Fuel abundant, grass scarce. Road excellent all the way. Chungtas (7 miles north-west) is sometimes used as a halting place instead of Khushk Maidan, but there is no fuel or grass there.  
 Snow fell here on the 24th September to a depth of several inches, and concealed all the grass. (*Trotter—Henderson*.)
- KIAM**—Lat.            Long.            Elev. 15,400.  
 A camping ground in the Changchenmo valley, situated on the left bank of a stream running down west from the Kepsang or No pass into the Changchenmo river, about 2 miles above their junction. It lies 11 miles east of Pamzal, the road from which lies over flat ground, covered with sand and boulders, up the left bank of the river. At 9 miles from Pamzal, it crosses and then recrosses the river. The fording in summer is difficult,

## KIA—KIR

the water being cold, deep, and rapid. The morning is the best time for fording, when the water subsides partially. There are some celebrated hot springs here, which are visited by the Tartars of the Pangong district and of No and Rudok. The water, which in August had a temperature of 179°, has an offensive smell and taste, being impregnated with soda and sulphur. It is said to be beneficial in cases of rheumatism, &c. The ground about the spring is covered with soda to a depth of about 2 inches. The valley between this and Pamzal is wide and open, and has a wild appearance. A general want of vegetation, except near Kiam, where grass is plentiful, and 'Boortsee' (lavender-bushes) are to be seen on the hill-side south of the springs. Antelope, Kiang, and wild yak plentiful, also a few hares and marmots. (*Johnson—Godwin-Austen.*)

**KIANG CHU OR KYANG TSO**—Lat.                      Long.                      Elev. 15,000.

A camping ground in the Rupshu district, 14 miles south of Rukchin. No supplies procurable. Water from small stream (in summer often scarce). Fuel plentiful, grass in patches. Road from Rukchin good, over plain. (*Reynolds.*)

**KIANG MAIDAN**—Lat.                      Long.                      Elev. 12,900.

A camping ground in the Karakash valley, 18 miles above Gulbashem. Grass and fuel procurable. (*Montgomerie.*)

**KIANG PLAIN**—

Lies between Sumgal and the Tagalang pass. It is about 35 miles long, and 2 wide, forming a valley bounded by low mountains, with sloping sides and flat summits. In summer there is often no water on this plain, and travellers from Kulu to Leh branch off to the west from Sumgal up the Zara valley. (*Moorcroft—Cunningham.*)

**KIDMUNG, OR KINMUNG, OR KINMA**—Lat.                      Long.                      Elev.

A village on the left bank of the Indus, a little below Chumathang, and nearly opposite Kesar. The Indus was fordable here in November. Water breast high. (*Reynolds.*)

**KIRGHIZ CAMP**—Lat. 36° 22' 9"                      Long.                      Elev.

Near Kirghiz Jungle. A long stretch of brushwood passed in the valley between Kukat Aghzi and Kashmir Jilga. It is a favourite summer resort of the Kirghiz. (*Trotter—Bellev.*)

**KIRGHIZ JUNGLE**—Lat. 36° 25' 44"                      Long.                      Elev. 13,620.

A camping ground on the right bank of the Yarkand river, passed on the winter (or Kugiar) route to Yarkand. At 3 miles from Kukat Aghzi, a road leads *viâ* this camp and the Kirghiz pass to Shahdūla (two days' march). (*Trotter.*)

**KIRGHIZ PASS**—Lat.                      Long.                      Elev. 17,092.

Is crossed between Kirghiz Jungle and Shahdūla. It is at times infested by the Kanjuti robbers.

Johnson gives its elevation 16,790 feet. An easy pass. (*Johnson.*)

**KIRKITCHU, OR KIRITCHU, OR KARKITCHU**—Lat.                      Long.                      Elev.

A village on the left bank of the Dras river, 10 miles above Gangang. It is a halting place on the routes from Srinaggar to Leh, and Srinaggar to Skardo (*viâ* Dras), the two routes branching off here. Travellers either halt here or at Chanegund, on the opposite bank. The red currant grows wild about here in great abundance. (*Montgomerie—Henderson.*)

**KISHTWAR—**

A district of Kashmir lying to the south of Sūrū, also a town of the same name. There is a route from here into Sūrū up the Wurdwan valley and across the Himalayas over the Bhotkol pass.

**KIUNG GANG LA PASS OR GONG LA—**Lat. Long. Elev. 17,259.

Is on the boundaries of Ladak and Rudok, in the mountains south of the Changchenmo valley. The route from Rudok to Kiam leads over this pass, which is situated south-east of Kiam and close to the Kepsang peak (which lies east). A guard of a few Rudok men are stationed here throughout the summer months. (*Godwin-Austen.*)

**KIZIL ANGUR OR KIZIL LANGUR—**Lat. Long. Elev. 16,700.

A camping ground on the summer route by the Karakoram pass, south of the Dipsang plain, which is crossed between it and Daulat-Beguldi (20 miles). The road from Murghi follows up the course of a tributary of the Shyok, and is very difficult, and crosses the stream repeatedly. There is also a risk from stone avalanches. Beyond camp (on the right bank) the road continues up the stream for 6 miles to the Dipsang plateau. No fuel or forage procurable. (*Bellew—Trotter.*)

**KIZIL JILGA—**Lat. 35° 20' 42" Long. Elev. 16,350.

A camping ground on the right bank of the Karakash river. Two routes from the Changchenmo valley meet here, *viz.*, that by the Changlung Pangtung and that by the Changlung Burma pass. The passage of the river is difficult a little above the camp. It here flows between two huge red rocks, the camping ground being under the southern one. Fuel (boortsee) grass, and water within reach of camp, down the river. (*Trotter.*)

**KIZIL PASS OR KIZIL DIWAN—**Lat. Long. Elev. 17,290.

Leads from the Lingzithang plain down to the valley of the Karakash, and is crossed between Sumna and Kizil Jilga on the route leading over the Changlung Burma pass from the Changchenmo valley.

"The pass is hardly perceptible;" no grass, but a little water and fuel can be found. (*Trotter—Cayley.*)

**KIZIL TAGH—**Lat. Long. Elev.

A camping ground on the right bank of the Yarkand river. It is passed between Balti-Brangsa and Wahab Jilga on the Karakoram route. It is 5 miles from Chadartash. A little grass here in river bed. (*Shaw.*)

**KNARUNG—**Lat. Long. Elev.

A spring about 2 miles north-east of Skio, "said to have medicinal properties, and of considerable repute among the natives. The water was scarcely tepid, and of a mawkish taste. Along the sides of the spring were incrustations of soda." (*Moorcroft.*)

**KOMPAS LA—***Vide* DEHRA KOMPAS.**KONGRA CHU—**

The principal affluent of the Hanlé Tso. It flows into the lake from the west, from the mountains east of the Tsomorari Lake. (*Cunningham.*)

**KONGTA LA PASS, OR KONBA LA, OR GONGTA LA, OR MANBAR PASS—**Lat. Long. Elev. about 16,500.

Lies 4½ miles west of Shooshal, south of the Pangong Lake, and is crossed from here on the route to Leh *viá* the Lung Chu (or Lung Burma) valley. Trebeck crossed this pass (the Manbar he calls it) on the 2nd December,



## KOR—KUG

and says that the ascent was not very difficult, though he took a whole day marching from Shooshal to the foot of the pass, the road being very stony. (*Trotter—Moorcroft*).

### KORZO GOMPA—*Vide* KARZOK.

KOTA JILGA—Lat. Long. Elev. 16,730.

A camping ground in the Kugrang valley, 8 miles above Gogra. Road up stream, difficult for laden ponies; grass, water, and wood at camp. (*Trotter*.)

### KUENLUEN MOUNTAINS—

The eastern range stretches from the bend in the Karakash river at Shahdūla in an easterly direction for a distance of about 100 miles from the sources of the eastern branch of the Karakash, and is then said to terminate on an extensive plain, communicating with the Changthang plain. Johnson was told that by skirting the eastern extremity of this range, wheeled conveyances might easily be taken from Ilchi to the Changchenmo valley over the Changthang plain. (*Vide* ROUTES.)

He ascended three peaks of this range E. 57 (Lat.  $35^{\circ} 53' 36''$ , Long.  $79^{\circ} 28' 32''$ , height 21,767.) E. 58 (21,973) and E. 61.

The eastern range forms the southern boundary of Khotan, and is crossed by two passes, the Yangi or Elchi Diwan, crossed in 1865 by Johnson, and the Hindutak Diwan, crossed by Robert Schlagintweit in 1857. Both passes are very difficult, and the latter can only be used by foot-passengers.

Dr. Henderson says that (in July) the range was tipped with snow, and the valleys filled with glaciers; some of the higher peaks rise to over 24,000 feet, and about 6,000 feet above the valley of the Karakash river, which flows along their southern base. The higher peaks are all granite, and the lower spurs are composed of gneiss and slate. There is a general absence of vegetation.

According to Hayward, the Karakash at Shahdūla forms the division between the eastern and western Kuenlueu. The latter range is crossed by several passes on the routes leading into Yarkand, *viz.*, the Yangi Diwan pass (by the winter route), the Suget Diwan on the summer route over a spur of this range, and further north by either the Kilik, Kilian, or Sanju passes. (*Johnson—Trotter—Henderson*.)

### KUENLUEN PLAINS—

Lie between the Kuenlueu (eastern and the Lokhzung ranges; the latter separate them from the Lingzithang plains. From Thaldat the ground slopes gently down for 200 feet to the level of the plains. To the south-east their boundary is not seen, but lofty snowy peaks are visible in the distance. The plains are 16,000 feet above the level of the sea, or 1,000 feet lower than the Lingzithang plateau. The surface is very uneven, and is sometimes of a hard clay, and sometimes of a softer mixture, half sand and half clay. At the lower levels small shallow saline lakes are met with here and there.

The drainage does not communicate with the Karakash river; there being an intervening barrier like the Lingzithang. These plains are desolate, barren, and uninhabited. (*Drew*.)

### KUGRANG—

A valley running into the Changchenmo valley from the north-north-

## KUK—KUM

west, and joining the Changlung valley above Gogra. Fuel plentiful; grass scarce; water from stream. (*Drew—Trotter.*)

**KUKAT AGHZI**—"The mouth of the blue horse."—Lat.                      Long.  
Elev. about 12,870.

A camping ground on the banks of the Yarkand river, 12 miles above Kulnaldi on the winter (or Kugiar) route to Yarkand. Two miles above camp are the ruins of an outpost fort at the mouth of a glen, which leads over a ridge to the east to Shahdūla (2 days' journey). On the road from Kulnaldi the river is crossed girth deep several times on a shingly and sandy bottom. Channel wide, with high hills on either side. Camp in tamarisk jungle. (*Bellew—Trotter.*)

**KUKSAR**—                      Lat.                      Long.                      Elev.

A village situated on the left bank of the Dras river, at the junction of its tributary the Kuksar river.

**KUKSAR RIVER OR SHINGO**—

A tributary of the Dras river, rises near the plateau of Deosai, and flowing east joins the Dras river, just below the village of Kuksar. Its waters are very clear, whilst those of the Dras river are turbid. (*Cunningham—Bellew.*)

**KULANULDI**—"The wild horse died"—Lat.                      Long.                      Elev. 13,210.

A camping ground on the banks of the Yarkand river, on the Kugiar route to Yarkand, 74 miles below Aktagh, between which the river is crossed 18 times. This portion of the route was at one time very unsafe, being infested by robbers (Kanjuti). Camp in tamarisk jungle. River channel  $\frac{1}{2}$  mile wide.

Eight miles below camp is the Yangi Diwan pass, the road to which is very difficult, passing through a narrow, tortuous, and deep gorge, which is blocked till June by a glacier that melts away in the next month. (*Trotter—Bellew.*)

**KULSI**—*Vide* KHĀLSI.

**KUMDAN**—Lat. 35° 8' 1".                      Long.                      Elev. 15,290.

A camping ground on the Shyok river, situated 9 miles below Gapshan, and 10 above Brangsa Saser. It is on the winter route from the latter to Daulat-Beguldi. Between Brangsa Saser and Gapshan some immense glaciers are passed. Bellew gives an account of them—

"We descended to the bed of the Shyok, and following up its stream for two hours came to a glacier lying right athwart the valley, which runs in a north-west direction. We here entered a narrow lane between vertical walls of white marble rocks on one side and bottle-green glacier on the other, and for one hour went up its stream, crossing from side to side, till we finally emerged upon the valley beyond, and then, going on for a mile or so, we camped on a raised beach of shingle under a sheer wall of white marble, and in full sight of another great glacier, only a few hundred yards ahead. This second glacier is seen winding down a long valley of which it fills the hollow like a solid river, and at its top, many miles away to the west, rises a very remarkable peak. The advance of this glacier obliquely across the valley, by closing its passage, produced that inundation of the Indus in 1842 which proved so destructive along its course down to Attock. The other glacier, left behind us, crosses the valley at right angles, and

## KUN—LAC

must have struck the opposite side with great force, for I noticed that the rocks were crushed and powdered in some parts, and had masses of the glacier still adhering to them, probably ever since their separation from the main body, by the passage forced through by the pent up waters. It was the projection across the valley of this glacier which produced that inundation of the Indus in 1859 which destroyed the Nowshera cantonment by a reflux of the waters of the Cabul river at Attock." (*Bellow.*)

KUNGI LA—*Vide* KANJI PASS OR VINGGÉ LA.

KURGEEA—*Vide* KURGIA.

KURU—*Vide* KHORO.

KUTAKLIK—Lat. Long. Elev. 13,500.

A camping ground on the winter route by the Karakoram pass, situated at the junction of the Shyok, and a tributary that flows into it from the north from the Dipsang plateau. It is 10 marches from Leh. (*Drew.*)

KYANG CHU—*Vide* KIANG CHU.

KYANG-MAIDAN—*Vide* KIANG-MAIDAN.

KYANG-TSO—*Vide* KYUNG-CHU.

KYARE—*Vide* KHERE.

KYOONGYUM OR KYÜNGYAM—Lat. Long. Elev.

A village on the right bank of the Indus, opposite Tiri, and below the junction of the Puga rivulet.

KYUN—

Two small lakes lying to the east of the Tsomorari Lake, and separated from it by a range of mountains. The north lake is fresh water, the south brackish. (*Drew.*)

KYUNG—

A tributary of the Indus, that rises in the mountains east of the Tsomorari Lake, near the Nidar pass, and flowing north enters the Indus at Nidar village. Half-way between the pass and Nidar the stream forms a small lake. (*Cunningham.*)

KYUNG-DUM OR KYANG-DOM—Lat. Long. Elev. 14,900.

A camping ground at the south end of the Tsomorari Lake. It is passed on the route from Spiti to Leh, 11 miles from Nurbo Sumdo and 13 south of Kurzok. (*Drew.*)

KYUNGSE LA—*Vide* NIDAR PASS.

## L

LACHALANG PASS OR LANGA LUCHA—Lat. Long. Elev. 16,630.

Is crossed on the route from Kulu to Leh, between Sumdo and Sumgal (or Sumkiel) and lies about 40 miles north-east of the Bara Lacha pass. There is another route *viá* the Pankpo La, and along the Tsomorari Lake to Puga and so on to Leh; but this route is not recommended. (*Vide* Routes.)

"Dr. Cayley says that scarcely any snow lies on the Lachalang after the 15th June, and that it never offers any difficulties. The northern slope is steep, but there is now (1870) a fairly good road, which only requires repairs to render it quite easy." (*Cayley—Cunningham.*)

## LADAK OR MIDDLE TIBET—

A region in Central Asia, lying north of the Western Himalayas, and subject to Kashmir.

On the north it is divided by the Karakoram and Kuenlun ranges from Yarkand and Khotan. To the east and south-east are the Chinese districts of Rudok and Chumurti. To the south lie the districts of Lahoul and Spiti, now under British rule, but formerly belonging to Ladak. To the west are Kashmir and Baltistan, the former separated by the Western Himalaya, and the latter by an imaginary line drawn from the mouth of the Dras river to the sources of the Nubra. (*Cunningham.*)

The Karakoram or Mustagh range forms the northern boundary as far east as the Karokoram pass. Eastward of the pass, however, to past the meridian of  $80^{\circ}$ , the boundary line is uncertain. The country lying between this portion of the Karakoram range and the Western Kuenlun to the north is a blank, uninhabited region, and may be looked upon as neutral territory. The boundary line from the Eastern Kuenlun, down south to the head of the Changchenmo valley, is also undefined. Elsewhere the boundaries of Ladak are well marked. (*Drew.*)

The country has an area of about 30,000 square miles, and is divided into the districts of Ladak (proper), Nubra, Rupshu, Zankar, Purik, Suru, and Dras. Zankar is now included in the Kashmir district of Udampur, and Purik, Suru, and Dras in the governorship of Baltistan. (*Drew.*)

Its greatest length is from north-west to south-east from the head of the Dras river, in long.  $75^{\circ} 30'$ , to Chibra on the Indus, long.  $79^{\circ} 10'$ , a distance of 240 miles. Its greatest breadth is from the Karakoram pass to the Gya peak, in the Himalayas, south of the Tsomorari Lake, a distance of about 215 miles.

Ladak, in Tibetan *La-tágs*, is the most common name of the country. It is also called *Mar-gul* or low, or red-land, and *Khu-chun-pa*, or snowland. The name Tibet is entirely unknown to the people.

The most striking feature in the physical aspect of the country is the parallelism of its mountain ranges, which stretch throughout it from south-east to north-west. This general direction of the mountain chains determines the courses of the rivers, as well as the boundaries of the natural divisions of the country. The principal valley in Ladak is that which follows the course of the Indus from south-east to north-west through the greater part of the country. Into it a number of smaller valleys open, forming basins for the tributaries of the Indus, the chief of which are the Shyok on the north and the Zankar on the south. The principal tributaries of the Shyok are the Nubra, Changchenmo, and Lang Chu rivers. Those of Zankar are the Sumgal, Serab, and Serchu. The only other important tributary of the Indus is the Dras river, which is formed of the united streams of the Wakha, Suru, Dras, and Kuksar rivers.

The principal mountain ranges are the Western Himalaya, the Kailas, the Karakoram or Mustagh range, and the Eastern and Western Kuenlun. These are described under their respective headings in the Gazetteer. All sheets of water in Ladak are known by the general name of *Tso*.

With a single exception, all the lakes are land-locked, and, consequently,

more or less salt. The principal are, the Pangong Lake, the Pangoor Tso, the Tsomorari Lake, and the Tsokar. There are besides some extensive salt lakes scattered about the Kuenlun plains. Ladak is one of the most elevated regions of the earth, and very barren. The lowest valleys have an elevation of about 9,000 or 10,000 feet. The climate is most singular, burning heat by day being succeeded by piercing cold at night, and everything is parched by the extreme dryness of the air. There is no rainfall, and but little snow. The climate is, however, favourable to animal life. On the plains up to 17,000 feet, wild horses (Kyang), antelope, wild yak, and several kinds of wild sheep are found, and the hill slopes up to 19,000 feet, abound with marmots and alpine hares. Immense flocks of domestic goats and sheep are pastured in the elevated plateau of Rupshu. The other domestic animals are the yak, cow, and zho (a cross between the male yak and common cow).

According to General Strachey, the whole of Tibet is classified into two portions. The Kong, or country of deep valleys, and the *Changthang*, or elevated plains. Cultivation is chiefly carried on in the former, on the alluvial plateaus, along the river banks. The principal crops are barley, of two or three species, wheat, and buck wheat. Fruit trees, poplars, and willows, are only to be found in the deep river beds, in sheltered nooks, watered by side streams, and timber is very scarce. The villages and monasteries are generally found near these streams. Lucerne (*Chunpo*) is extensively cultivated in parts, but it is entirely eclipsed by an umbelliferous plant called *Prangos*, which will grow on the most barren soil. The manufactures are rude and unimportant. The principal is woollen cloth, adapted for home consumption, and, from cheapness of labour and material, sold at a very low price. There is considerable transit trade, Ladak being naturally the great thoroughfare between Chinese Tibet and Yarkand on the one hand, and the Punjab and Kashmir on the other. (For details *vide* Trade Reports.)

The Bhots or Ladakis (called by the Turki merchants Tibetee) are mild, peaceable, and honest, but timid, indolent, dirty, and somewhat given to intoxication. They profess the religion of Buddha, under a peculiar hierarchy of monks called Lamas. Polyandry prevails. The population, in 1848, was estimated to be about 126,000. (*Cunningham—Imperial Gazetteer—H. Strachey—Drew.*)

#### LADAK PROPER—

The central and most populous district of Ladak, from which it is sometimes called *Mangyul*, or the district of many people. It stretches along the Indus in a north-westerly direction from Rupshu to the frontier of Baltistan, a length of 120 miles, with an average breadth of 38 miles. Its area is about 4,000 square miles, and the mean elevation of the inhabited portions, as deduced from observations along the Indus, 11,500 feet (10,500?).

It is bounded on the north by the Kailas range, on the east by the Indus, south by Zankar, and west by Parik and Sūrā. (*Cunningham.*)

#### LA GANSKIEL PASS OR GANSKIEL-LA—Lat. Long. Elev.

A low pass, on the road from Leh to Gartokh, about 14 miles south of Chibra. The Indus near here is fordable in summer. In winter it is crossed on the ice. The pass is on the borders of Ladak and Chinese Tibet. (*Moorcroft.*)

## LAH—LAN

- LAHOUL**—Lat. Long. Elev.  
 A district lying south of Zanksar and south-west of Rupshu, separated from them by the Bara Lacha range. It formerly belonged to Ladak, but is now attached to British India. The route from Kulu to Leh passes through Lahoul, and enters Ladak by the Bara Lacha pass.
- LAKUNG OR LUKUNG**—*Vide* LUKUNG.
- LAKZUNG**—*Vide* LOKHZUNG.
- LAMA GURU**—Lat. Long. Elev.  
 The first march from Lingti (at the junction of the Yunam and Serab streams), up the latter river *viâ* the Pankpo La pass. Road tolerably good and easy, but beyond this difficult. (*Cayley.*)
- LAMA KYENT, i. e., MONK'S VILLAGE**—Lat. Long. Elev. 12,200.  
 A halting-place on the right bank of the Shyok, six marches from Leh by the winter Karakoram route. Travellers either halt here or at Shyok on the opposite bank. (*Drew—H. Strachey.*)
- LAMAYURU**—Lat. Long. Elev. 11,520.  
 A halting-place situated half-way between Kharbu and Nurla, on the route from Srinaggar to Leh, and at the foot of the Fotu La pass, which lies west of it. The camping ground lies under two steep cliffs, on whose summit is perched a large monastery. It contains 20 monks (*Lama*) and 8 nuns (*Kimi*). "Their Superior is always appointed from Lhasa, but the rest are recruited in the country." There is some cultivation here, a narrow strip lying for some length above the sloping valley bottom. When Moorcroft visited Ladak, there were said to be about 500 monks and nuns attached to this monastery. They do not all reside together, but are dispersed amongst the people. A road goes from here to Zanksar, Padam, the capital, being 11 marches or 106 miles south. (*Bellew—Moorcroft—Drew.*)
- LAMSA**—Lat. Long. Elev.  
 A crest crossed between the Saser pass and the Karawal Diwan at 8 miles from Tutiyaluk and 3 above Changlung. Ascent from the latter very steep. (*Trotter.*)
- LANAK PASS**—Lat. Long. Elev. 18,100.  
 Lies 15 miles east of the southern end of the Tsomorari Lake, and is crossed on the route from Spiti to Changchenmo *viâ* Hanlé. It is in the range forming the water-shed between the tributaries of the Indus and the Sutlej. Dr. Thomson crossed it on the 13th September, from a camping ground (Dongan?) 5 miles from its western base and situated on the left bank of a stream flowing down from the pass. "From our encampment the mountains appeared easy of access and rounded in outline, and we commenced the ascent by a nearly level walk across the gravelly plain. At an elevation of over 16,000 feet the vegetation was quite alpine. After a mile we left the ravine (through which the stream flowed) and ascended to the open gently sloping ground on its left. The surface was, as usual, dry and gravelly. We continued nearly parallel with the ravine, and crossed it again a little further on. It was now dry, and its steep stony banks were covered with bushes of *Dama*. Still gradually ascending, we crossed the ravine a third time, where its bed was upwards of 17,000 feet. Leaving it, the ascent became steeper as we advanced. A rounded ridge lay on the right, and we rose nearer and nearer to its crest. The top of the pass

## LAN—LEH

was nearly level for several hundred yards, and covered with boulders, principally granite. The outline of the mountains was generally rounded, and they rose gradually in both directions above the pass. View on all sides extensive, but country barren. No villages or trees to be seen. Lake Tsomorari also not visible. No snow on the pass (September), but a steep mountain  $\frac{1}{2}$  a mile to the right was still covered with snow to at least 500 feet below the level of the pass. The descent was at first gentle, but very soon became steep to the bottom of a valley in which a small stream was running. Cunningham gives 18,746 as the elevation of the pass. (*Thomson.*)

LANAK PASS—*Vide* NAKPOGODING PASS.

LANGA-LACHA—*Vide* LACHALANG.

LANG-KARTZE OR LANG KARCHU—*Vide* KARTZE.

LANGBUT LA—*Vide* RIBERANG LA.

LANKA ROCK OR PEAK—Lat. Long. Elev. about 19,000.

A boundary mark between Lahoul and Ladak, near Lingti, from which place to the summit is a steep rough climb of over 4,000 feet. It is a most conspicuous object, and visible from almost every side. (*Cayley.*)

LANKAR LA—*Vide* MARSEMIK LA.

LAOCHE LA—*Vide* KHARDONG PASS.

LASIRMOU PASS—*Vide* THANGLASGO PASS.

LAZGUNG PASS—*Vide* DIGAR LA.

LEH—Lat.  $34^{\circ} 10'$ . Long.  $77^{\circ} 37'$ . Elev. 11,538.

The capital town of Ladak; is situated about 3 miles from the right bank of the Indus, at the apex of a triangular shaped valley that rises gradually as it recedes from the river. The town lies about 1,000 feet above the river, and occupies the slope, and surrounds the base of a low spur on the east side of the valley, while the centre and west side are occupied by extensive tracts of cultivation. The fields rise in terraces and are watered by little rills drawn from a stream which flows down the centre of the valley. The town "is enclosed by a wall, furnished at intervals with conical and square towers, and extending on either side to the summit of the hills. It is approached by a double line of the sacred structures or *Manis* (*vide* Religious Buildings), some of which are nearly  $\frac{1}{2}$  mile in length. The streets are disposed without any order, and form a most intricate labyrinth, and the houses are built contiguously." A good bazaar has, however, been since built by the Dogras. "Entering from the direction of Kashmir, we pass through a small gate-way and find ourselves in a long, wide, and straight bazaar, the houses being regularly built and uniformly white-washed. At the further end of the bazaar is the old part of the town described by Moorcroft. It in his time contained about 500 houses. These vary from one to two or three stories in height, and some are loftier. The walls are in a few instances wholly or in part of stone, but in general they are built with large unburnt bricks: they are white-washed outside only, and are usually furnished with light wooden balconies. The roofs are flat, and are formed of small trunks of poplar trees, above which a layer of willow shoots is laid, which is covered with a coating of straw, and that again by a bed of earth. The upper story is usually reached by a flight of earthen steps. The rooms, though frequently of good size, are low, rarely over 7 or 8 feet high. In the upper part of the town a few houses of a

## LEH

higher class are met with; these were built by the Kablons or ministers of former sovereigns, and now for the most part belong to their representatives. The most conspicuous building is the royal palace of the former Gyalpo, a fine looking building 250 feet in length and seven stories in height, which towers over the rest of the town. The outer walls have a considerable slope, as their thickness diminishes rapidly with their increase of height. The upper stories are furnished with long, open balconies, and the walls are pierced with a considerable number of windows. The beams of the roof are supported on carved wooden pillars, and covered with planks painted in various patterns on the outside. The building is substantial and plain."

Outside the town are several plantations of willow and poplar trees, which make good camping-grounds. Small hamlets are scattered over the cultivated portion of the valley, and about a mile south-west of the town is a fort built by the Dogra conquerors, on the banks of the Leh rivulet. The walls are nearly 30 feet high, and are built of huge sun-dried bricks. In the interior, the barracks and store-rooms are built against the walls all round, and their flat roofs form the terre-plein of the ramparts. Each room is furnished with a door. When General Cunningham visited this fort in 1846, it was garrisoned by 30 artillerymen, and had four brass 3-pounders, all in good order, well set up on substantial carriages. Dr. Thomson estimated the population of Leh in 1847 to be 3,000. It consists of Ladakhis, Kashmiri and Turki merchants (most of the latter are only settled here a short time, returning to Yarkand after having disposed of their goods). There is also a hybrid class called Argoons, mostly of Kashmiri and Ladakhi parentage. They are said to be great rascals, and have the monopoly of the carrying trade from Leh to Yarkand.

The foreign commerce of Ladak is principally one of transit, with the town of Leh for a sole mart or entrepôt. The different lines of traffic from Yarkand, Chinese Tibet, Kashmir, and the Panjab are met here. Prior to 1868 traders were much oppressed by the exactions and heavy duties levied by the Ladak officials. About this time, however, matters improved. Roads were repaired, the tribute paid to Kashmir abolished, the duties reduced, and an annual fair established at Leh by Sir Douglas Forsyth.\* Dr. Cayley, on special duty in Ladak, did a great deal towards promoting the trade with Central Asia, by keeping the roads in a state of repair, and by erecting serais and supply depôts at different stages. He also established a dispensary at Leh. For the purpose of still further developing Central Asian trade, a commercial treaty was concluded in 1870 between the Government of India and the Maharajah of Kashmir. Since then a Joint Commissioner is appointed annually by each Government, vested with certain powers. They remain in Ladak during the trading season, and look after the interests of the traders from different countries, and settle disputes, &c., &c.

LEH PASS—*Vide* KHARDONG PASS.

For details of trade, *vide* Trade Reports. (*Cunningham—Drew—Cayley.*)

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\* An annual fair was also established by him at Palampur, in the Kangra district, in order to attract Yarkandi merchants from Leh.



## LEPTRA—

A valley, the southern prolongation of the basin of the Tsomorari Lake (*vide* Pirsai river). (*H. Strachey.*)

LIKCHE—Lat. Long. Elev.

A small village on the right bank of the Indus, a few miles above Upshi, and about 40 miles above Leh. The road from here to Leh for the first 4 miles is not practicable for laden animals. It crosses two lofty spurs by a succession of stone steps rudely put together. Four miles above the village, the Indus is crossed by a ricketty wooden bridge. (*Reynolds.*)

LINGTI or SARCHU—Lat. Long. Elev.

A camping-ground, at the junction of the Yunam and Lingti streams. It is passed on the route from Kulu to Leh, and lies about 11 miles north-east of the Bara Lacha pass, on the boundary between Lahoul and Ladak.

The Phalang Danda, another boundary-mark near here, is called Lingti by the people of Kulu. (*Vide* Phalang Danda.)

Dr. Cayley recommends a supply depot being built here, as no supplies are procurable for 9 marches, from Darcha in Lahoul, to Rukchen.

## LINGTI PLAINS—

Lie above Lingti, and though presenting a fine level expanse of grass, with abundance of fuel (*Dama* or Tibetan furze), have no surface water, and cannot be irrigated, so that in this dry climate cultivation would be impossible. (*Cayley.*)

## LINGTI STREAM—

Rises near the Bara Lacha pass, and following south-east joins the Yunam river a little below the Phalang Danda, and close to the Lingti (or Sarchu) camping-ground.

The junction is on the borders of Ladak and Lahoul. (*Cayley.*)

## LINGZITHANG PLAIN or AKSAI CHIN—General Elev. 17,300.

A barren, elevated, and uninhabited region, lying between the range that runs parallel with the Changchenmo valley on the north and the Lokhzung range. Portions of it are crossed by the three routes leading from the Changchenmo to the Karakash valley. (*Vide* Routes.)

Near the Nischu camp, the plateau has an elevation of 18,630 feet. The plains are undulating, the hills being low, and with such easy slopes that a horse may be galloped over them everywhere. (*Johnson.*)

## LINGZITHANG—

It bears traces of having been the bed of a large lake, and at present contains two salt lakes, which in July covered areas of about 16 and 60 square miles respectively, and are probably much larger in April and May on the melting of the snows.

The Burtsai or wild lavender is the only vegetation, and that is not found abundantly. It is used both for fuel and fodder. The only animal seen here is the Tibetan antelope. Mirages are frequently visible.

A high wind begins to blow almost daily at 10 A. M. from the west or south-west. It increases to a hurricane towards the afternoon, then gradually subsides, and by midnight the air is again still. Travellers have not unfrequently been killed by this wind, which at times is so cold as to destroy vitality in a very short time. In addition to this, both men and cattle suffer very much from the rarity of the air. Drew says "that the

## LOC—LON

plain extends north and south for 16 or more miles, and that the distance from west to east must be 50 or 60 miles. On the south are the low sloping hills lying north of the Changchenmo valley, on the west are bolder hills and even snowy peaks; in these there is a gap leading down to the Shyok river. The Lokhzung range is the northern boundary. This begins on the west with two peaks between 20,000 and 21,000, and continues at from 18,000 to 19,000 feet, a range of irregular hills, steep, rocky, and peaked. To the east-south-east the plain at first seems boundless, but again from some points summits of mountains become visible, which probably belong to an enclosing ridge."

On the 12th September the plain was white with snow.

"The soil is all clay, covered with flinty stones and rough agates."

Not a vestige of grass.

**LOCHAN OR LOTSAM**—Lat. Long. Elev.

A village of 30 or 40 houses situated on the right bank of the Pashkyum river (or Wakha-chu), and passed between Kargil and Shergol on the route from Srinaggar to Leh. The river here scoops its way through a narrow passage in the serpentine rocks. Path near village narrow and difficult. (*Bellew.*)

**LOKHZUNG OR LAK-ZANG, i. e., THE "EAGLE'S NEST"**—

Lat. Long. Elev. 17,200.

A camping ground on the most westerly of the routes leading from the Changchenmo valley to the Karakash. On a solitary rock about 200 feet high, Dr. Henderson saw the remains of an enormous nest, "probably of some raptorial bird, for the ground underneath was covered with fragments of bone, &c. &c." A little water, fuel, and grass here. Thermometer fell at night to 7° F. on the 25th July. The camp is situated in a valley in the Lokhzung range. Montgomerie gives 16,400 as the elevation of the camp. (*Henderson—Drew.*)

**LOKHZUNG RANGE**—

Runs from west-north-west to east-south east and divides the Lingzithang plains on the south from the Kuenluen on the north. Its length is 60 miles; its width from 15 to 20 miles. It is a region of rocky hills, with flat, dry, stony valleys between them—not one continuous range, but a series of parallel ranges, which are broken through by valleys leading from the southernmost edge of the hill tract to the north-east. The breaks in the different ranges are not opposite each other, but in echelon, so that each valley zig-zags, and ultimately leads out on to the Kuenluen plains. The highest peak is on the west 21,000 feet, the average height of the range being from 18,000 to 19,000 feet. The path traverses the range from Tso Thang (salt lake) to Thaldat, where there is another salt lake a two days' march. (*Drew.*)

**LONDING OR LUNG DUNG**—Lat. Long. Elev.

A camping ground on the most westerly route from Changchenmo valley to the Karakash, 17 miles north of Patsalung. Nearly 10 miles of the road between the two camps is covered to a depth of many feet with sulphate of magnesia. "It caused a glare which was most painful to the eyes, and irritated the face and hands. On the surface of the plain the salt had effloresced and become an impalpable powder, which rose in clouds

## LON—LUN

as the horses waded through it, sometimes up to the knees. Underneath it was hard and crystalline, and crackled under the horses' feet. At intervals there were lakes of strong brine. Fortunately we got over this plain before the wind rose, for later in the day clouds of salt were raised by the breeze, and we saw the remains of a former caravan which had probably been destroyed in this way." Camp at end of salt plain in a valley, where there is a little grass, and water is obtained by digging. Karakash valley 10 miles north of camp. (*Henderson*)

**LONG KONGMA**—Lat. Long. Elev.

A camping ground in the Lung Chu valley, between the Kongta La pass and Lung Burma.

**LONG KONGMA RIVER**—*Vide* LUNG CHŪ.

**LONG PARMA**—*Vide* LUNG BURMA.

**LOTSUM**—*Vide* LOCHAN.

**LUGHJUNG**—*Vide* LYAKJUNG.

**LUKKING**—Lat. Long. Elev.

A halting-place at north base of the Shinkul pass. No supplies, coolies, or fuel obtainable.

**LUKUNG OR LAKUNG**—Lat. 34° 0 6". Long. Elev. 14,130.

A camping ground on the Changchenmo route, situated 2 miles north of the western end of the Pangong Lake. A few huts here, and a small patch of cultivation. Also a stream which flows into the lake. (*Trotter*.)

**LUKUNG STREAM**—*Vide* WATA.

**LUMKANG**—Lat. Long. Elev. 17,501.

A camping ground in the Changchenmo valley, 18 miles north-east of Kiam, and 4 miles south of the Lumkang pass. Road from Kiam crosses the stream immediately north of the hot springs, and then over a low spur at 8 miles, from whence it runs up the Lumkang ravine, which joins the one from the Kepsang pass 3 miles above Kiam. A little grass and Boortsee here. Tibetan antelope very numerous. (*Johnson*.)

**LUMKANG PASS**—Lat. Long. Elev. 19,500.

Top of pass 8 miles north of Lumkang camp. Road lies up gradual ascent, and then descends gently down the ravine to Nischu. No snow (end of July). (*Johnson*.)

**LUNG BURMA OR LONG PARMA**—Lat. Long. Elev.

A good camping ground in the Lungchu valley, 31 miles from Shooshal and 24 from Tankse. At 4½ miles from Shooshal cross Kongta La pass. Road stony; fuel and grass plentiful. (*Trotter*.)

**LUNGCHU RIVER, OR LONG KONGMA, OR LONG YUKMA.**

Rises near the Kongta La pass, and flowing north-west through the Lung Chū valley enters the Shyok just above the village of Shyok. In December Trebeck found the valley thinly covered with snow, and the rivulet running along its south-western edge was frozen, but skirted by grass, in which 200 yaks were pasturing. Large droves of yaks and sheep were seen here pasturing in the side valleys, or moving down to the Indus valley, for the winter. Just above Tankse the Lung Chū is sometimes called the Hurong river. Below Tankse it is joined by the Durgu stream from the west. (*Trotter—Moorcroft*.)

**LUNGTUNG**—

A halting-place on the left bank of the Zanksar river, 165 miles from Leh and above Padam. No supplies; fuel very scanty.

## LUN—MAN

- LUNKHA OR LANKAR**—Lat.                      Long.                      Elev.  
 A camping ground on the Changchenmo route, one stage from Panglung, on the south side of the Marsemik or Lankar La pass. There is a Serai here. Steep but not difficult ascent to top of pass. A little water. Trotter says there is only an uninhabited stone hut here. (*Trotter—Cayley.*)
- LYAKJUNG OR LUGHJUNG**—Lat.                      Long.                      Elev.  
 A village on the left bank of the Nubra river, situated close to its junction with the Shyok. It is passed on the summer route by the Karakoram between Satti and Panamikh. The Shyok is visible for 10 miles below the junction flowing through a wide gravelly plain as far as the large village of Hundar. (*Thomson.*)

## M

- MACHAI PEAK**—Lat.                      Long.                      Elev. 19,630.  
 South of the Omba La pass.
- MAHIYE, OR MAIYA, OR MYA**—Lat.                      Long.                      Elev. 13,800.  
 A camping ground on the right bank of the Indus, opposite the junction of the Puga rivulet, and 12 miles below Nima Mud. It is passed on the route from Leh to Garo. A route also branches off from here north to Shooshal, over the Thato La pass. The Indus valley opens out to a width of about  $\frac{3}{4}$  mile, the river flowing by in a gentle stream, with a velocity of about  $2\frac{1}{2}$  miles per hour. Below here the river flows through a narrow defile or gorge called Rong. No shelter at the camping ground, and no wood or grass. A little pasture on the opposite bank. Cattle must swim across the stream.  
 Mahiye is a deserted hamlet. (*Reynolds—Drew.*)
- MALIKSHAH** } 1st camp—Lat. 35° 59' 3"      Long.                      Elev. 15,960.  
 OR AKTAGH } 2nd    ,,      Lat. 36° 0' 11"      Long. 78° 3' 20"      Elev. 15,330.  
 A camping ground about 30 miles north of the Karakoram pass, and on the right bank of a tributary of the Yarkand river. The Karakoram route meets that from the Changchenmo valley (*via* Karatagh pass) at this camp. There are also two routes from here to Yarkand—
1. The winter or Kugiar route, which follows the course of the Yarkand river north-west.
  2. The summer route by the Suget pass north.
- The former was a few years ago infested by Kanjuti robbers between this and Kulanuldi.  
 Between this and the Suget pass lies an elevated and stony plateau, perfectly desert.  
 No wood or grass here. Water also not obtainable from the end of October to the end of April, owing to the streams being thickly frozen over. (*Trotter—Johnson—Bellew.*)
- MANDARLIK**—Lat.                      Long.                      Elev. 13,300.  
 A camping ground on the winter route by the Karakoram, situated on the right bank of the Shyok, 9 marches from Leh. (*Drew.*)
- MANECHUN SUMDO**—  
 In the Pankpo valley west of Tsomorari Lake. General Strachey in June 1849 passed two large permanent snow-fields here, in places 4 or 5 feet thick. They were 3 or 4 miles apart at an elevation of about 16,000. The valley

## MAN—MAT

bottom was a mile wide, and exposed to the sun all day, and 2,000 feet below the snowline on the neighbouring mountains. (*H. Strachey.*)

**MANG OR MAN**—Lat. Long. Elev. 18,940.

A small village of six houses on the western shore of the Pangong Lake. It is a halting-place on the route from Spiti to Changchenmo (*via* Pangong Lake.) A small stream enters the lake here. It has its source in a glacier in the mountains west of the lake. Pasture and fuel plentiful. A little barley is grown here. (*Drew—Godwin-Austen.*)

**MANGKANG**—*Vide* MONKANG.

**MAPOTHANG**—*Vide* THALDAT.

**MARCHALONG**—*Vide* MARSALANG.

**MARKHA**—Lat. Long. Elev.

A village on the right bank of the river of that name, 10 miles above Skew. It is passed on the route from Padam to Leh (*via* the Riberang pass.) (*Moorcroft.*)

**MARKHA RIVER OR SKEW**—

A tributary of the Zankar; rises near the Riberang pass, and flowing north-west joins the Zankar river at Skew. (*Moorcroft.*)

**MARKIM**—Lat. Long. Elev. 12,100.

A village in the Zankar district, lying about 12 miles east of the Bhardar (or Umasi La) pass, and between it and Padam. It is passed on the route from Kishtwar to Leh *via* Zankar, and is situated on the right bank of a tributary of the Zankar river. A fine grassy plain here. (*Thomson.*)

**MARSALANG OR MARCHALONG**—Lat. Long. Elev. 12,200.

A village on the left bank of the Indus, 22 miles above Leh. A rest-house and supply depôt here. Camping ground Attabagh, near Atta. The routes from Leh to Kulu and Garo pass through this place, the Indus being crossed by a bridge near Chushot. There is also a good wooden bridge, 34 paces long, here, over which a road leads to Chimré, where the Changchenmo route is joined. Some very substantial-looking houses in the village. Extensive cultivation on an alluvial platform on both sides of a deep ravine, through which a stream flows from the west into the Indus. The latter in September was a rapid stream, varying from 40 to 100 feet in width.

Considerable plantations of poplar and willow about the village. (*Moorcroft—Cayley—Thomson.*)

**MARSEMIK LA PASS OR LANKAR LA**—Lat. Long. Elev. 18,420.

Is crossed between Chagra and Rimdi, on the Changchenmo route, and lies about 14 miles east of the western end of the Pangong Lake. The ascent for 5½ miles to Lankar is very slight, then steeper, but not difficult to the top of the pass. Gradual descent down valley turning due north, which at 3½ miles joins a valley from west at Rimdi.

This pass, though very high, is by no means difficult in summer. It is free from glaciers, and generally clear of snow during the summer and early autumn. Some neighbouring peaks 500 to 1,000 feet higher than the pass were covered with snow on the 15th July. Kiang, snapo, and wild yak to be found on the hills about here. (*Trotter—Thomson.*)

**MATAYAN OR MATEN**—Lat. Long. Elev. 10,700.

The first village on the Ladak side of the Zoji La pass, 16 miles from Baltul and 15 from Dras. It is situated on the right bank of the Gumbar, a

## MAZ—MOR

tributary of the Dras river, and at the base of a very steep mountain, which rises in precipices several thousand feet above the village. The camping ground is 2 miles above, and opposite the village. No trees here but a good deal of cultivation, chiefly barley. Wild rhubarb and onions, found near here, both very good eating. (*Bellow—Drew—Johnson*).

### MAZADI—

A small clear stream, which, flowing from the south-west, joins the Nakpochu (blackwater) above Sankho. It was forded with difficulty on the 30th June by Moorcroft. (*Moorcroft*.)

MECHU-HOI—Lat. Long. Elev. 10,850.

A glacier near the Zoji La pass. (*Drew*.)

MIRAK—Lat. Long. Elev. about 14,000.

A straggling village on the western shore of the Pangong Lake, 7 miles from Mang and 3 from Karkfe. Wood abundant, and good grazing. (*Drew—Reynolds*.)

MIRPA TSO—Lat. Long. Elev.

A camping ground 11 miles south of Shooshal, on the western route from that place to Nima (on the Indus), and at the foot of the Shooshal pass. There is a fresh water lake here, a short distance from which fuel is to be found. No provisions; four days' supply should be taken in at Shooshal. Four miles south of the lake, between it and Yahle, the Thato-La (or Nurpa) pass is crossed. (*Reynolds*.)

MIRU—Lat. Long. Elev.

A village on the left bank of the Gya rivulet, passed between Gya and Upshi, on the route from Kulu to Leh. The valley here is well cultivated. Camp in a plantation of poplars.

Below here the Gya ravine is very narrow, and the stream is crossed three or four times on small wooden bridges of rough planks. The road has been much improved of late years. (*Thomson—Cayley*.)

### MONKANG, OR MANGKANG, OR CHIBRA MANGKANG—

Lat. Long. Elev.

A camping ground 19 miles north of Hanlé, at some distance from the right bank of the Hanlé river. It is also called Chibra Mangkang. The Indus is about 20 miles north from here. (*Montgomerie*.)

MONKANG OR MANKANG—Lat. Long. Elev.

A camping ground on the left bank of the Hanlé river, about half-way between Hanlé and the Indus. (*Cunningham*.)

### MONKANG PLAIN—

Extends from Hanlé north-west for about 30 miles along the course of the Hanlé river. It is covered pretty thickly with *Dama* or Tibetan furze, which grows here to the unusual height of 3 and even 5 feet. On the west is a low range of hills, on the east a very lofty range separating the Hanlé valley from the Indus. (*Cunningham—Thomson*.)

MORECHU OR MORTSO—Lat. Long. Elev.

A camping ground in the Kiang plain, passed between Samgal and Rukchen, on the route from Kulu to Leh. A small pond of fresh water here, but in summer it often dries up. Owing to this scarcity of water on the Kiang plain, the route by the Zara valley is often taken instead. (*Cunningham*.)

## MUD—NAK

MUD—*Vide* NIMA MUD.

MUGLIB—Lat.

Long.

Elev.

A small village about 12 miles north-west of the western end of the Pangong Lake, and passed on the Changchenmo route between Tankse and Lukung. No cultivation here, but good pasturage. General Strachey says that white marble is found near here. Gypsum is found between Muglib and the Pangong Lake. Baggage animals procurable. No supplies. This is the last village met with between Leh and Yarkand. Provisions should be taken in at Tankse. (*Trotter—Henderson.*)

MULBEKH OR MULBIL—Lat.

Long.

Elev.

A monastery of some size situated on the right bank of the Paskhyum river (or Wakha-chu), and passed between Shergol and Kharbu, on the route from Srinaggar to Leh. It is 4 miles from Shergol, and is perched on a cliff about 200 feet high. A little beyond Muglib a colossal figure called *Chamba* is passed, cut out in the rock on the road side. (*Bellew—Henderson.*)

MULLING OR MALING—

A village in the Zanksar or Maling district, on the right bank of the Zanksar river, and 182 miles from Leh. Supplies and fuel procurable.

MURGHI OR MURGHAI—*Vide* BULAK-Ī-MURGHAI.

MUSTAGH RANGE AND PASS OR "ice mountain"—*Vide* KARAKO-RAM MOUNTAINS.

## N

NAERUNG OR NIRA—Lat.

Long.

Elev. 11,850.

A village in the Zanksar district, a little distance from the right bank of the Zanksar river, and lying on the route from Padam to Leh between Panch and Yelchung, and at the north base of the Naerung La pass. Extensive cultivated lands here, and juniper trees common in the neighbourhood. A stream runs by the village. Abrupt and stony descent to river, which here flows through a narrow rocky channel, and is crossed by a wooden bridge, without hand rails, about 40 feet long and nearly 50 feet above the water (2nd July). (*Thomson.*)

NAERUNG LA PASS, OR NIRA PASS, OR TAKTI PASS, OR PANCHE PASS—Lat.

Long.

Elev. 16,000.

Is crossed between Panch and Naerung, on the route from Padam to Leh. From the Panch side the ascent may be made up either the right or left branch of a ravine. The former is the longer, but easier road, the road up the ravine on the left being steep. The top of the ridge is rounded. The mountains on the right and left are about 1,500 feet higher than the pass. A good deal of vegetation on the top, and snow in large patches on its northern face (July 1st). Extensive view to north of a range of mountains tipped with snow. Descent to Naerung village abrupt and stony. (*Thomson.*)

NAKPO-CHU OR "Black Water"—

A tributary of the Sūrū river. It is formed by the Mazadi and Omba streams. Flowing east it joins the Sūrū river at Sankho. Its waters are very muddy, and discolour those of the Sūrū for some distance along its

## NAK—NIR

- left bank. Moorcroft forded it with some difficulty on the 30th June a little below the village of Omba. It here rushed with great force through a broad stony bed. (*Moorcroft.*)
- NAKPOGODING PASS OR LANAK PASS**—Lat. Long. Elev. 18,000.  
Lies north of the Tsomorari Lake, and is crossed between it and the head of the Puga rivulet. Trebeck crossed it from the north on the 14th June, and says that all his party suffered much inconvenience from difficulty in breathing. The descent to the south side was comparatively easy. (*Trebeck.*)
- NAMTSE OR NIMCHU**—Lat. Long. Elev. 13,050.  
In the Zankar district. It is a halting-place on the route from Padam to Leh, and lies between Zangla and Pangatse (or Panch) south of the Chelang Labho pass. (*Drew.*)
- NAMYIK LA PASS**—Lat. Long. Elev. 13,000.  
Is crossed between Shergol and Kharbu, on the route from Srinaggar to Leh. The ascent from the west is very gradual, and is 5 miles long. A spring of fresh water about half-way up. An easy descent down to the Kanji river and Kharbu.  
Doctors Bellew and Henderson estimate the elevation to be 11,900 and 12,000 respectively. (*Drew—Henderson.*)
- NARBU SUMDO**—Lat. Long. Elev. 15,300.  
A camping ground 11 miles south of the Tsomorari Lake, on the routes from Spiti to Leh, *viá* Parang La pass. It is on the banks of the Para river and at the head of the Leptra valley, and lies on the borders of Ladak and Spiti. (*Montgomerie.*)
- NI, OR NIS, OR GNI**—Lat. Long. Elev.  
A small village on the right bank of the Indus, 14 miles below Chumathang, the road from which is very rough, at times ascending and descending by a succession of stone steps over precipitous rocks, which descend to the water's edge. There are gold-fields here, worked by people from Skardo. Fuel and pasture plentiful. (*Reynolds.*)
- NIDAR**—Lat. Long. Elev.  
A small village of three houses on the left bank of the Indus, at the junction of the Kyung river, which flows through the Nidar ravine. (*Drew.*)
- NIDAR PASS OR KYUNGSE-LA**—Lat. Long. Elev.  
At the head of the Kyung valley, in the mountains that lie east of the Tsomorari Lake. (*Drew.*)
- NIMA MUD OR NYAMA**—Lat. Long. Elev. 14,000.  
Two villages of twelve and ten houses respectively, on the right bank of the Indus, which is forded here. Water chest-deep. Current almost imperceptible (in autumn). Two routes lead from here to Shooshal, and *viá* Pangong Lake join the Changchenmo route at Lukung. There are two routes also to Leh, down the right and left banks of the Indus (*vide* Routes). The route to Hanlé lies south, across the Indus *viá* Nowi camp.  
Naked barley ripens here. Peas and *Chunpo* (lucerne) do not flourish. A few large willow trees near village. Fuel and pasture plentiful. Very little snowfall. (*Reynolds—Drew.*)
- NIMO**—*Vide* SNIMO.
- NIRA**—*Vide* NAERUNG.



## NIS—NUB

**NISCHU** OR **GNISCHU**, *i. e.*, "Two Streams"—Lat.

Long.                      Elev. 18,630.

A camping ground at the southern edge of the Lingzithang plain, and at the foot of the mountains north of the Changchenmo valley. Two passes lead down to Nischu from these mountains, the road by each being good for laden animals. From here there are two routes to the Karakash. The western route *viá* the Kizil pass, the eastern *viá* Thaldat and the Soda plains. Boortse is found in very small quantities, but no grass. Water from stream. The camp is at the junction of "Two Streams" (Tibetan Gnischu). Hence its name. (*Trotter—Henderson.*)

**NO PASS**—*Vide* **KEPSANG PASS.**

**NOBOK LA PASS**—Lat.                      Long.                      Elev.

Between Dorgu and Taghar, over Kailas or Leh range.

**NOWI**—Lat.                      Long.                      Elev. 13,900.

A camping ground on the right bank of the Indus, which is fordable here Water waist-deep. Hanlé is 42 miles south *viá* Tura and Monkang Shooshal 37 miles north *viá* Tsaka La pass. (*Montgomerie.*)

**NUBRA**, *i. e.*, "Western"—

"The north-western district of Ladak, consists of the valley of the Nubra river and of a portion of the valley of the Shyok river. It is the largest district in the country, being about 128 miles in length by 72 miles in breadth, with an area of 9,200 square miles. It is bounded on the north by the Karakoram mountains, on the south by the Kailas range, which divides the Indus from the Shyok, and it extends from the frontier of Baltistan to the Pangong Lake, on the borders of Rudok. The mean elevation of the inhabited parts of the district is 12,763 feet." (*Cunningham.*)

"Throughout Nubra, the villages, with scarcely an exception, occupy the surface of the low platforms of alluvium which fill up the funnel-shaped terminations of the ravines." These alluvial platforms, owing to the copious supply of water, are always well cultivated. "The villages have generally a few fruit trees as well as a good many poplars and willows (the only timber). The lower part of the Nubra valley is particularly fertile, and on the east side the cultivation extends from Tirit as far as Panamikh, in a belt varying from 100 feet to nearly a mile in width. The villages are large and seem populous. Many of the houses are very substantially built. The sacred Mané walls are numerous, and of great length and size. (*Thomson.*)

The principal crop grown in the Nubra valley is naked barley, called *Grim* or *Nas*, which is much in demand by caravans journeying from Leh to Yarkand; as is also the *Chunpo*, or lucerne, which is grown in hedged-about plots, and let out, at so much a head, for cattle to graze in.

The copious water-supply of the district no doubt depends on the great elevation of the surrounding mountains, which rise everywhere, if not above, yet almost to the level of perpetual snow; so that at the head of each little stream there is either a glacier or a snow-bed, which does not melt entirely till the end of autumn, affording therefore a nearly perennial supply of water. (*Bellew—Thomson.*)

The following are the sub-divisions, according to Mr. Drew, of the Nubra district:—

Gyen,		Tsarkā,		Yarma.
Shama,		Farkā, and		

## NUB—OLT

A description of each will be found under their respective headings.

### NUBRA RIVER—

A considerable stream and a tributary of the Shyok. It rises in the Saichar Ghainri glacier, on the southern slopes of the Karakoram or Mustagh range, and flowing south-east joins the Shyok opposite Deskit at an elevation of 9,950 feet above the sea-level. It is about 100 miles in length. The lower Nubra valley is very similar, in general character, to that of the Shyok about Hundar and Deskit. The same wide, gravelly expanse occupies its centre, forming a plain of 1 or 2 miles in width, through which the river runs in many branches. A great part of this gravelly plain, particularly on the left bank, is covered by a dense brushwood of *Hippophaë* and *Myricuria*, which extends for 4 or 5 miles, and is usually impervious, except in certain beaten tracts. Numbers of hares are to be found in it. The maximum depth of the river opposite Charasa was 2½ feet in September. In November, Johnson found it frozen over, and crossed it, near its junction with the Shyok. The stream was about 20 yards wide. The summer route by the Karakoram follows the left bank of the river as far as Changlung (10,760 feet). On both banks are lofty snow-capped mountains, containing numerous glaciers. (*Cunningham—Thomson.*)

### NUNAK—

The portion of the Zankar valley between Padam and the junction of the Kargia stream. In spring avalanches are very common in this valley. (*Drew.*)

NUN-KUN PEAKS—Lat. Long. Elev. 23,447.

In the Western Himalayas, about 14 miles east of the Bhot Kol pass. These two peaks are conspicuous from afar, and are 3,000 feet higher than the surrounding mountains. (*Drew.*)

NURLA—*Vide* SNURLA.

NURPA PASS—*Vide* THATO LA PASS.

NYAMA—*Vide* NIMA MUD.

## O

OGLOK—Lat. Long. Elev.

A camping ground on Hayward's route, *viâ* Changchenmo. It is situated on the right bank of a tributary of the Yarkand river, which, rising near the Karatagh Pass, flows north-west and joins the main stream a little above Wahab Jilga. The regular route is from Karatagh Lake, *viâ* Tamba, to Malikshah. (*Drew.*)

OKTI OR UKTI—Lat. Long. Elev. 11,870.

A small square fort with four round bastions, situated on the left bank of the Zankar river, 2 miles below Padam, on the level tongue of land lying between the Zankar river and a stream which, flowing from the west, joins it a little below the fort. There was a small garrison of Gulab Sing's troops here in 1848. (*Thomson.*)

OLTINGTHANG—Lat. Long. Elev.

A village on the left bank of the Dras river, a little above its junction with the Indus, and at the junction of a considerable tributary from the west. It is a halting-place on the route from Srinagar to Skardo, *via* Dras. The

## OMB—PAK

village occupies a gentle slope, at the bottom of which is a small plain covered with huge boulders. Three or four inches of snow fell here on the 18th December. (*Thomson.*)

**OMBA OR UMBA**—Lat. Long. Elev.  
A small village in the Sūrū district, situated on the right bank of the Omba rivulet, at its junction with the Nakpo-chu, and lying at the east base of the Omba La Pass. *Prangos* cultivated here. (*Moorcroft.*)

**OMBA-LA PASS**—Lat. Long. Elev.  
A steep and difficult pass in the mountain range, separating the valleys of the Dras and Sūrū rivers. A path leads over it from Sankho to Dras. The ascent from the village of Omba is very laborious. The descent abrupt, but not very difficult, passing occasionally over firm beds of snow. Numbers of marmots seen on both sides of the pass. At western base the rhubarb plant is to be found (July 1st). (*Moorcroft.*)

**OMBA RIVULET**—  
Rises near the Omba La Pass, and flowing south joins the Nakpo-chu river at the village of Omba. Its waters are very muddy. (*Moorcroft.*)

**OROROTZE**—Lat. Long. Elev. 13,600.  
A camping ground on the left bank of the Changchenmo river, some distance below Pamzal. It is only used by shepherds. General Strachey, in the middle of September, had great difficulty in fording the river just below the camp. It was here 50 yards wide, 3 feet deep, and flowing rapidly over a very stony bottom. There are hot springs in the river bed. (*H. Strachey*)

**OROROTZE-LA PASS**—Lat. Long. Elev. 18,050.  
“Is used only by shepherds when taking flocks to graze in the lower courses of the Changchenmo river.” (*Godwin-Austen.*)

## P

**PADAM**—Lat. Long. Elev. 11,873.  
A village on the left bank of the Zankar river, 5 miles above its junction with a tributary from the west, and at the south-east angle of a plain lying between the two rivers. It was formerly the capital of Zankar, but is now in ruins. It is still, however, owing to its central position, considered the chief place of the district. There is a small Kashmiri garrison in the fort of Okti, 2 miles to the north. Two routes lead from here to Leh, the one most used being *via* Zangla, Yelchung, and Lama Guru. Being surrounded by high mountains, which intercept all moisture, there is very little vegetation, and no trees are to be seen. The plain to the north-west is, however, partially cultivated. The river is crossed, opposite the village, by rather an insecure rope-bridge, high above the stream, which at the end of June was deep, rapid, and muddy.

The Ladakhis were defeated here in 1835 by one of Zorawer Sing's Generals. (*Thomson—Cunningham.*)

**PAKRA**—Lat. Long. Elev. 11,000.  
A camping ground on the right bank of the Shyok. The fourth march from Leh by the winter route, *via* the Karakoram Pass.

PAM—PAN

PAMZAL OR PAMCHALAN—Lat. Long. Elev. 14,790.

A camping ground on the left bank of the Changchenmo river, at the junction of a stream from the Marsemik La Pass. It is a halting-place on the Changchenmo route. Grass and fuel plentiful. Hares to be found in Tamarisk jungle. There is a serai here. Kiam 12 miles up valley. At half way ford river, and follow path north to Gogra, 12½ miles from Pamzal. (*Trotter—Johnson.*)

PANAMIKH—Lat 37° 47' 10". Long. Elev. 10,840.

A large village on the left bank of the Nubra river, and a halting-place on the summer route from Leh by the Karakoram. Barley and lucerne extensively cultivated here, and both are in much demand by merchants travelling between Leh and Yarkand. No supplies obtainable between this and Yarkand. One mile below the village are some hot springs. Temperature at exit of two springs 155°·5 F. and 167° F. The water is conducted into two tanks enclosed by walls. These baths are much resorted to by travellers from Yarkand and by the natives, and are said to be efficacious in the cure of rheumatism and syphilis. (*Trotter—Bellew.*)

PANBUK OR TSOKAR-CHUNSE—Lat. Long. Elev. 14,900.

A small fresh water lake about 1 square mile in area, lying south-east of the Tsokar, and connected with it by a small stream. It is a favourite resort of the Kyang or wild horse. (*Drew.*)

PANCH, PANGACHE, OR PANGATSE—Lat. Long. Elev.

A village in the Zankar district, and a halting-place on the route from Padam to Leh. It lies at the south base of the Naerung La (or Nira) Pass. No supplies procurable. (*Drew.*)

PANCH PASS—*Vide* NAERUNG-LA.

PANDRAS OR PRAN—Lat. Long. Elev.

A village on the left bank of the Dras river, and passed on the route from Srinaggar to Leh at about 6 miles from Matayan. The river is crossed by a bridge ½ mile below the village, and at this portion of its course flows rapidly through a narrow furrowed channel. On the 12th April Dr. Thomson crossed it above the village on a snow bridge, at least 40 feet thick, and covering the river for more than 100 yards. A good deal of *Prangos* here, and a little cultivation. (*Bellew—Thomson.*)

PANGACHE OR PANGATSE—*Vide* PANCH.

PANGLUNG—Lat. Long. Elev.

A camping ground and serai on the banks of the stream flowing from the Marsemik La Pass into the Changchenmo river. It is a short stage from Pamzal and one march from Lunkha, at the south base of the Marsemik La Pass. (*Cayley.*)

PANGMIK—*Vide* SPANGMIK.

PANGONG LAKE, OR TSOMONANGLARI, OR PANGONG TSO, *i. e.*, "the lake of the great hollow"—Lat. Long. Elev. 13,936.

The largest lake in Ladak, extending from Lat. 34° and Long. 78° 30' south-east to Lat. 33° 40', and thence east to Noh in Long. 79° 50'.

Only the lower lake (the Pangong Tso proper) lies in Ladak, the middle (Tso Nyak) and upper lakes being in Rudok territory. The lower lake is 40 miles long, with an average breadth of about 3 miles, the maximum depth at its north-west end being 142 feet. The following are the

soundings taken by Captains Trotter and Biddulph at the north-west end:—

“Starting from the sandy shore at the west end of the lake, we made for the island, lying about 2 miles off, and situate nearly equidistant from the two sides of the lake. (*N. B.* The horizontal distances are only roughly estimated.)

				Depth.
At 100 yards from shore	...	...	...	55 feet.
“ 250 “ “	...	...	...	93 “
“ 450 “ “	...	...	...	112 “
“ 1,000 “ “	...	...	...	130 “
This being the maximum depth between the shore and the island.				
At 400 yards from island	...	...	...	50 “
“ 250 “ “	...	...	...	14 “

From this point a shelving sandy bottom stretched up to the island, which consisted of a mass of rocks, about 150 yards in length and considerably less in breadth. It was composed mostly of *calcareous tufa*, and in no place rose to more than 4 feet above the surface of the lake. It is submerged during *heavy storms*.

*Soundings between island and north shore of lake.*

				Depth.
At 300 yards from island	...	...	...	107 feet.
“ $\frac{1}{4}$ mile from main shore	...	...	...	136 “
“ 250 yards “ “	...	...	...	142 “
“ 100 “ “ “	...	...	...	114 “
“ 50 “ “ “	...	...	...	95 “
“ 30 “ “ “	...	...	...	80 “
“ 20 “ “ “	...	...	...	50 “
“ 10 “ “ “	...	...	...	12 “

Although the water was beautifully clear, we looked in vain for fish, and with the exception of a species of bug, of which myriads were swimming about, we failed to see any animal or signs of life of any description. The water was decidedly brackish, with a temperature of 55° F. (September); its colour, a very pure blue where deep, and green where shallow. The banks of the lake showed evident signs of the water having formerly stood at a much higher level than it does at present, and there can be little doubt but that the valley along which the road passes from Tankse up to the lake was, at no very distant period, its main outlet; for although there is now a low pass, about 2 miles from the head of the lake, yet it is not much more than 100 feet above the present level of the water, and is of recent formation.

“The character of the containing banks is for the most part very steep and rocky, scarcely leaving a foot-path along the water’s edge. All along the south-west side, however, there is a flat or shelving bank, sometimes a mile wide, and near where the Shooshal stream enters the lake, there is a level extent of ground quite 10 miles in area.

“In the eastern part, on both sides, high mountains bound the lake whose bold spurs jut out in succession, and at last meeting, close in the view. These hills are composed of bare rock and loose stones, and no vegetation is to be seen. There are similar barren mountains on the north-east side, but though from 18,000 to 19,500 feet high, there was very little snow on them in July.

“To the south-west a high range runs parallel to the lake, some of the peaks

## PAN

on which are 21,500 feet. This range terminates in a peak, 20,003 feet, east-south-east of Tankse, and is covered with perpetual snow. Its upper ravines contain glaciers from which little streams flow down and finally lose themselves in the silt and sand on the edge of the lake. Only the larger ones find an exit into the lake, such as the Mang and Shushul streams.

“The Lukung stream enters the lake at its north-west end, but there are no affluents whatever on the northern shore. The lake has no effluence, and shows signs of gradual subsidence. The waters of the western end are much more salt than those of the eastern end near Ot. In the stream connecting the Pangong Tso with the Nyak Tso the water becomes drinkable, and rich grass is found on the banks. Wild geese are plentiful here, and in the Tso Nyak there are fish, a species of tench. The Pangong Lake is said to be frozen over for three months in the winter and can be crossed on the ice. Along the western shore are a few small villages, whose inhabitants cultivate naked barley and peas to a small extent. On the northern shore there are no houses, but the tent-dwellers (Champas), chiefly from Chinese territory, frequent certain spots in small numbers.

“The road from Shooshal to Leh skirts the western edge of the lake, and strikes the Changchenmo route at Lukung at its north-west end. (*Trotter—Drew—Strachey—Austen.*)

**PANGOOR TSO OR TSO RUL, i. e., “Bitter Lake”—**

Lat.	Long.	Elev. 14,400.
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Is situated about 5 miles south of the Pangong Lake, its eastern extremity being in Rudok territory. It is about 16 miles in length, and somewhat less than 2 miles in breadth. Its waters are extremely bitter. General Strachey found fresh water shells on its shores; so at one time it must have been a fresh water lake. It has only one affluent, about 12 miles long, entering its east end, and no effluence, though the basin is quite open towards the Shooshal valley. (*Cunningham—H. Strachey.*)

**PANGPOK—*Vide* PANKPO.**

PANGTUNG—Lat.	Long.	Elev. 17,250.
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A camping ground at the south base of the Changlung Pangtung Pass, 7½ miles above Kota Jilga camp. The camping ground was covered with snow (beginning of October). Grass and an inferior fuel said to be plentiful. (*Trotter.*)

**PANGTUNG LA PASS—*Vide* CHANGLUNG PANGTUNG PASS.**

**PANKPO OR PANGPOK—**

A tributary of the Pirse river. Rises to the east of the Pankpo La Pass. General Strachey met with some extensive snow beds in the Pankpo valley. (*H. Strachey.*)

**PANKPO LA, OR PONGHA PASS, OR PONGPO PASS—**

Lat.	Long.	Elev. nearly 17,500.
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Lies about half-way between the Bara Lacha Pass and the southern end of the Tsomorari Lake, on the borders of Ladak and Spiti. There is a route from the Bara Lacha up the Serab valley across this pass to the Tsomorari Lake, and thence to Puga, but it is only used late in autumn by traders with wool, borax, &c., carried on sheep and goats, which easily clamber along the rough stony slopes. In August this road is impassable from the size and

force of the Serab river, which has to be crossed several times. The best route is *viâ* the Lachalang Pass and Rukchen.

“The ascent of the pass is not difficult. It is, however, not safely open till late in July, on account of some steep slopes of snow under overhanging precipices, from which water drops continually on to the snow below, and freezes into a steep incline of smooth hard ice, on which laden horses can never safely pass. The descent on the Ladak side is very gentle and easy, as is the whole road on to Tsomorari and Puga.” (*Cayley.*)

PARA RIVER OR RUPSHU—

A tributary of the Suttlej. Rises in the glaciers on the northern slopes of the Parang La Pass (in Spiti), and flowing north-east for 25 miles enters Ladak territory at Narbu Sumdo camp. Thence its course is due east for another 25 miles to Chumar. From this point it turns to the south-east through the Tso Tso district, and then flowing south-west joins the Spiti river on the borders of Tso Tso and Hangrang. Its whole length is 130 miles, and its fall about 7,500 feet, or 57·7 feet per mile. The most important and most populous part of its course lies through the Chinese district of Tso Tso. Near Narbu Sumdo it flows in several channels through a broad expanse of gravel. The largest stream, on the 12th September, was about 25 feet wide and 2½ deep, with a moderately rapid current. (*Cunningham—Thomson.*)

PARANG LA PASS—Lat. Long. Elev. 18,300.

In Spiti, south-west of the Tsomorari Lake. (*Thomson.*)

PASHKYUM—Lat. Long. Elev. 8,600.

A large village on the right bank of the Wakha-chu, and passed at 5 miles from Kargil on the route from Srinaggar to Leh. The cultivation is chiefly wheat, barley, and lucerne. The water-courses leading from the river are lined with willows and some tall poplar trees. Nearly 1,000 feet above the village, on the edge of a cliff, are the ruins of the fort of Sod, which was taken by the Dogras in 1835. Moorcroft crossed the river here by a Sanga. He gives an account in his book of his interview with the Rajah of Pashkyum. It was at that time the chief place between Leh and Kashmir, and contained a few shops. The inhabitants were all Mahomedans. (*Bellew—Moorcroft.*)

PASHKYUM RIVER—*Vide* WAKHA-CHU.

PATSALUNG—Lat. Long. Elev. 15,300.

A camping ground on the Changchenmo route (eastern variation). It is passed on the western route from Thaldat to the Karakash valley, and lies in a branch of the Kuenlueen plains. To the north-east is a salt lake, and between it and Loding camp, a Soda plain is crossed. A little grass here. Water to be had by digging. (*Drew—Henderson.*)

PHALANG DANDA OR LINGTI—Lat. Long. Elev.

A boundary-mark on the borders of Lahoul and Ladak. Situated north-east of the Bara Lacha Pass and just above Lingti (or Sarchu) camp. It is called Lingti by the Lahoulis, and is a high, square, insulated rock rising out of the Lingti plain. (*Cayley—Moorcroft.*)

PHAROL—Lat. Long. Elev.

A village in the Sūrū district, and on the banks of the Sūrū river, between Kartse and Sankho.

PHA—PIR

“It is enclosed by lofty mountains. Those on the south were thickly covered with snow. In the day the sun was distressingly hot (26th June), whilst at night warm covering was indispensable. Goitre very common.”  
(*Moorcroft.*)

PHAYANG OR PHYANG—Lat. Long. Elev.

A small village situated a little distance from the right bank of the Indus, a few miles below Pitak, and on the left bank of a stream which joins the Indus. It lies on the road from Leh to Srinaggar. (*Drew.*)

PHI—Lat. Long. Elev.

A small village on the right bank of the Indus, situated above Phayang. (*Moorcroft.*)

PHOBRANG OR POBGUNG—Lat. Long. Elev. 14,500.

A small village passed on the Changchenmo route, 5 miles above Lukung, between the latter and Chugra. It consists of one or two houses, occupied in summer for the sake of the cultivation of some naked barley, and deserted in winter for Lukung itself. No inhabited places are met with between this and Yarkand territory. (*Drew—Cayley.*)

PHOTO LA PASS—*Vide* FOTU LA.

PHUGUL—Lat. Long. Elev.

A small village on the left bank of the stream of that name, situated a few miles south of Shergol.

PHUGUL—

A tributary of the Waka river; rises in the mountains south of Shergol and joins the Waka river at that place. (*Cunningham.*)

PHURSOOK—

A bay on the western shores of the Pangong Lake, and on the boundary between Ladak and Chinese territory. It forms a circular little lake in itself. A narrow strait only connects it with the water outside. It was evidently of great depth in places where the hills came down in cliffs upon it, and a line of battle ship might have floated and sailed in and out of it. (*Godwin-Austen.*)

PHUTAKSA—*Vide* FUTTOKSIR.

PHYANG—*Vide* PHAYANG.

PIDMO—Lat. Long. Elev.

A village on the left bank of the Zankar river, a little below Zangla. Gold is found in the river bed between this and Chiling. (*Vide* Chiling.)  
(*H. Strachey.*)

PILISKIMBO—*Vide* CHANAGUND.

PIRSE RIVER OR PIRSA—

Rises in the mountains west of the Tsomorari Lake.

“This intermittent affluent, which joins the south end of the lake (Tso-morari), after a course of 40 or 50 miles in two branches from the westward, is the same with the Pangpok (Pankpo) branch of the Rupshu (or Para) river, which sends half its water into the lake, and half to join the Parang branch of the river at Narbu Sumdo, sometimes both at once, and sometimes alternately in different years; an instance of distomosis which, if insignificant from the smallness of its scale, is remarkable as the only one that I have ever seen or heard of in all West Nari or the Indian Himalaya.”  
(*H. Strachey.*)



## PIT—PUG

- PITAK**—Lat. Long. Elev. about 10,700.  
 A village on the right bank of the Indus, 5 miles south-west of Leh.  
 "There is an isolated rock here a few hundred feet high, on which all the older buildings are situated. The monastery is on the summit at one end, and there is a fortification of two towers connected by a double wall, that must have helped to make the rock a strong position." The cultivation here is irrigated from the Indus. The road from Srinaggar to Leh passes by the village. General Strachey remarks that the Indus is "fordable here at all seasons, being sub-divided into two streams, which in the middle of May I found each 100 yards wide, and at the utmost knee-deep, or 1½ feet."  
*(Drew—H. Strachey.)*
- POAT LA PASS**—Lat. Long. Elev. 18,752.  
 Is crossed between Zankar and Chamba, and lies south of Padam.
- POBGUNG**—*Vide* PHOBRANG.
- POLAKONKA PASS**—Lat. Long. Elev. 16,300.  
 Leads from the head of the Puga rivulet, down to the salt lake of Tsokar, on the Rupshu plateau. Both ascent and descent very gradual. Road becomes heavy 5 miles before reaching the camping ground on the banks of the fresh water lake, which lies south-east of the Tsokar. The crest of the pass is nearly level and grassy for about a mile. It is a very deep depression in the axis of the chain which runs parallel to the left bank of the Indus. The hills to the right and left are bold and rugged. Height of pass, according to Reynolds, 16,682; Dr. Thomson, 16,500. *(Reynolds—Thomson.)*
- POLONG KARPO**—Lat. Long. Elev. 14,600.  
 A camping ground on the left bank of the Karakash river, 21 miles below Tak Marpo, and above Sūrū camp. It is passed on one of the variations of the Changchenmo route, leaving the western route at Chungtas. A huge rock here in the bed of the valley on the left bank. Camping ground good. Grass plentiful. Five miles below camp the river takes a sudden bend to the north-west. *(Trotter.)*
- POLU CAMP**—  
 At the north base of the Digar La Pass, 5 miles above Digar. *(Trotter.)*
- POLU DIGAR**—Lat. Long. Elev.  
 A camping ground at the south base of the Digar La Pass, 10 miles from Leh and 14 from Digar. A small rivulet here. Some pasture, but no fuel. *(Trotter.)*
- POPCHI**—Lat. Long. Elev.  
 A village in the Nubra district, on the left bank of the Nubra river. It is passed on the summer route by the Karakoram, about half-way between Taghar and Panamikh.
- POWEN**—Lat. Long. Elev.  
 A village on the left bank of the Sūrū river, opposite Kargil; river bank from here down to junction with the Dras river lined with cultivation and orchards. *(Bellew.)*
- PUGA CAMP AND STREAM**—Lat. Long. Elev. 15,200.  
 On the right bank of the Puga rivulet (or Kulung-chu); is situated about half-way between the Polakonka Pass and the Indus opposite Mahiye. It is a halting-place on the route from the Tsomorari Lake to Leh. The route from Leh to Garo also passes through it. There are sulphur mines and

borax-fields here. The former are worked by the Kashmir government, and the latter by the poorer traders from Kulu and Lahoul. Hot springs occur in the bed of the rivulet for a length of about 2 miles, and its banks are quite white with saline matter that is being continually precipitated. The springs vary in temperature from 80° to 148° F., the hottest containing chloride of soda and sulphuretted hydrogen in solution, and those of low temperature chloride and borate of soda, both in solution. The Puga stream rises at the foot of the Polakonka Pass, and flowing east, joins the Indus opposite Mahiye. The ravine through which it flows is in parts thickly covered with Myricaria bushes. Some of them are about 15 feet high, with stout, erect trunks about 6 inches in diameter. (*Cunningham—Thomson—Drew.*)

#### PULUMBA CHU—

A tributary of the Sūrū river. Rises in the mountain range that lies between the valleys of the Sūrū and Wakha rivers, and flowing west, enters the Sūrū river at Kartse. (*Moorcroft.*)

#### PURIK OR PURIG—

A small district of Ladak, consisting of the valleys of the Wakha and Phugul rivers, from their sources in the transverse range of the Singa La to Kargil, below their junction. Its principal villages are Mulbekh, Pashkyum, and Sod, each of which had once a petty chief of its own. This district is famous for its breed of sheep. They are small, but good eating, and cost Re. 1 each; in Leh Rs. 2 each. (*Cunningham.*)

#### PURIK RIVER—*Vide* WAKHA-CHU.

## R

#### RALMANG RUHNA OR RULMA—Lat. Long. Elev.

A monastery passed 4 miles south-east of the Tsaka La Pass, on the eastern route from Shooshal to Nima Mud. A stream flows by here to the Indus, distant 4 miles in a south-east direction. (*Reynolds—Moorcroft.*)

#### RAMBAK—Lat. Long. Elev.

A village situated at the east base of the Kandu La Pass, and west of Shushot.

#### RAMBIRPUR—Lat. Long. Elev.

A village passed on the Changchenmo route at 22 miles south-east from Leh, between Tiksay and Chimray. "It is inhabited exclusively by slaves and the officers in charge of them." (*Henderson.*)

#### REMOO GLACIER—Lat. Long. Elev.

Is situated north-west of Gapshan. "From Gapshan we marched to Daulat-Beguldi, 15 miles. The route goes up the Shyok a little way. As we turned away from the main stream, we left behind us a magnificent panorama of glacier scenery. Away to the left, at about 6 miles off, the Shyok is lost in the vast field of glaciers from which it issues. These come down in three main lines from the north-west, west, and south-west, and unite in one great mass, which fills the wide plain into which the river bed here expands. They appear like rivers set solid in a coating of purest white, and slope down for 12 or 13 miles from the foot of the lofty snow peaks

RER—RUM

whence they start; and where they meet, they present a vast sea which appears as if suddenly frozen solid in the tumultuous foam of its clashing waves; for here the glacier is thrown into a confusion of billowy projections formed by the crashing of the ice under the lateral pressure of the solid streams meeting from opposite directions." (*Bellew.*)

RERU—Lat. Long. Elev.

A village on the left bank of the Zankar river, a short stage above Padam.

RIBERANG LA PASS OR LANGBUT LA—Lat. Long. Elev. 16,100.

An easy pass crossed between Markha and Kharnak Sumdo, on one of the routes from Leh to Padam. It is only open during May and October. At other times, on account of snow, and the (swollen) state of the several streams, the route is impassable. (*H. Strachey.*)

RIMDI—Lat. Long. Elev. 17,500.

A camping ground at the north-east base of the Marsemik La Pass, which is crossed at 7 miles from Chugra, on the Changchenmo route from Leh to Yarkand. The camp is at the junction of two streams, one of which flows north from the Marsemik Pass, and the other comes in from the west, from some high snowy peaks. Fuel scarce. Water and grass plentiful. The grazing ground is occasionally visited by shepherds from the Pangong district. Kiang, snāpo, and the wild yak are to be found on the surrounding hills. (*Trotter—Johnson.*)

RINGDUM—Lat. Long. Elev.

A monastery on the right bank of the Sūrū river, south-east of the Kungi La pass.

ROKSING—Lat. Long. Elev.

A village 45 miles from the Bara Lacha Pass and 51 from Leh. A few supplies procurable.

RONG—*Vide* CHANGTHANG.

RONG—

A narrow defile, crossed between Khardong village and the Shyok river, on the summer route from Leh by the Karakoram Pass. The torrent flowing down it is crossed several times. (*Trotter.*)

RONG—

The Indus valley between Upshi and Mahiye. It is much narrowed in this portion, and the river flows between rocks, along which it is difficult to find a practicable path. (*Drew.*)

RUDOK—

A sub-division of the Chinese district of Nari Khorsam. It comprises the country immediately to the east of the Ladak districts of Tankse and Rupshu, and includes the eastern portion of the Pangong Lake. (*Cunningham.*)

RUKCHEN—Lat. Long. Elev. 15,000.

A camping ground on the route from Kulu to Leh, situated at the north end of the Kiang plain, and west of the Tsokar Lake. There is generally an encampment of shepherds here. (*Drew—Moorcroft.*)

RULANGCHU—*Vide* PUGA STREAM.

RUMCHU—Lat. Long. Elev.

A small village on the left bank of the Gya rivulet, situated a little above Gya. Barley cultivated here. (*Moorcroft.*)

## RUPSHU OR RUKCHU—

The south-eastern district of Ladak, and one of the loftiest inhabited regions in the world. It is bounded on the north by Ladak Proper, on the east by the Chinese districts of Chumurti and Rudok, on the south by Lahoul, Spiti, and the Chinese district of Tso Tso, and on the west by Zankar. Its length from the Tagalang Pass to the head of the Hanlé river is 90 miles, and its mean breadth about 62 miles, which give an area of 5,500 square miles. The valleys having a mean elevation of 15,000 feet, the climate is necessarily severe, and at the same time very dry. In summer the sun at mid-day is very powerful, but in the afternoon a biting wind generally springs up, and at night water freezes throughout the year.

The snow limit is about 20,000 feet. Mountains above this height originate glaciers. The surface of the hills is chiefly disintegrated rock, and that of the valleys earth or gravel. Vegetation is extremely scant, the only herbage for the flocks being found by the streams and a little on the hill sides. Cultivation is carried on in two places only, and that to a very small extent. The people depend on their flocks for a living. The population is not over 500, and consists wholly of *Chumpas*, or dwellers in tents. The tents are of a black hair cloth, there being about 100 in the whole district, one per family. These are divided into two camps, which separate in summer, but re-unite in winter. The sheep and goats are very numerous, and there are also about 500 head of yak.

They are all, with the exception of the shawl-goat, used in carrying loads. Borax and salt are taken from Puga and the salt lake district into Kulu and Lahoul, and also into Gār in Chinese Tibet, and exchanged for grain, &c. All the farinaceous food consumed in the country is imported chiefly from Kulu and Lahoul.

There are two kinds of goat, the larger kind used in carrying loads, and the shawl-goat. The latter are the most numerous. The pushm taken from them is sent on to be picked at Leh, and thence exported to Kashmir (*Cunningham—Drew.*)

RUPSHU RIVER—*Vide* PARA RIVER.

## S

SABARA PASS—Lat. Long. Elev. 17,247.

Between Tsokar Lake and the Indus. (*Reynolds.*)

SABU—Lat. Long. Elev. 14,000.

The first march from Leh (about 4 miles) on the winter route by the Karakoram. The village lies east of Leh, situated in a small valley south-west of the Digar La pass, and consists of several small hamlets. The fields are laid out in terraces sloping down towards the Indus. Crops flourishing, and a few trees. (*Moorcroft—Montgomerie.*)

SAICHAR GHAINRI—Lat. Long. Elev. 11,700 lower end.

A large glacier at the source of the Nubra river.

General Strachey, in the beginning of October, found the river issuing from it full formed, being 50 yards wide with an extreme depth of 1½ feet and very rapid. The glacier entirely occupied the head of the valley,

## SAJ—SAR

rendering it impassable. Its breadth at its lower end was about  $\frac{1}{2}$  mile, and its length was such that after ascending perhaps 2 miles, he was unable to see the head of either of the two branches into which it is divided 4 or 5 miles above the lower end. The thickness of the ice seemed at least 200 feet. Wild juniper trees grow all about the hill sides along its lower part. It is remarkable for the extreme flatness of its level, and for the absence of moraine. The upper part is much crevassed. (*H. Strachey.*)

SAJUN—Lat. Long. Elev. 20,021.

A lofty peak and Trigonometrical station in the Kailas range, situated east of the Tsaka La Pass, and south of the Pangoor Tso, on the boundary of Ladak and Rudok territory. (*Drew.*)

SAKA LA PASS—*Vide* TSAKA LA.

SAKTI—Lat. Long. Elev. 13,500.

A large village in the Chimray valley passed on the Changchenmo route, about  $4\frac{1}{2}$  miles above Chimray. It is situated at the junction of two streams; up the western one a road leads over the Waris Pass to the village of Tainyar (Taghar) and thence to Nubra. The road to Zingral camp ( $3\frac{1}{2}$  miles) leads up the stream which runs down south-west from the Changla Pass. The Chimray valley from Sakti to the Indus is well cultivated in a succession of terraces. Ascent between Sakti and Zingral very steep, being the best part of the ascent to the Changla Pass.

Moorcroft says that there is a dismantled stone fort here. It was taken and destroyed by the Kalmaks two centuries ago.

On the 31st October, on commencing the ascent of the Changla, snow was met with at  $1\frac{1}{2}$  miles above the village. (*Moorcroft—Johnson.*)

SANGTHA—Lat. Long. Elev.

A camping ground on the left bank of the Zara river, a little above its junction with the Samgal river.

SANI—Lat. Long. Elev. 11,560.

A village in the Zankar district, passed on the route from Khistwar, *via* Umasi La to Leh. It lies to the east of Markim on the right bank of a tributary of the Zankar river. Cultivation and pasture on river bank. A rope-bridge leads across to Tungring village on the opposite bank. (*Drew.*)

SANKU OR SANKHO—Lat. Long. Elev.

A village in the Sūrū district, on the left bank of the Sūrū river, at its junction with the Nakpo-chu. It is a halting-place on the route from Khistwar to Leh (*via* Kargil), and lies 18 miles below Sūrū. The mountains surrounding it were at the end of June tipped with snow. Cultivation here. Supplies and sheep procurable. (*Moorcroft.*)

SARCHU CAMP—*Vide* LINGTI.

SARCHU RIVER OR SERCHU RIVER, *i. e.*, "Yellow River"—

A tributary of the Zankar river. Rises north of the Bara-Lacha Pass, and flowing due north through the Lingti plains, joins the Lingti and Yunam streams at Sarchu (or Lingti) camp. The upper part of its course is in Lahoul territory. Dr. Cayley recommended its being bridged, where it crosses the Lingti plain, as the ford was a dangerous one. (*Cunningham—Cayley.*)

SAR-I-HAUZ-I-KHOJAH FATEH OR SARTANG—  
Lat. Long. Elev. 15,500.

A camping ground on the summer route by the Karakoram, passed half-way

between Tutiyaluk and Brangsa Saser, and at the foot of the Saser Pass. Dr. Bellew passed it with the second Yarkand mission on the 8th October. From Tutiyalak "the path wound from north to east and back to north, through a narrow defile bounded by lofty granite mountains, whose peaks were laden with perennial snow, and whose gullies were blocked with glaciers, large and small, which sloped down on either side of the pass, and presented a scene of wildness and grandeur that is rarely witnessed." The path was very rough. "After 2½ hours we came to a small flat where the defile bulges to Sartang camping ground, where there is a pool at this time frozen over."

According to Dr. Bellew the elevation is about 15,725. The cold was most penetrating, an icy wind blowing with cutting force. Glycerine paste rubbed over the exposed portions of the face prevented the skin chapping. The glare from the snow is also almost blinding. Spectacles should be worn. The Bhots usually tie whisks of yak's tail hair over their eyes as a protection. Beyond this camp a glacier is passed, the path over which leads to the top of the Saser Pass. (*Bellew.*)

SASER PASS OR SARSIL—Lat. Long. Elev. 17,820.

On the mountain ridge between the Nubra and Shyok rivers. Is crossed on the summer route by the Karakoram, between Sartang camp (above described) and Brangsa Saser, and is "a very difficult pass." It is dangerous in summer owing to the avalanches and rocks that crush down the slopes on either side, as well as to the sudden rise of its numerous torrents, by the giving way of some obstructing barriers of rock or ice. It is safest in the winter season, when rock and glacier are alike riveted fast to their holds by the bonds of hard frost. From Sartang onwards the path winds amidst sharp rocks and moraine banks under the shadow of an impending glacier, and then passing into a narrow groove between the wall of a vast glacier on one side and the sharp gneiss rocks strewn the base of the hill on the other, slopes down to a spot where the glacier presents a huge split which is occupied by a small pool thickly frozen over (October 8th). This spot appears to be the water-shed of the defile, for the end of the glacier, which here for 6 miles fills its hollow, slopes away from either side of the split. Beyond this the path rises on the top of the glacier itself, and for 3 miles or so leads over its surface. The passage in this part is always hazardous, owing to the fissures and crevasses in the ice being more or less covered with snow. Beyond the glacier we descended the bank of a moraine and passed beyond the snow on to the firm slope of the hill, which led us down the gully to Brangsa Saser. The path is easily discoverable, being strewn over its whole length with the skeletons of beasts of burden. (*Bellew—Trotter.*)

SASER POLU—*Vide* BRANGSA SASER.

SASPOOL—Lat. Long. Elev.

A village on the right bank of the Indus, about 30 miles below Leh. It is passed on the route from Kashmir to Leh between Snurla and Basgo, on the lower road which leads from Snurla along the right bank of the Indus. At the end of June the river here was about 100 yards wide and unfordable. The village is celebrated for its apricots. (*Drew—Moorcroft.*)

SATTI—Lat. Long. Elev. 10,500.

A village in the Nubra district, situated on the right bank of the Shyok,

## SEO—SHA.

about 11 miles above the junction of the Nubra river. It is passed on the summer route by the Karakoram between Khardong and Tirit.

In summer the Shyok near here is crossed in boats, and is a large and rapid river. Baggage animals are made to swim across, and many are drowned in crossing. In winter it is fordable, but at the beginning of October the water was up to the saddle-flaps.

There are two routes from here to Leh:—

- (1). Across Shyok and *via* Khardong Pass.
- (2). Up river bank some way, then across to Digar village, and over Digar La to Leh. This is the easier of the two routes. (*Trotter*  
—*Bellew*—)

SEOJI LA PASS—*Vide* ZOJI LA PASS.

SERAB RIVER—*Vide* CHERPA AND TSARAP.

SERCHU RIVER—*Vide* SARCHU.

SHADI—Lat.

Long.

Elev.

A village in the Zankasar district east of Padam, on the left bank of a tributary of the Zankasar river, which flows down south from the Charchar La Pass.

SHAHDULA KHOJA—Lat. 36° 24' 57." Long. Elev. 11,780.

A camping ground on the left bank of the Karakash river, at the junction of the streams flowing down from the Kirghiz and Suget Passes. It lies on the frontiers of Ladak and Yarkand territory, and is passed on the summer route from Leh, by the Karakoram Pass, and is also a halting-place on the Changchenmo route.

Distance from Leh by summer Karakoram route 241 miles, or 16 marches.

„ „ „ „ Chengchenmo route (western) 312½ miles, or 24 marches.

There are three routes from here to Yarkand, *viz.*, by the Kilik, Kilian, and Sanju Passes. The latter is the most frequented route, Yarkand being by it 202½ miles, or 12 marches. The Kilik route is closed to traders, though it is said to be the shortest and easiest of the three.

A road also branches off here to the west up the ravine and over the Kirghiz Pass to Kirghiz jungle, where the Kugiar (or winter) route is joined. This route is very easy, and can be traversed by laden camels. It is, however, not much used, being infested by robbers. The Karakash at Shahdullah takes a bend to the north-east and flows towards Khotan, winding through the Kuenlun range. The Sanju route follows its course for about 20 miles, and occasionally crosses it. The passage in summer is very difficult.

There is a sacred shrine here on the summit of a bluff. It is a mere pile of stones, surmounted with horns of wild sheep, &c. On the boulder beach, under this bluff, is a small stone fort. It was erected by the Kashmir government as a precautionary measure during the disturbances in Eastern Turkistan (which resulted in the accession of the present Amir of Kashgar), and was occupied by a small Dogra detachment for two years. This detachment has since been withdrawn, and the place is now generally recognized as belonging to the Kashgar ruler. The fort has now a garrison of about twenty-five men to protect the road and control the Kirghiz of the neighbourhood, and draws its supplies from Sanju.

The Kirghiz on this frontier are reckoned at 300 tents spread in different camps. They own a few camels and horses, but their principal wealth

## SHA—SHO

consists in their yuks (called *Cutas* by them), which they employ in transporting caravans over the Sanju, Kiliam, and Yangi-dawan Passes.

Fuel and grass plentiful about Shahdula. (*Bellew—Trotter—Johnson.*)

### SHAMA—

A sub-division of the Nubra district, being the Shyok valley, below the junction of the Nubra as far as the boundary of Baltistan. (*Drew.*)

### SHARGOL—*Vide* SHERGOL.

### SHAYOK—*Vide* SHYOK.

### SHEH OR SHAY—Lat. Long. Elev.

A village on the right bank of the Indus, passed on the Changchenmo route at 7 miles above Leh. Road heavy for first few miles out of Leh owing to sandy nature of soil. There is a monastery here.

A fair, called the *Sheh Changdus*, is held annually in August or September, and consists exclusively of barter between the agriculturists of the Kong and the shepherds of the Changthang. The fair derives its name from the latter. (*Reynolds—H. Strachey.*)

### SHERA OR SHARA—Lat. Long. Elev.

A village on the right bank of the Indus, 37 miles above Leh, passed on the route to Nima Mud, *viá* the Indus valley. Grass and fuel plentiful. A few supplies procurable. (*Reynolds.*)

### SHERGOL OR SHARGOL—Lat. Long. Elev. 10,290.

A village on the left bank of the Wakha river, at the junction of the Phugul stream. The valley opens out here, and there is considerable cultivation. It is a halting-place on the route from Srinaggar to Leh, between Kargil and Kharbu. There is a small monastery here. (*Drew—Henderson.*)

### SHINGLUNG OR DUNGLUNG—Lat. Long. Elev. 17,030.

A camping ground on the right bank of the Karakash river, passed on the western variation of the Changchenmo route, 14½ miles above Kizil Jilga, and 18 below Dehra Kompās. Road from latter good, but stony. *Boortsee* abundant. (*Trotter.*)

### SHINGO RIVER—*Vide* KUKSAR RIVER.

### SHINLDAT—

A halting-place 83 miles from Leh. A few ruined huts here.

### SHITANG RIVER—*Vide* KANJI RIVER.

### SHOOSHAL OR CHUSHUL—Lat. Long. Elev. 14,200.

A large village of about sixty houses with a government store-house, situated on the left bank of the Shooshal stream and about 10 miles south of the Pangong Lake. Between it and the lake is a hot spring, which is said to possess medicinal properties. The temperature is 96° F., and the water has neither taste nor smell.

There are two routes from here to Nima Mud on the Indus—

- (1). The eastern one *viá* Eastern Shooshal valley and Tsaka La Pass.
- (2). The western route *viá* the Shooshal and Thato La (or Nurpa) Passes.

The eastern is the better route of the two.

A route also leads from here along the Pangong Lake and *viá* Tankse to Leh, striking the Changchenmo route at Lukung.

There is another route to Tankse and Leh *viá* the Kongta La Pass and Lungchu valley.



**SHOOSHAL PASS**—Lat. Long. Elev. 16,954.

Is crossed on the western route from Shooshal to Nima Mud, 1 mile north of the Mirpa Tso Lake. Ascent on north side steep. (*Reynolds.*)

**SHOOSHAL RIVER**—

Rises near the TsakaLa Pass, and flowing north enters the lake near Takang camp, with a course of about 30 miles. Before entering the lake it flows through a plain some 10 square miles in extent, dotted over in the vicinity of the stream with a few low bushes, and over the rest grows a scanty coarse grass in tufts. On the 22nd July, Major Godwin-Austen found a good deal of water in the river. In spring it is an insignificant stream. Fuel plentiful. (*Godwin-Austen—H. Strackey.*)

**SHORJILGHA**—Lat. 35° 41' 2". Long. Elev. 16,490.

A camping ground on the western Changchenmo route, about 8 miles east of the Karatagh Pass, on the right bank of the stream, which flowing from the pass joins the Karakash at Chungtash camp. The road from the latter is bad for 2 or 3 miles, owing to the number of times the frozen stream has to be crossed and re-crossed. It then passes over a tolerably level plain up to a gorge, at the mouth of which is Shorjilgha. No water here in October, and no grass or fuel. Fuel is, however, plentiful 4 miles below the camp. (*Trotter—Cayley.*)

**SHUMMAL LUNGPA OR BHAO**—Lat. Long. Elev. 17,020.

A camping ground 12 miles above Gogra in the Changlung valley. Water and fuel plentiful, grass very scarce. (*Biddulph.*)

**SHUSHOT OR CHUSHOT**—Lat. Long. Elev. 10,500.

A large scattered village of over 200 houses, situated on the left bank of the Indus, opposite to, and 10 miles from, Leh. The river is crossed by a good wooden bridge, a double one. The smaller has a span of 30 feet and the larger of 80 feet. Both are strongly made of poplar spars laid touching each other. On each side of the roadway, which is 8 feet wide, are stout railings.

Height of bridge above stream on the 2nd October, 15 feet.

Extensive cultivation here, and some poplars and small willows. Fruit trees do not flourish. There is a colony of Baltis in the village, and also some Arghauns or half-breeds. (*Cunningham—Drew.*)

**SHYOK OR SHAYOK**—Lat. Long. Elev. about 12,200.

A village on the left bank of the Shyok river, the sixth march from Leh by the winter Karakoram route. Travellers either halt here or at Lamakyent, on the opposite bank. It is the last village passed on this route, and is situated a little below the great bend which the river takes to the north-west. It is 30 miles above Agham. (*Drew—H. Strackey.*)

**SHYOK RIVER, OR SHAYOK RIVER, OR KHUNDAN RIVER**—

The principal mountain tributary of the Indus; rises in the Karakoram mountains, south-east of the Karakoram Pass. From its source to near Gapshan camp it makes a bold sweep of 60 miles to the west and south. Thence for 50 miles to Mandarlik it takes a south-easterly course. From Mandarlik it flows due south for 50 miles more to Shyok village. Total length to this point 170 miles. Fall 6,000 feet, or 35·3 feet per mile. It is joined by the Changchenmo river from the east a little above the great bend to the north-west and below the bend by the Lung-chu river from the

## SIN—SIR

south-east. From Shyok to Hundar the course is west-north-west and the distance about 80 miles. Near Hundar it receives the Nubra river from the north-west, and from here continues west-north-west to its confluence with the Indus at Keris (in Baltistan), a distance of 150 miles.

Distance from Shyok to junction with Indus 230 miles. Fall 4,500 feet, or 19·6 feet per mile.

Total length of river 400 miles.

Total fall of river 10·500 feet, or 26·4 feet per mile.

Its general character is exactly the reverse of the Indus. Its upper course is turbulent, down a narrow glen, but its middle course is either broad and rapid, or divided into numerous channels in an open valley. In such places where the waters are much scattered, it is fordable, but not without difficulty in summer. In winter the passage is easy, and even in the lower part of its course the stream is frequently frozen over and crossed on the ice. The winter route from Leh to Yarkand follows the course of the river as far as Daulat-Beguldi, crossing and re-crossing it repeatedly. Near Kumdun and Gapshan camps the large glaciers of Kumdun and Remoo are met with. The summer route crosses the river opposite Satti, travellers and merchandize passing over by boats and baggage animals being made to swim. (In winter the river is fordable at this point.) The summer route again crosses it at Brangsa Saser, the ford being at this season rather a difficult one.

One of the routes from Leh to Skardo follows the course of the Shyok, from the confluence of the Nubra to its junction with the Indus, but the route usually taken is *viâ* Indus valley and Hanû Pass, striking the Shyok river at Piun Chorbat. (*Cunningham—Thomson—Trotter.*)

SINGA LA, OR SINGHE-LA, *i. e.*, Lion Pass—

Lat.

Long.

Elev. 16,600.

A pass over the western water-shed of the Zankar river. It is crossed between the villages of Yelchung and Fatoksir, on the route from Khistwar to Leh. The ascent commences at once from Yelchung over dry, rounded hills, and to the left of a deep ravine. After about 1,000 feet the ascent is more gradual and continues over similar ground to 15,000 feet. The road is now for some distance nearly level, winding round a deep bay or hollow in the mountains, with high hills on the left and the deep ravine still on the right. Several small streams are crossed. After completing the circuit of the bay, the ascent re-commences, but is not at all rapid till within a few hundred yards of the top, when a short, steep pull occurs. Vegetation very scanty during latter part of the ascent, and none at all on the top of the pass. On the 3rd July several large patches of snow occurred on the south side. On the north side a snow bed commenced at the very crest, down which the descent was very steep for a few hundred yards. The road now follows the course of a wide arid valley, descending very gently. This valley gradually narrows, and on the right, high, precipitous rocks overhang the stream. The road crossing to the left bank of the stream after a time turns abruptly to the left, and crosses a low ridge. From this ridge it descends 1,000 feet to the village of Fatoksir. (*Thomson.*)

SINGE-CHU, SINGE-KHA-BUB—*Vide* INDUS RIVER.

SIRSIR LA PASS OR SARSAR PASS—Lat. Long. Elev. 16,372.

Is crossed between Fatoksir and Hofata on the route from Khistwar to Leh,

## SKE—SOW

*viâ* Zanksar. After leaving the cultivation at Fatoksir the road leads up a barren stony valley, following the course of a small stream, almost to its source. The ascent from this point to the top is steep. *Dama* (Tibetan furze) plentiful. The descent is rapid down a deep stony valley, generally at some height above the stream, to the village of Hofata. (*Thomson—Drew*)

**SKEW OR SKIU**—Lat. Long. Elev. 11,130..

A village on the right bank of the Zanksar river, at the junction of the Markha stream and at the south-west base of the Kanda-la Pass. It is passed on one of the routes from Padam to Leh, between Markha and Rambak. (*Moorcroft.*)

**SKIRBICHAN**—Lat. Long. Elev.

A village on the right bank of the Indus, 16 miles below Khalsi. It is a halting-place on the route from Leh to Skardo *viâ* Chorbat. A wide expanse of cultivation here on the river banks. (*Drew.*)

**SNIMO OR NIMO**—Lat. Long. Elev.

A village on the right bank of the Indus, 18 miles below Leh, and opposite the junction of the Zanksar river. It is passed on the route from Srinaggar to Leh, 14 miles above Saspool. There is an open cultivated plain here, several hundred feet above the level of the river. Snimo is very hot in summer, whilst in winter the cold is so severe that the river is crossed on the ice. (*Bellew—Henderson.*)

**SNURLA OR NURLA**—Lat. Long. Elev.

A village on the right bank of the Indus, about 45 miles below Leh, and 5 above the bridge at Khalsi. It is a halting-place on the route from Srinaggar to Leh. There are two roads to the latter—

(1). The upper road *viâ* Hemis Shukpa.

(2). The lower road up right bank of the Indus and past Saspool.

They unite at Basgo.

The cultivation here is extensive on a gravelly soil, and owing to its sheltered position, fruit trees grow well; also poplars, willows, and the *Sersing* or *Elæagnus*. The Indus here flows through a narrow rocky channel, and the road along its right bank is difficult. In January it was frozen over, and Mr. Drew was able to ride up for a mile or two towards Leh on the ice.

(*Drew—Bellew.*)

**SOD OR SOTH**—*Vide* PASHKYUM.

**SORA**—Lat. 36° 1' 9". Long. Elev. 14,000.

A camping ground on the right bank of the Karakash, in the broad valley at the foot of the Eastern Kuenluen range, and below the great bend the Karakash makes to the north-west. It is a halting-place on the eastern Changchenmo route. Camping ground good. Fuel and grass abundant. Ground covered with natural salt pans.

A road leads from here north-east crossing the Kuenluen by the Yangi or Elchi-dawan Pass to Khotan, distant 160 miles, or eleven marches.

(*Trotter.*)

**SOWAR OR CHIRI**—Lat. Long. Elev.

A camping ground on the Changchenmo route, 13 miles from Tankse and 15 from Chagra, and about 5 miles west of the Pangong Lake. Road from Tankse good. Slight ascent up a ravine the whole way. Muglib passed at 7 miles. Camp on banks of a small fresh-water lake. Grass and

## SOW—SUM

fuel plentiful. No houses here. The mountains on either side abound with wild goats (Snāpo). (*Johnson.*)

**SOWLEH**—Lat. Long. Elev.  
A small village 173 miles from Leh. Supplies procurable in the neighbourhood. Fuel rather scarce.

**SPANMIK**—Lat. Long. Elev. about 14,000.  
A small village of one or two houses, on the western shore of the Pangong Lake. It lies half way between Lukung and Mang. Grass and fuel plentiful. (*Drew—Reynolds.*)

**SPITI**—  
Formerly a district of Ladak, but now attached to British India; lies south of Rupshu and the Tsomoriri Lake. A route leads from it into Ladak *viâ* the Parang-la pass, striking Ladak territory at Narbu-Sumdo camp.

**STAKNA**—Lat. Long. Elev.  
A village on the left bank of the Indus, passed about half-way between Marsalang and Shushot, on the route from Kulu to Leh. The fields here are watered by a canal cut from the river. (*Moorcroft.*)

**STOK**—*Vide* TOK.

**SUJET DAWAN PASS** OR “Willow Pass”—  
Lat.  $36^{\circ} 9' 53''$ . Long. Elev. 17,610.  
Leads over a spur of the Kuenluen range, which here forms the water-shed between the tributaries of the Yarkand river and those of the Karakash. It is crossed on the summer route from Leh to Yarkand, between Chibra and Suket camps, and is a tolerably easy pass. Snow lies on it from September to April. Ascent from Chibra gradual up an easy gully. Descent on north side at first steep, into a ravine winding between banks of black shale. From this the path leads over high moraine banks of granite boulders, and crossing the slope of a hill reaches the Suket camp. (*Trotter.*)

**SUKA LA PASS**—*Vide* TSAKA LA.

**SUKET** OR **SUKIT**—Lat.  $36^{\circ} 18' 45''$ . Long. Elev. 12,970.  
A camping ground on the summer route by the Karakoram Pass, situated on the right bank of the Suket stream, and about 6 miles north of the Sujet Dawan pass. Hills on left bank steep down to the river, and on right bank rolling away in wide slopes to high mountains. This valley is a grazing ground much used by traders from Leh to Yarkand, as it is the first at which grass and wood are obtainable after leaving the Nubra district, and travelling over the barren ground about the Karakoram for eight days. (*Trotter—Johnson.*)

**SULTAN CHUSKUN** OR “King’s Camp”—  
Lat. Long. Elev. 14,000.  
A camping ground on the left bank of the Shyok, passed on the winter route from Leh to Yarkand, eleven marches from the former between Kuktalik and Dahn-i-Murghai. It lies 10 miles below Brangsa Saser. (*H. Strachey.*)

**SUMDO**—Lat. Long. Elev.  
A camping ground and rest-house near the top of the Lachalang Pass (on the west face), and 18 miles from Sarchu (or Lingti). (*Cayley.*)

**SUMDO**—Lat. Long. Elev. 17,000.  
A camping ground on the right bank of the Karakash river, and not far

## SUM—SUM

below its source. It is passed on the western Changchenmo route. Gogra, distant 66 miles. Shinglung lies 11 miles below camp. (*Drew.*)

*N. B.*—The usual route is *via* Sumzungling and Dehra Kompis Pass and camp to Shinglung. (*Trotter.*)

**SUMGAL** or **SUMKIEL**— Lat. Long. Elev.

A camping ground on the right bank of the Sumgal river, and north-east of the Lachalang Pass. It is passed on the route from Kulu to Leh between Sumdo camp and Rukchen. There are two roads from this to Debring, at the foot of the Tagalang Pass—

- (1). By Kiang plain and Rukchen.
- (2). By the Zara valley which lies to the west.

The latter is generally taken in summer, when there is often a scarcity of water in the Kiang plain. The camping ground is at the junction of three streams. (*Moorcroft.*)

**SUMGAL**—Lat. Long. Elev.

A camping ground on the right bank of the Karakash river, one march above Potash camp, and about 40 miles above Shahdūla. It is passed on the eastern route from the Changchenmo valley. A road leads north-east from here across the Hindutak-dawan Pass into Khotan. It was the route taken by Robert Schlagintweit. Fuel and grass abundant. (*Trotter.*)

**SUMGAL RIVER** or **SUMKIEL**—

A tributary of the Zankar river; is formed by three streams, two of which rise in the mountains west of the Tsomoriri Lake, and the third flows down from the Lachalang Pass to the junction of the three streams at Sumgal camp. "As each of these streams is forded separately within the short distance of a mile, the united stream has received the descriptive name of *Sumgal*, or the river of the 'Three Fords.' Its course is north-north-west, and its length from its source to its junction with the Zankar river 110 miles. Fall about 5,000 feet, or 45·4 feet per mile."

Moorcroft calls it the Sumkiel, or "Three Spring River." (*Cunningham—Moorcroft.*)

**SUMNA**—Lat. 35° 16' 39". Long. Elev. 17,150.

A camping ground passed on one of the routes leading from the Changchenmo to the Karakash. It lies east of Kizil Gilga at the north base of the Kizil Pass. Water, grass, and fuel are obtainable 3 miles below camp in the Kizil Gilga ravine. (*Trotter.*)

**SUMNAL**—Lat. Long. Elev. 15,540.

A camping ground on the left bank of the Karakash river, 13 miles north-east of Chungtash. It is passed on one of the variations of the Changchenmo route which leaves the western route at Chungtash. At 6 miles from latter are some hot springs on the right bank. Road in parts stony and bad. Good camping ground at bend of river to east, where a large nullah from west joins. Fuel and grass abundant. (*Trotter.*)

**SUMZUNGLING** or **SUMZAM LUNGPA**—

Lat. 34° 41' 10". Long. Elev. 17,330.

A camping ground on the western Changchenmo route, 9½ miles north of the Changlung Pass. Road from pass very bad, crossing the stream in numerous places before reaching the camping ground at the junction of three nullahs. A little grass obtainable on a neighbouring hill, but no fuel.

## SUR—TAG

Captain Trotter calls this "one of the worst marches on the whole road, as the number of recently dead animals that strewed it too surely testified."  
(*Trotter.*)

**SURTOKH LA**—Lat. Long. Elev. about 15,000.

A low ridge in the Muglib valley,  $2\frac{1}{2}$  miles from the north-west end of the Pangong Lake. It forms the water-shed across the natural exit of the lake, and is entirely formed by the loose shingle brought down a somewhat large lateral ravine from the snowy peaks to the south.

Marks of the former level of the lake are seen extending within a very short distance of this ridge or low pass. A rise of 150 feet in the waters of the present lake would find them again an exit down the valley to Tankse.  
(*Godwin-Austen.*)

**SŪRŪ, OR SOOROO, OR KARTSE**—

A small district of Ladak, lies in the upper valley of the Sūrū river. It once had a petty chief of its own, who lived at Lung Kartse (or Kartse), the principal place in the valley.

The route from Khistwar crosses into Sūrū by the Bhotkol Pass, and proceeding down the Sūrū valley to Kargil, there joins the Srinaggar and Leh route. From Khistwar to Kargil the road is not fit for laden animals, and the Bhotkol Pass is closed by snow for about six months. (*Cunningham—Drew.*)

**SŪRŪ OR SOOROO**—Lat. Long. Elev. 10,624.

A village and fort on the left bank of the Sūrū river, just below the sudden bend it takes to the north-north-east. It is a halting-place on the route from Khistwar to Leh *viá* the Sūrū valley, and lies 18 miles above Sankho and north-east of the Bhotkol Pass. (*Drew.*)

The fort was built by Zorawer Sing in 1834.

**SŪRŪ RIVER OR KARTSE RIVER**—

A tributary of the Dras river, rises in the Himalayas, east of the Nun Kun peaks. Its course is north-east to Ringdum monastery, then due west to a little above Sūrū, after which it flows north-north-east and joins the Dras river just below Kargil. Total length about 60 miles. Its principal tributaries are the Nakpo-chu and Palumba-chu, which join it from the west and east respectively. (*Cunningham—Moorcroft.*)

## T

**TAGALANG PASS**—Lat. Long. Elev. 18,042.

At the north-western extremity of the Rupshu district; is crossed on the route from Kulu to Leh, between Debring and Gya.

Dr. Thomson crossed it from the south side on the 25th September. The road was very stony and rugged, and covered with snow, and the latter part of the ascent very steep. Descent very rapid down a steep narrow ravine: 3 miles from the summit, at perhaps 2,000 feet lower level, snow ceased to lie on the ground. Descent continues down the ravine, through which flows the Gya stream, to the village of Gya, about 4,000 feet below the level of the pass.

## TAG—TAN

Drew and Thomson estimate the height of the pass to be 17,500 feet. In 1870 the road over it was much improved. (*Thomson—Drew.*)

**TAGHAR**—Lat. Long. Elev. 10,500.

A village in the Nubra district, situated on the left bank of the Nubra river. It is a halting-place on the summer route from Leh by the Karakoram, and lies 18 miles below Panamikh and about 7 above the junction of the Nubra with the Shyok. Cultivation here (barley and lucerne), and a good many trees, apricot, willow and poplar, also elm and elæagnus. The river runs in divided streams over a wide bed of shingle and sand, on which are island patches of buckthorn and myricaria brushwood. It is frozen over in winter. (*Bellew—Trotter.*)

**TAGNAK**—Lat. Long. Elev.

A village in the Chimré valley, 10 miles north of Chimré. A road branches off to it north-west from Sakti, and crossing the Waris-la Pass, north of the village, leads down to the Shyok river: the ferry across which, opposite Satti, is 40 miles distant (three marches). (*Drew.*)

**TAINYAR**—*Vide* TAYAR.

**TAKANG**—Lat. Long. Elev. about 14,000.

A camping ground on the left bank of the Shooshul stream, just above where it enters the Pangong Lake, and situated in a plain 2 or 3 square miles in extent. Shooshul lies about 8 miles south. Wood and grass plentiful at this camp. (*Drew—Trotter.*)

**TAKCHA**—Lat. Long. Elev. about 11,000.

A village in the Nubra district, on the left bank of the Nubra river. It is passed on the summer route from Leh to Yarkand by the Karakoram Pass, about half-way between Panamikh and Changlung,  $7\frac{1}{2}$  miles below the latter. At 4 miles, proceeding up the valley, the Tulumbuti, a tributary of the Nubra, is crossed by a good wooden bridge.

This is the best village in the Nubra valley, where travellers can procure supplies on their way to Yarkand. (*Thomson.*)

**TAKCHA OR TAKTZE**—Lat. Long. Elev.

A village passed on the route from Srinaggar to Leh, between Shergol and Khurbu, close to the latter and on the right bank of the Kanji river. The monastery is perched on an isolated rock, the only ascent being by a very steep pathway. (*Bellew—Henderson.*)

**TAK MARPO**—Lat. Long. Elev. 15,000.

Camping ground, Karakash valley, 24 miles below Changtash. Grass and fuel obtainable.

**TAKTI LA PASS**—*Vide* NAERUNG-LA PASS.

**TAMBA**—Lat. Long. Elev.

A camping ground on the western Changchenmo route, passed about half-way between Karatagh Camp and Malikshah. It lies east of a low double-topped hill, and is only occasionally used as a camping ground. *Boortsee* procurable, but no water in summer. (*Trotter.*)

**TANGMAR OR KANGMAR**—Lat. Long. Elev.

A small village on the left bank of the Indus, situated about half-way between Kinma and Khere, at the mouth of a ravine. A path leads up this ravine and across the mountains to the Tsokar Lake, but it is difficult. (*Cayley.*)

TAN—THA

- TANKSE**—Lat. Long. Elev. 12,900.  
 A large village of 50 or 60 houses, situated on the right bank of the Lungchu river, about half-way between the Chang-la Pass and the north-west end of the Pangong Lake. It is a halting-place on the Changchenmo route, and is the last place on this road where supplies are procurable. Sanju, the first large village in Yarkand territory, is 350 miles distant. The headman of the Tankse district resides here. There is a rest-house and supply depôt in the village.  
 A road leads up the Lungchu valley to Shooshul, 55 miles distant. (*Trotter.*)
- TARA**—Lat. Long. Elev.  
 A camping ground on the right bank of the Hanlé river, situated a little above its junction with the Indus. Nowi camp, on the opposite bank of the Indus, is 11 miles north. It is a halting-place on the eastern of the two routes leading from Hanlé to the Indus and Pangong Lake. (*Montgomerie.*)
- TARLDAT**—*Vide* THALDAT.
- TARUTZE**—Lat. Long. Elev.  
 A small village, situated a little distance from the right bank of the Indus, 28 miles below Leh, and 27 above Khalsi, on the upper road from the latter to Leh. (*Drew.*)
- TASHGAM**.—Lat. Long. Elev. 9,390.  
 A village in the Dras valley, on the left bank of the Dras river, 15 miles below Dras. It is a halting-place on the routes from Srinaggar to Leh and Skardo *viâ*, the Dras valley.  
 The Leh route proceeds from this to Chanagund on the right bank, distant 15 miles. The Skardo route to Kirkitchu on the left bank of the Dras river, opposite Chanagund. A mile below camp the river is crossed by a ricketty wooden bridge. Above Tashgam the valley narrows, and vegetation is scanty. But near the village are several acres of tamarisk and myricaria jungle. Prangos and lucerne (called here *Buksuk*) are cultivated. There are cattle in the village, chiefly the *Zho*. (*Bellew—Thomson.*)
- TAYAR OR TAINYAR**.—Lat. Long. Elev.  
 A village on the right bank of the Digar stream, situated north of the Waris-la Pass. A road leads from here across the pass to Sakti in the Chimré valley. (*Drew.*)
- TERTSE**—Lat. Long. Elev.  
 A village in the Nubra district, on the left bank of the Shyok river, about 20 miles below the junction of the Nubra. On the 23rd October Dr. Thomson forded the Shyok here. The stream ran in seven branches, of which three were from 100 to 150 feet wide, average depth 2 feet, maximum 3 feet. The other branches were much smaller. (*Thomson.*)
- THAKSE**—*Vide* TAKCHA.
- THALDAT, TARLDAT, OR MAPOTHANG**—Lat. Long. Elev. 16,300.  
 A camping ground on the eastern Changchenmo route, immediately south of a salt lake, which is situated at the foot of the Lokhzung range, at the southern end of the Kuenluen plains. No fuel or grass here. Two routes lead from this camp to the Karakash—  
 (1). Western *viâ* Patsalang camp.  
 (2). Eastern *viâ* Yangpa camp and the Kataidaman Pass.  
 They unite on the Soda plains north of the salt lakes.



## THA—TIK

On the 27th October the salt lake near this camp was partially frozen over. (*Drew—Johnson.*)

**THANGLASGO PASS OR LASIRMOU**—Lat. Long. Elev. 16,961.  
Across the Kailas or Leh range; lies north-west of Leh. A path leads over it from the Indus valley down a ravine due north to Hundar in the Shyok valley. (*Thomson.*)

**THARU**—Lat. Long. Elev.  
A small village of 8 or 10 houses, situated a little distance from the right bank of the Indus, 11½ miles below Leh, and passed on the road from the latter to Snimo. There is a little cultivation, and a small stream flows through it down to the Indus. (*Drew.*)

**THATOLA PASS OR NURPA PASS**—Lat. Long. Elev. 17,481.  
Leads over the portion of the Kailas range lying between the Pangong Lake and the Indus. It is crossed on the western route from Shooshul to Nima Mud, between Mirpa Tso and Yahle camps, at 4 miles from the former. Road over it very strong. (*Reynolds.*)

**THOGJI CHANMO OR "Salt-Covered Plain"**—  
Lat. Long. Elev. 14,900.  
The widest opening in the whole of the Rupshu district; lies about 30 miles north-west of the Tsomoriri Lake. Its length in a direction north-north-west and south-south-east is 13 miles, and its average breadth 5 miles. It contains the Tsokar Salt Lake, and the small fresh-water lake of Panbuk. There can be no doubt that at one time the whole plain was occupied by a large lake, which had an outlet to the north-west. It is surrounded by low, barren, rounded hills. A portion of the plain is covered with a saline efflorescence, generally carbonate of soda. (*Cunningham—Drew.*)

**THONDE**—Lat. Long. Elev.  
A small village in the Zankar district, situated on the right bank of the Zankar river, 9 miles below Padana. It is passed on the route from Kishtwar to Leh, *via* Zankar. (*Thomson.*)

**THUGJI OR THUGRILI**—Lat. Long. Elev. 14,900.  
A camping ground in the Thogji Chanmo plain, on the north banks of the Tsokar Lake, 14 miles south-east of Debring. In summer there are generally some Bhoti camps here, from which a few supplies and sheep are procurable. Water from small stream. Fuel and grass plentiful. It is a halting-place on the routes from Kulu and Spiti (*via* Tsomoriri Lake) to Leh. (*Reynolds.*)

**THURAM OR THURAB**—Lat. Long. Elev.  
A peak, and boundary mark, on the left bank of the Yunam river, near the Bara-Lacha Pass and on the borders of Ladak and Lahoul. (*Cayley.*)

**TIGAR**—*Vide* TAGAR.

**TIKZAY OR TIKSE**—Lat. Long. Elev. 11,000.  
A large village situated in a plain on the right bank of the Indus, 13 miles above Leh. It is the first march from the latter on the Changchenmo route. Road good. There is a monastery here on a spur north of the village. Encampment in a poplar garden. Fields irrigated by canals from the Indus, subject to inundation when the river rises above its usual height.

About 600 inhabitants in this village. (*Trotter—Johnson.*)

TIL—TSA

- TILUT SO OR TILAT SUMDO**—Lat. Long. Elev.  
 A camping ground on one of the routes from Padam to Leh, on the left bank of the Kharnak river; between this and Kharnak Sumdo the river has to be forded nine times in  $2\frac{1}{2}$  miles. The Charchar Pass lies west of the camp, and is crossed between Chipchack and Zangla. (*H. Strachey.*)
- TIMISGAM**—Lat. Long. Elev.  
 A small village situated some distance from the right bank of the Indus, 45 miles below Leh and 10 above Khalsi. It is passed on the upper road from the latter to Leh. (*Drew.*)
- TIRI**—Lat. Long. Elev.  
 A small village situated in a lateral ravine on the left bank of the Indus, opposite the village of Kyūngyam (on the right bank). The river is here crossed by a rude wooden bridge, not practicable for laden animals. A path leads up the Tiri ravine into Rupshu. (*Reynolds.*)
- TIRIT**—Lat. Long. Elev. 9,800.  
 A village in the Nubra district, situated on the right bank of the Shyok, 7 miles below Satti and a little above the junction of the Nubra river. It is passed half-way between Satti and Taghar on the summer Karakoram route. (*Bellew.*)
- TIRITSHU**—Lat. Long. Elev. 10,100.  
 A small village in the Nubra district, on the left bank of the Nubra river below Panamikh. Between it and the latter is a small fresh-water lake, a few furlongs in circumference, completely insulated in a crater of low serpentine hills. (*H. Strachey.*)
- TOK OR STOK**—Lat. Long. Elev. 11,228.  
 A village situated some distance from the left bank of the Indus, opposite Leh. It was bestowed as a jagheer upon the deposed Gyalpo by Zorawer Sing in 1835, and is still held by his descendants. (*Cunningham.*)
- TOM TOKH OR TANGMOCHE?**—Lat. Long. Elev.  
 A camping ground on one of the routes from Padam to Leh, north-east of the Charchar-la Pass.
- TRAGŪME BUR TSO**—Lat. Long. Elev.  
 Two small lakes in the Muglib valley between Muglib and the north-west end of the Pangong Lake. (*Godwin-Austen.*)
- TSAKA LA PASS OR SAKA LA**—Lat. Long. Elev. 15,625.  
 Leads, over the Kailas range between the Pangong Lake and the Indus. It is crossed on the eastern route from Shooshul to Nima Mud (on the Indus) and is remarkably easy. Both ascent and descent very gradual. The monastery of Ruhna (or Ralmang) is passed about 4 miles south of the pass.
- |  |         |
|--|---------|
|  | Feet.   |
| Elevation according to Trigonometrical Survey map... | 17,000. |
| "    "    "    Drew's map ... ..                     | 15,178. |
| Trebeck says it cannot be less than ... ..           | 15,000. |
- (*Reynolds—Drew.*)
- TSAKSHANG, OR CHAKSANG, OR SHUKSHANG**—Lat. Long. Elev.  
 An encamping ground at the south-west end of the Tso Kiagr Lake, and at the foot of the Nakpogoding Pass. A stream flows by here from the west, and turning south enters the Tsomoriri Lake after a course of 25 to 30 miles (*vide Gyang.*) (*H. Strachey.*)

TSALTUK—*Vide* TSULTAK.

TSARAP RIVER—*Vide* SERAB OR CHERPA.

TSATTI—*Vide* SATTI.

TSAZA—*Vide* KARSAR.

TSO-AR OR TSO-WAR, *i. e.*, "Between the Lakes"—

Lat. Long. Elev. 14,900.

A camping ground situated between the Tsokar Lake and the small fresh-water lake of Panbuk. It is used in summer by the shepherds of Rupshu. (*H. Strachey.*)

TSOKAR LAKE OR TSOKAR CHUMO LAKE—

Lat. Long. Elev. 14,900.

Or "White lake"; called by the Hindus Kharoi Talao, or salt lake. Is situated in the Thogji Chanmo plain 30 miles north-west of the Tsomoriri Lake. It is extremely irregular in shape; its greatest length from east to west about 5 miles, and its extreme width about  $2\frac{1}{2}$  miles. It is supplied at its south-east corner by a small stream, which flows from the Panbuk (or Tsokar Chansi) fresh-water lake. In the middle of the south side, where a rocky promontory juts out into the lake, the water is very deep. On the north and east sides it is shallow. Drew says that in parts he did not find more than 6 feet of water, while over a great space towards the western end it was but 1 foot deep. The water is exceedingly bitter and brackish, and the whole surface of the ground on the south-east shore glitters with a saline matter, which forms a thick crust of some extent. The road from Kulu to Leh passes over part of this vast cake of salt, which cracks and crunches beneath the feet. It is composed chiefly of natron or subcarbonate of soda. On the northern shore are several lagoons in which common salt is deposited and collected by the *Champas*, or shepherds of Rupshu. It is not very pure salt, and is apt to produce itchininess of the skin; still it is used all over Ladak and even carried as far as Kashmir.

Waterfowl, especially wild geese and duck, are found in great numbers on the lake, and the fresh-water lake near it is a favourite haunt of the *Kyang*, or wild horse.

On all sides the mountains still retain the ancient beach-marks at various heights up to 150 feet above the present level of the lake; and in the numerous deposits of fine alluvial clay, myriads of fresh-water shells are found. From this it has been supposed that the lake once formed a vast sheet of fresh-water with a narrow passage to the west which connected it with a second and larger lake that must have covered the whole of the present *Kyang* plain, from the foot of the Tagalang Pass to the forks of the Sumgal river, a length of 35 miles. (*Cunningham—Drew.*)

TSO KIAGR—Lat. Long. Elev.

A small lake, about 2 miles long and 1 wide, situated north of the Tsomoriri Lake, and close to the Nakpogoding Pass, which lies west of it. It is surrounded by low ridges of gneiss rock, from 250 to 300 feet high. The water is brackish, being fit for animals to drink, but not for men. The maximum depth was 67 feet; this was 300 yards from the south end. In the centre the depth was 48 feet. A spring of water rises on the west side. (*Drew.*)

## TSO

TSO LU—Lat. Long. Elev. 14,760.

A camping ground in the Changchenmo valley, on the left bank of the river. It is situated at the junction of the stream which flows down from the Marsemik-la Pass. Pamzal camp is close by on the opposite bank of this stream. Fuel and pasture obtainable. Travellers usually halt at Pamzal, where there is a serai. (*Drew.*)

TSOMONANGLARI—*Vide* PANGONG.

TSOMORIRI LAKE OR "Mountain Lake."—

Lat. Long. Elev. 14,900.

A fine mountain-bounded expanse of water, lying between the Parang-la and Nakpogoding Passes, in the Rupshu district. Its length, north and south, is about 16 miles, and its width varies from 3 to nearly 5 miles. The water is clear and blue, but slightly brackish, enough so to be unwholesome for man to drink, though not for horses and yaks. It is frozen over from the end of October to the end of May, and can be crossed on the ice. In winter there can be no fluctuation, as the ice is protected by a mass of snow about knee-deep. The lake attains its highest level at the end of July, but that is not more than 1 foot above the winter level. It has several affluents, but no effluence, hence the saltness of its waters. The longest permanent affluent is that of Gyang and Tsakchang from the north-west with a length of about 30 miles. The Karzok affluent from the west is much smaller, and there are two or three others, insignificant summer rivulets.

The Pirsai, which joins the south end of the lake from the westward, is an intermittent affluent, which sometimes flows into the lake and sometimes into the Para river, at Narbu Sumdo (*vide* Pirsai). Karzok monastery is the only inhabited place on the shores of this lake, and the bare rocky mountains and stony plains afford but little pasture for the flocks of the Rupshu shepherds. The climate is thoroughly Tibetan. Snow falls in winter, but to no great depth. In summer the air is usually clear and cloudless.

The following are soundings taken by Mr. Drew.

*From Kyangdum (south-west corner of lake) course 25° north of east towards the first promontory on the eastern shore.*

	Depth.
At 100 yards from shore .. ...	36 feet.
„ 200 „ „ „ ...	75 „
„ 1½ miles (middle of lake) ...	198 „
„ 2½ „ „ „ ...	242 „

In the bay between the two promontories on east shore 248 „

*Around the little island, which is about ½ mile from west shore.*

At half-way from west shore .. ...	98 feet.
„ 70 yards north of island .. ...	22 „
„ ¼ mile .. ...	178 „

## TSO—TUT

*From Karzok, course east.*

At 20 yards from shore	...	...	...	...	12 feet
" 40 "	" "	" "	" "	" "	21 "
" 100 "	" "	" "	" "	" "	93 "
" 200 "	" "	" "	" "	" "	105 "
" $\frac{1}{4}$ mile	" "	" "	" "	" "	122 "
" $\frac{1}{2}$ "	" "	" "	" "	" "	139 "
" $1\frac{1}{2}$ "	" "	" "	" "	" "	166 "
" $1\frac{1}{2}$ "	" "	" "	(middle of lake)	" "	180 "

The island above mentioned is a favourite resort of the gull and wild goose. (*Drew—Strachey—Cunningham.*)

**TSO RUL—***Vide* PANGOOR TSO.

**TSO THANG.**—Lat. Long. Elev. 17,100.

A camping ground on the eastern Changchenmo route, situated on the northern shore of a salt lake, which lies on the Lingzithung plains, at the foot of the Lokhzung range. It is passed between Burchathung and Thaldat. Between it and the latter the road passes through the Lokhzung range. A little fuel here (Boortsee) but no grass. (*Drew—Johnson.*)

**TSOWAR—***Vide* TSOAR.

**TSULTAK.**—Lat. Long. Elev. 15,950.

A camping ground on the Changchenmo route, 41 miles from Leh, at north-east base of the Chang-la Pass. There is a small lake here, which on the 7th December Trebeck found completely frozen over. (*Trotter.*)

**TSURKA—**

A sub-division of the Nubra district, it being the portion of the Nubra valley below Panamikh, on the right bank, that on the left being called Farka. (*Drew.*)

**TUGGU NUGGU.**—Lat. Long. Elev.

Two conspicuous isolated low rocky knobs, situated on the west shore of the Pangong Lake, at the confluence of the Shooshul stream. "The eastern rock had formerly been a fortified post. The level space at the top was enclosed by a low stone wall, while a detached outwork had been built on the low spur that ran on the east side." (*Godwin-Austen.*)

**TULUMBUTI OR TUTIYULAK RIVER—**

A tributary of the Nubra river. Rises in the glaciers of the Saser pass and flowing south-west joins the Nubra, between Takcha and Changlung; at 4 miles from the former it is crossed by a good wooden bridge, on the summer Karakoram route. This route again crosses the stream between the Kurmouldawan and Tutiylak, this time by a ricketty spar bridge, the last met with in Ladak territory. (*Thomson—Bellev.*)

**TUNGRING.**—Lat. Long. Elev.

A village in the Zankar district, on the left bank of a tributary of the Zankar river, which joins it from the west below Padam. A rope bridge connects it with Sani on the opposite bank.

**TUTIYALUK OR PANGDONGSTA—**

Lat. 35° 0' 17". Long. Elev. 13,000.

A camping ground on the summer Karakoram route. It lies at the foot of the Saser Pass, between it and the Karawal-dawan. The Bhots call this place *Pangdongsta*, i. e., the "pleasure ground of the yak." Pasture plentiful;

## UGH—UMA

fuel scarce. Brangsa Saser camp, at the other end of the Saser Pass, is 15 miles distant. Sartang camping ground is passed half-way. (*Trotter—Bellew.*)

## U

UGHAM—*Vide* AGHAM.

UGSHI—*Vide* UPSHI.

UKTI—*Vide* OKTI.

ULDING THUNG—*Vide* OLTING THANG.

UMASI LA OR BARDHAR PASS—Lat.            Long.            Elev. 17,370.

Between Kishtwar and Zankar is a high, snowy, and difficult pass called Umási La by the Zankar people, and Bardhar by the Pádar people and by the Dogras. Dr. Thomson crossed it in June from Kishtwar "the first part of the ascent lay up the moraine, and was extremely steep for nearly 1,000 feet up to the top of the very abrupt ravine in which I had been encamped. Beyond this the valley widened considerably; and as its slope was now very gentle, the glacier was quite smooth, and the path lay over its surface, which was covered by a considerable layer (5 or 6 inches) of last winter's snow, as well as by a sprinkling of that which had fallen during the night. The ice was a good deal fissured, but in general the fissures were not more than a few inches in width.

The road continued for 2 or 3 miles over the glacier, which gradually widened out as I advanced.

The three branches which united to form this grand sea of ice were very steep, and consequently much fissured and fractured. The road lay up the right branch, ascending by the moraine to the left of the glacier, the surface of the ice being quite impracticable. This ascent of about 1,000 feet was exceedingly steep and laborious.

At the summit the glacier surface was much more smooth, and was covered with a layer of snow, several feet deep. I was now in a wide valley or basin, the rocky hills on both sides rising precipitously to a height of from 200 to 1,000 feet above the level of the snow. After perhaps 2 miles of gradual ascent, these rocky walls, gradually closing in, united in a semi-circle in front, and the road passed through a gorge or fissure in the ridge, to the crest of which the snow bed had gradually sloped up. This fissure, which was not more than 2 feet wide, was the pass. When I reached it the snow was falling thickly. The commencement of the descent was very rapid down a narrow gorge, into which the fissure at the top widened by degrees. After four or five hundred yards, the slope became more gradual and the ravine considerably wider. The road was now evidently over the surface of a glacier. Further on the slope again increasing, the road left the surface of the glacier, and ascended the moraine by its side. At last I reached a point at which the snow melted as it fell, and not long after the glacier stopped abruptly, a considerable stream issuing from beneath the perpendicular wall by which it terminated. Lower down I crossed the rivulet to its right bank over a natural bridge, consisting of one large stone, about 12 feet long, which had fallen across the rocky channel. A few paces beyond

## UMD—WAK

this bridge is the end of the ravine. Many hundred feet below was a wide valley, filled by an enormous glacier. (*Thomson.*)

UMDUNG—Lat. Long. Elev.

A camping ground on the banks of Para river, 20 miles above Nurbu Sumdo, between the latter and the foot of the Parang-la Pass. (*Montgomerie.*)

UMLA—Lat. Long. Elev.

A village situated some distance from the right bank of the Indus, in a ravine north of Snimo. (*Drew.*)

UNMARU—Lat. Long. Elev.

A village on the right bank of the Shyok, 5½ miles below Tertse, and in the Nubra District.

It is famous for its fruit; melons and water-melons ripen here, besides apples, apricots, and walnuts: all cultivation ceases below the village, and the valley narrows considerably. (*Thomson—Drew.*)

UPSHI OR UGSHI—Lat. Long. Elev.

A village on the left bank of the Indus, about 35 miles above Leh. It is a halting-place on the route from Kulu to Leh, and lies between Gya and Marsalang. The road from the former is stony, and frequently crosses the stream. It has been improved of late years. The road to Marsalang is good, and follows the left bank of the Indus. There is a good deal of cultivation here, on a plain at the mouth of the Gya ravine. Houses and enclosures are scattered about it, and some poplar, willow, and fruit trees. It is watered by the Gya stream. At the end of September the Indus here was not more than 40 feet wide, flowing swiftly among large boulders, and quite unfordable.

The *Rong* or narrow portion of its valley begins just above Upshi. (*Drew—Thomson.*)

## V

VINGGE LA—*Vile* KANJI-LA OR KUNGI-LA.

## W

WAHAB JILGA—Lat. Long. Elev. 16,490.

A camping ground on the summer Karakoram route, situated north of the Karakoram Pass, on the right bank of a tributary of the Yarkand river, which here flows through a cutting in slate rocks. It lies half-way between Brangsa, Karakoram, and Malikshah (or Aktagh). No fuel or forage procurable. (*Trotter.*)

WAKHA—Lat. Long. Elev.

A village on the right bank of the Wakha river, situated west of the Namyika Pass. Barley is cultivated here. (*Moorcroft.*)

WAKHA-CHU OR PARIK RIVER—

A tributary of the Dras river; is formed of two main branches, the Wakha and the Phugal, which both rise to the north of the Himalaya, near the Vingge-la (or Kungi-la) Pass. Each stream is fordable above the junction, but the

## WAN—YAH

united stream is crossed by bridges. The whole length of the river from its source to its junction with the Sūrū River at Kargil is about 100 miles, the general direction being north-north-west. (*Cunningham.*)

**WANLA**—Lat. Long. Elev. 10,900.

A village on the left bank of the Wanla stream, lying 6 miles south-east of Lamayuru. It is passed between the latter and Hofata, on the route from Kishtwar to Leh (*via* Zankar). Cultivation here in July rich and luxuriant. Heat oppressive. Rose bushes abundant, some at least 15 feet high. (*Thomson—Drew.*)

**WANLA**—

A small tributary of the Indus. Rises near the Sirsir Pass, and flowing north, past the villages of Hofata and Wanla, enters the Indus opposite Khalsi. About Hofata and Wanla there is extensive cultivation. Two or three miles below the former the stream flows through a very narrow rocky channel, so that the road is often obliged to leave it, and to ascend to a considerable height in order to effect a passage. Above Wanla the valley widens, but again contracts into a rocky ravine immediately below the village. This ravine is not quite impracticable, but the stream has to be forded frequently. In July it was 4 feet deep. The better route is north-west to Lamayuru. (*Thomson.*)

**WARIS**—Lat. Long. Elev. 12,400.

A small village situated some distance from the right bank of the Shyok, below the junction of the Nubra river. It is a halting-place on the route from Leh to Skardo *via* the Shyok valley, and lies 8 miles north-west of Khoro. The road from the latter is in summer obliged to leave the Shyok, the rocks on both sides being too precipitous to permit of a passage, and the river too deep to be forded. In winter travellers can proceed along the river on the ice. On the 26th October Dr. Thomson found the village deserted, the inhabitants having after the harvest moved down to winter in the river valley. Four inches of snow fell on the 27th October. The road from Khoro was up a steep ravine. Half-way between Waris and Boghdan, the next stage, a ridge about 14,700 feet high is crossed. It lies on the borders of Nubra and Chorbat. (*Thomson.*)

**WARIS LA PASS**—Lat. Long. Elev. 17,200.

An easy pass leading over the Kailas range south-east of the Digar-la. It is crossed on the route which, leaving the Chimré valley and Changchenmo route at Sakti, proceeds north across this pass to the Shyok valley. It is practicable for laden ponies, and might easily be made so for camels. It is closed by snow for three months. (*Drew.*)

**WATA OR LUKUNG STREAM**—

An affluent of the Pangong Lake; enters its north-west end after a course of 20 miles from the north, in two branches, the western of which is fed by glaciers, and sometimes in summer is much swollen. (*H. Strachey.*)

## Y

**YAHLE**—Lat. Long. Elev. 15,000?

A camping ground on the western route from Shooshul to Nima Mud, on the Indus. It lies south of the Thato-la Pass, the road over which is very



## YAL—YAR

stony. Mahiye, on the Indus, is 9 miles south. No supplies here, but fuel and pasture plentiful. (*Reynolds.*)

**YALCHUNG**—*Vide* YELCHUNG.

**YANGI DIWAN PASS OR "New Pass"**—

Lat. Long. Elev. 15,800.

Is crossed on the winter (or Kugiar route) from Ladak to Yarkand, and leads over the Western Kuenluen from Kulanaldi camp, on the Yarkand river. Ascent from north side easy, up a winding and narrowing gully. Descent also easy for 2 miles, to where a gully joins from the left. Beyond this down an extremely difficult, narrow, tortuous, and deep gorge which is blocked till June by a glacier that melts away in the next month. (*Trotter—Bellew.*)

**YANGI DIWAN PASS OR ELCHI-DIWAN**—

Lat. Long. Elev. 19,072.

Leads over the Kuenluen range from the Karakash valley, at the bend in the river above Sora, to Khotan (distant 160 miles). Mr. Johnson crossed it in September 1865.

Ascent from Karakash up a steep ravine. Snow in it and at the top of the pass. It is only open during the months of June, July, and August. It would be practicable for horses' if cleared of snow and stones in the ravine above the Karakash. (*Johnson.*)

**YANGPA**—Lat. Long. Elev. 16,200.

A camping ground on the eastern Changchenmo route, on the left bank of a small stream, the water of which is slightly brackish, though it flows down from the Kuenluen range. It lies 25 miles north of Thaldat, the road from which lies over an extensive plain covered with several salt lakes, and in portions quite white with a deposit of soda. The Katai-dawan Pass is crossed 8 miles north of this camp. Fuel (Boortsee) and grass procurable in small quantities. Elevation, according to Johnson, 15,279. (*Johnson.*)

**YANGTHANG OR "New Plain"**—Lat. Long. Elev.

A village situated in a ravine some distance from the right bank of the Indus. The monastery contains 70 lamas. Both it and the village were founded some 25 years ago by a Lama. The land is free of Government dues, and is worked by labourers who receive their food and clothing from the monastery. This place is passed between Hemis Shukpa and Basgo. (*Drew.*)

**YARKAND**—

A province in the dominions of the Amir of Kashgar, lying north of Ladak, and separated from it by the Karakoram and Western Kuenluen ranges.

**YARKAND RIVER**—

Rises north of the Karakoram Pass. Its course is for the first 30 miles north-east to Malikshah. Thence north-west for 56 miles to Kirghiz jungle. From Kirghiz jungle it flows 15 miles west to Kulanaldi camp. Up to this point its course is followed by the Kugiar (or winter) route from Ladak to Yarkand. Beyond Kulanaldi it continues west for some distance, and then takes a sudden bend to the north into Yarkand territory. Several small streams flow into it near its source. And at

## YAR—YUN

Khafelung camp it is joined by a tributary from the south. Fuel is plentiful between Malikshah and Kulanaldi, there being large patches of tamarisk and myricaria jungle in the river bed. Snow beds are met with in the valley in winter. (*Trotter.*)

YAR LA PASS—Lat. Long. Elev. 16,180.

Is crossed on the range separating the valleys of the Zaru and Khurnak rivers, at the sources of the latter.

YARMA—

A sub-division of the Nubra district, being the portion of the Nubra valley above Panimikh. (*Drew.*)

YELCHUNG OR YALCHUNG—Lat. Long. Elev. 12,730.

A village on the left bank of the Zankasar river and at the foot of the Singala Pass, which is crossed between it and Fatoksir. The ascent begins at once on leaving the village. It is a halting-place on the route from Kishtwar to Leh (*via* Zankasar), and lies about 70 miles north of Padam. The Zankasar river is crossed by a common wooden bridge (without rails) between this and Naerung on the opposite bank. Barley and buckwheat cultivated here. Near the village is an iron mine. Dr. Thomson visited it. "The ore was yellow ochre, occurring in a breccia-looking conglomerate situated on the flanks of a steep, narrow ravine. There were two smelting furnaces, built of stone, of a conical shape, 3 feet in height, and about 6 inches in diameter at the top. The fuel employed was charcoal, and no flux was mixed with the ore."

Dr. Thomson estimates the elevation of Yelchung to be 13,700.

(*Thomson.*)

YOGMA HANU OR LOWER HANU—

A village on the left bank of the same stream, at its junction with the Indus, a few miles below the Goma Hanu.

A strip of cultivation here, and some willows and fruit trees, and a few poplars. (*Drew.*)

YUMA RIVER—*Vide* INDUS.

YUNAM—A tributary of the Zankasar river; rises north of the Himalayas, near the Bara Lacha Pass. The road from Kulu to Leh crosses it by a bridge at Kanunor Kilung camp, north of the pass. A little below its source the stream flows through a small fresh-water lake (the Yunam T'so), and continuing in a north-east direction is joined by the Lingti stream from the west, a little above Sarchu camp. The junction of the two streams is on the borders of Ladak and Lahoul. (*Cunningham—Caley.*)

YUNAM TSO—Lat. Long. Elev.

A small fresh-water lake in the bed of the Yunam stream, which flows through it. In former times it must have been of some extent, and of considerable depth. In September 1846, when General Cunningham visited it, it was only 1,000 yards long and 500 yards broad. The gradual decrease in size has been brought about by the constant wearing away of the rocky barrier which once dammed the river about a mile below the present end of the lake. Between these points the river has worn a channel through a mass of fine cream-coloured clay, which once formed the bed of the lake. The water is of a pale yellowish colour. (*Cunningham.*)

## Z

- ZANGLA OR CHANDLA**—Lat. Long. Elev.
- A village on the right bank of the Zankсар river, 12 miles below Thonde. It is a halting-place on the route from Kishtwar to Leh (*via* Zankсар), and lies at the base of a mountain on the upper part of a steep, stony slope, which extends down to the river. There are two roads from this to Leh—
1. The western and better of the two *via* Panche, Naerung, and Lamayuru.
  2. The eastern, *via* the Charchar and Riberang Passes, very difficult, and only open in May and October.

The river below Zangla narrows considerably, and the mountains on either side are extremely rocky and rugged. At the end of June they were still tipped with snow. (*Thomson.*)

**ZANGLA STREAM**—

Flows into the Zankсар river just above the village of Zangla. The eastern road from the latter to Leh leads up its course for some distance, crossing it 13 times by fords in 4 miles. In May it was about 7 yards wide and 2½ feet deep, and at sunset was a foot deeper. In June it becomes unfordable. General Strachey mentions some Tibetans being drowned in attempting to cross it in the first week in June. (*H. Strachey.*)

**ZANKSAR OR ZASKAR**—

Geographically a part of Ladak, but now attached to the Kashmir district of Udampúr. (*Drew.*)

It includes all the country lying along the two main branches of the Zankсар river, in a general direction from south-east to north-west. It is bounded by Ladak on the north, by Rupshu on the east, by Lahoul on the south, and by the small districts of Purik and Wanla on the west. The southern boundary is formed by the great Himalaya itself, the western by the transverse range of Singa-la, and the northern boundary by the Trans-Himalayan chain. Its greatest length is 72 miles, mean length 56 miles, and mean breadth 55 miles. Area 3,000 square miles, and mean elevation, as deduced from seven different observations along the valley, 13,154 feet. The name *Zang-sar* means "white-copper" or brass. (*Cunningham.*)

Though not belonging to the Ladak Governorship, Zankсар is closely united to the rest of Ladak, both by physical characters and by the close relationship in race, speech, religion, and character that exists between the people of the two countries. Forty or fifty years ago it was also politically connected with Central Ladak, being governed by a Raja who was dependent on the Gyulpo at Leh, and lived at Padam, the capital of the district.

The climate is severe. The spring, summer, and autumn together last little more than five months, after which snow falls, and at once winter closes in, confining the people and the cattle within doors for half the year. A much greater depth of snow falls here than in central Ladak. In the spring it causes avalanches to such an extent that in the Nunak valley the people cannot, till a month has passed, get about from village to village for fear of them. Trees are extremely rare; the continuance of

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snow and the force of the wind are much against their growth. A few poplars are grown in parts of the district for timber. The population is very scanty. Drew estimates it at 2,500. There are about 43 villages in the district containing 500 houses. The tax paid to the Maharajah's Government used to be Rs. 3,000, but in 1869 was reduced to Rs. 2,000. The trade is very insignificant, and is carried on by three or four routes. The Rupshu people bring salt and take barley in exchange. Some of this salt is taken to Padar and Pangri by a difficult route and there exchanged for rice, butter, skins, &c. Part of the salt from Rupshu is also taken on by the Zankaris to Suru, and exchanged for woollen cloths, barley, and a little cash. A fourth line of traffic is with Lahoul, whence traders come with cash and buy ponies, sheep, and goats. It is only by this branch of trade that cash enough is introduced into the country to pay the Government tax.

### ZANKSAR RIVER OR CHILING CHU—

One of the principal mountain tributaries of the Indus is formed of two main branches, the Zanksar proper and the Sumgal. Its head waters are the Yunam, Serchu, and Cherpa (or Serab), all of which rise to the north of the Himalaya range, near the Baralacha Pass. The united stream below the junction of the Cherpa is not fordable until the end of September. From its source to Padam the distance is 130 miles, fall 4,000 feet, or 34.6 feet per mile.

At Padam it receives a small stream from the west, and then takes a due northerly course for upwards of 80 miles, to its junction with the Indus, opposite Snimo. In this part of its course the fall is only 1,500 feet, or 18.7 feet per mile.

Total length of river	...	210 miles.
„ fall „	...	6,000 feet, or 28.5 feet per mile.

Cunningham estimates its discharge as follows:—

1,000 cubic feet in winter.
6,000 „ „ May.
9,000 „ „ August.

ZARA—Lat. Long. Elev.

A camping ground at the head of the Zara valley, close to and south of Debring. It is situated on the left bank of the Zara river.

### ZARA RIVER—

Rises near the Tagalang Pass, and flows south-east to Zara camp. Thence its course is south-east to its junction with the Sumgal, a tributary of the Zanksar river. In summer, when there is often a great scarcity of water in the Kiang plain, travellers sometimes turn off to the west after crossing the Lachalang Pass, and proceeding up the Zara valley (*viâ* Sangtha and Zara camps) strike into the main route at the foot of the Tagalang Pass.

ZINGRAL—Lat. Long. Elev. 15,780.

A camping ground at the head of the Chimré valley. It is the fourth march (33 miles) from Leh, on the Changchenmo route. From the village of Sakti the ascent up the valley for  $3\frac{1}{2}$  miles is steep. At Zingral the valley forks to the Chang-la and Kay-la Passes. Ascent up the former, up northern ravine, easy but stony for 2 miles to the top. The Kay-la Pass saves 6

## ZOJ

miles, but is more difficult. A small tank here situated in a grazing ground belonging to the villages of Sakti and Chimré.

### ZOJI LA PASS OR SEOJI-LA OR BALTAL KOTAL OR DRAS PASS—

Lat.

Long.

Elev. 11,300.

Called Zoji-la by the Ladakhis and Zoji-bal by the Kashmiris. The proper name is a corruption of Shivaji or Sheoji, one of the three great Hindu deities. It leads over the Western Himalayas from the head of the Dras valley to the Sind valley in Kashmir, and is crossed on the route from Srinaggar to Leh, between Baltal and Matayan.

It is closed by snow during nearly half the year, and is entirely impassable, except to post couriers, during two months. Two routes lead up to it from the Kashmir side—

1.—Follows up the bed of the Sind river and passes over the blocks of ice and snow drift which block the narrow gorge through which it flows. This is seldom used, and is only practicable for footmen.

2.—Winds up the steep slope of the hill rising above the gorge of the Sind river to the north. It is a very fair road, and kept in repair.

The top of the pass is 2,118 feet above Baltal. The descent on the Ladak side is easy, leading down to the Dras river and along its banks to Matayan, crossing several tributary streams. (*Bellew—Drew.*)

## ANIMAL PRODUCTIONS.

General Strachey observes that the stock of animal life in Ladak is as scanty as the vegetation, and confined to about the same limit of elevation, *i. e.*, 19,000 feet.

The principal wild animals are—

*The Kyang*—or wild horse, which when full grown stands about 14 hands high. Its ears are longer than those of the horse, and a line of black hair extends along the whole of the back. The tail has a long tuft of hair at the end, like that of the Zebra. The general colour is a reddish-brown, with white on the stomach. It is generally found at elevations over 14,000, and its endurance of cold is wonderful. Large herds of nearly 100 are occasionally seen on the elevated plains of Rupshu. The small fresh-water lake south-east of the Tso-kar is a favourite habitat. They are not very shy of man, and if unmolested generally come to inspect the passing traveller at about 150 yards distance. The flesh is eaten by the *Champas*. It tastes like coarse beef-steak. (*Cunningham—Strachey.*)

*The Dong*, or *Brong*—the wild yak, is very rare. Its only known habitat being the Kugrang valley, which leads into that of the Changchenmo, at an elevation of between 15,000, and 16,000 feet, and also the adjoining ravine, left of the Shyok river, which the Yarkandis have named *Dong-Aylak*, *i. e.*, the “wild yak’s summer pasture ground.”

The *Dong* is much larger than the domestic yak, and uniformly black, with a slight rusty tinge about parts of the head and back. It looks very like a large bison, with a thick coat of long shaggy hair, and bushy tail like a horse’s. The horns are symmetrical, but not large. They are occasionally killed and eaten by the *Champas*. (*H. Strachey.*)

*The Nyan*—or *Ovis Ammon*, is the largest of the different kinds of wild sheep found in Ladak. Its habitat is in the most inaccessible places near the snow limit. It is closely allied to the *Kachkar* or *Ovis Polii* of Badakshan and Chitral. It has a coat of peculiar hair, short, and very thickly set, of a brittle quill-like substance; colour, a darkish fawn with white belly. The horns are very large. Specimens, and also ibex and other horns, are often seen on the *mane*, or sacred walls, where they are placed by the shepherds as votive offerings. (*Cunningham—H. Strachey.*)

*The Na*—or *Barhal* of the Himalayas, a smaller specimen of wild sheep. It has smooth black horns and a blueish tinge in its coat. (*H. Strachey.*)

*The Sha*—or *Ovis Montana*—Another species of wild sheep, is seen in large flocks on the mountains on the left bank of the Indus, below Leh. It is seldom found on the elevated plateaus to the east. The animal is as large as a stag, with strong wiry hair of a reddish-brown colour on the back, gradually changing to white on the belly. The chest is covered with a long fringe of dirty black hair. (*Cunningham.*)

## ANIMAL PRODUCTIONS.

*The Skyin*—or Tibetan ibex, is only found in the *Rong* portion of the country, on the mountains bordering the deep, narrow valleys of western Ladak. They are killed by the natives for the sake of the soft under fleece, which in Kashmir is called *Asali Tus* (or genuine *Tus*.) (Cunningham—H. Strachey.)

*The Tsos*—The Tibetan or lyre-horned antelope. It has straight or slightly curved horns, and is occasionally seen on the Linzithung plains and near the eastern borders of Ladak, but is commoner in Chinese territory. (H. Strachey.)

*The La*—(Also called *Rabotse*), the musk deer, is only occasionally met with though common in Kashmir. (Cunningham—H. Strachey.)

*The Ribong*, i. e., hill-ass—The hare, is common throughout Ladak. It has longer ears than the English hare, and is of a blueish grey or slate colour. A smaller kind, *Lagonys*, is still more common. They are not eaten by the Ladakis. (Cunningham.)

*The Phea*—or marmot, is found at great heights near the Indian Himalayas, and is often seen on the passes leading over this range.

**BIRDS**—Are few in number, and none of them of brilliant plumage. Water-birds are most numerous on the Rupshu lakes, at elevations above 14,000. The principal birds are—

*The Rekpa*—(or *Shakpa*), the common Chakor, or red-legged partridge, found in all parts of the country.

*The Purgon*—A small field pigeon, also very common.

*Chusak*—Water-fowl: frequent the larger rivers and lakes, especially the Tsomoriri Lake and the fresh-water lakes of Rupshu. They summer and breed in Ladak, migrating in winter to India. The principal are the grey goose, wild duck, mallard, and teal. The duck and teal frequent the larger rivers more than the lakes. Storks, kingfishers, and gulls are also seen.

One of the commonest birds is the *Porok*, or large raven, which together with the *Chough* (*Chunka*) is frequently seen near villages. Vultures, eagles, and hawks are also met with. (H. Strachey.)

### FISH—

*Nya*—Fish are common in the fresh-water lakes and larger rivers. The generality are scaleless, and not good eating. The only kind fit for food has scales and weighs about 1½ lbs. The inferior quality of the fish is doubtless the reason why they are in such little request with the natives of the country. (H. Strachey.)

Moorcroft thinks it is "the chariness of life which is taught by the religion of Buddha that prevents their being caught." Johnson found numbers of fish in the Durgu stream, "principally trout, which are very good." There are no fish in the Tsomoriri or Pangong Lakes, but Major Godwin-Austen states that the Tso Nyak, which lies east of the Pangong Lake, and is connected with it, is full of a species of tench, from 1 to 4 lbs in weight.

**REPTILES**.—The only kind found in the country is a small lizard.

**INSECTS**.—The absence of insects is very remarkable. The common housefly is quite a rarity in Leh. Locusts are seen in the Zankar district only, where they commit fearful devastation. (H. Strachey.)

**DOMESTIC ANIMALS**.—The principal are—

*The Yak*.—It does not stand as high as the wild yak, but is broadly and strongly built, with a small head, short horns, and a wild-looking eye. The

## ANIMAL PRODUCTIONS.

long black hair reaches close to the ground before it is cut. They are generally used for carrying loads, being too intractable for the plough. The cow yak (*Brimo* or *Dimo*) is kept only for milk. These animals thrive best on the elevated plateaus, and soon get knocked up if taken into the hot valleys. They are usually of a black or black and white colour. White and red ones are also seen. The white ones furnish the *Chaori* tails for export to India. (*Cunningham*.—*H. Strachey*.)

*Balang*.—The common Indian oxen (the small Himalayan breed), are common in Nubra and the warmer districts of the country.

The *Dzo* (female *Dzo-mo*), the offspring of the yak and common cow, is a most valuable hybrid. It is used throughout the country for the plough as well as for carrying loads, being more tractable than the yak, and quite as strong. It also bears heat better. The *Dzo-mo* gives much more and better milk than the yak cow. The milk is chiefly used for butter, which is taken by the Ladaki with his tea. The price of a good *Dzo* varies from 16 to 20 rupees. (*Cunningham*).

*Ponies* (*Ta*) are small, active, and hardy, but not numerous nor much used. At least one-half of them are brought from Yarkand, and are generally geldings. (*H. Strachey*.)

*Asses* (*Bong*) are small, and only equal to half-pony loads.

*Sheep* (*Luk*).—Two distinct kinds are found in the country:—

1.—The large, black-faced *Huniya*, used chiefly for carrying loads.

2.—The pretty, diminutive sheep of the Purik district, which is used for food only.

Nearly all the traffic of Ladak is transported on the *Huniya* sheep. They are food, clothing, and carriage, and form the principal wealth of the people. The average price ranges from 2-8 to 4 rupees. A Purik sheep can in Purik be bought for a rupee, but in Leh the price is 2 rupees. (*Cunningham*).

*Goats* (*Raba* or *Ra*).—The larger kind are used for carrying loads, but the most numerous are the well-known shawl goats, which thrive only in the most elevated districts. They are bred in Nubra, Zankasar, and Rupshu. The finest wool, however, comes from Chinese territory, and from Khotan. The shawl goat is only shorn once a year, and the wool is at once separated from the coarser hair. The latter is manufactured into blanketing for tents, sacking, and ropes for home consumption.

The wool is exported to Kashmir and the Punjab, Leh being the entrepôt between the shawl marts and the wool-producing countries. The fine shawl-wool is called *Lena*, the common wool *Bal*, and the hair *Spu*. The average price of the shawl-wool in Ladak is about 2 rupees a seer, and that of a shawl-goat 4 rupees. (*Cunningham*.)

*The Dog* (*Khyi*).—A shepherd's dog, sometimes called the Tibetan mastiff. He has a shaggy coat, and is usually of a black or black and tan colour, with tail curled up on the back. He is an ill-tempered, fierce, and cowardly brute.

Cats, rats, and mice are also common. The domestic fowl is found at Leh and in the Nubra valley. It is only eaten by Mussulmans.



VEGETABLE PRODUCTIONS AND CULTIVATION.

The vegetable productions of Ladak are few and unimportant.

The *trees* consist of the willow, two varieties of poplar, the pencil cedar, the *elæagnus*, and a kind of tamarisk.

The latter and the pencil cedar are indigenous. The others are regularly planted.

*The poplar*—Is the most valuable wood in the country, as its straight stem is particularly adapted for bridges, and for the rafters and beams of houses.

*The willow*—Abounds in all the water-courses, but generally in the state of a pollard. Its twigs are extensively used in the manufacture of baskets and hurdles. It also furnishes the only firewood that is procurable in Ladak.

*Dama*—or Tibetan furze, is the principal fuel used, besides dried dung of all kinds.

*The Elæagnus*—Is called Ser-sing or the yellow tree, from its yellow flower.

The *Tamarisk* is abundant in the Puga ravine, below the hot springs. The warmth is favourable to its growth. It is also found in the beds of the Shyok, Nubra, Karakash, and Yarkand rivers.

*Fruit trees*.—The fruit-trees are the apricot, walnut, mulberry, apple, and the vine.

*The Apricots*—Are large but not well flavoured. The best come from Baltistan.

*Apples*—Are plentiful along the Indus. They are large, and well flavoured.

*The grapes* are inferior to those of Kashmir. Small and large grapes are found on the same bunch. The small ones are dried and sold as Zante Currants in Simla.

*Cultivation*.—All cultivable land is called *Zhing*, and this term is also generally used for a field of any kind. Cultivation is confined to the courses of the small streams and the banks of the great rivers.

*Crops*.—The crops consist of bearded and beardless barley (*grim*), peas, wheat, buck-wheat, turnips, lucerne, and *prangos*.

*Nas* is the name for barley of all kinds. It thrives up to 15,000 feet.

(*Honma* .—Peas thrive up to from 12,500 to 13,500 feet: for instance, at Miru in the Gya valley. The turnips at Leh and Timisgam are good and palatable. A small hard kind is chiefly grown.

Wheat (*Gro* or *To*) and buck-wheat (*Do*) grow up to 13,000 feet.

Lucerne (*chunpo*) and a plant called *prangos* are extensively grown for fodder, chiefly in the Dras and Nubra valleys. The *prangos* is a most valuable plant, and grows to a height of 4 or 5 feet. It is converted into hay for winter use.

Large tracts of grass land, which are never brought under cultivation, occur at different places in the bed of the Indus.

The *Dzo* (the cross between the yak and common cow) is employed in ploughing.

*Agricultural implements*.—A wooden plough is used, the share only being tipped with iron. Many of the fields, however, are dug by hand with a peculiarly shaped mattock, of which the handle forms a very acute angle with the blade.

## CLIMATE.

*Manure.*—Yak and sheep dung is chiefly used as manure, but only in small quantities, for firewood being so scarce, all kinds of dung are in daily use as fuel.

*Irrigation.*—The harvest, in this dry country, is entirely dependent on artificial irrigation. The waters of the smaller streams are arrested by dams and conducted with considerable skill from terrace to terrace, and from field to field.

*Measurement of land.*—All land is measured by the *khāl*, which means simply a load of any kind. When the term *khāl* is used alone, a sheep's load is always intended, *i. e.*, from 12 to 16 seers.

A *khāl* of land is equal to about  $\frac{1}{3}$  of an acre.

*Sowing time, &c.*—The seed is sown in May, and crops are cut in September, before the first fall of snow. They are either pulled up by the roots, or cut close to the roots with a sickle, so as to get as much straw as possible for the winter fodder of the cattle. When cut they are generally spread out on the ground to ripen, but are occasionally loosely bound in sheaves.

*Amount of return.*—The return varies according to the quality of the soil and the quantity of the manure. The best lands in Ladak Proper at Sabu near Leh, and at Sakti in the Chimray valley, do not yield more than ten-fold. The poorer lands yield about eight-fold. The richer lands, however, in the Sūrū, Waka, and Dras Valleys, which enjoy a milder climate and a moister atmosphere, generally yield from ten to fifteen-fold. With the present population of 125,000, the land would yield fully enough for home consumption, but scarcely more than  $\frac{2}{3}$  of it is now under cultivation; the rest of the grain is imported. (*Cunningham—H. Strachey.*)

## CLIMATE.

*Winds.*—From observations made by General Cunningham, his brother, and other travellers, it would appear that the prevailing wind at night is from the north-east, and during the day from the south-west. The day breeze always begins to blow before midday, and continues rising and veering towards the west, with frequent and strong gusts, until 3 or 4 P. M., when it reaches its greatest force. Towards sunset it changes to west-north-west, and gradually lessens, till at 9 P. M. it is only a gentle breeze from the north-west. At midnight there is a slight north wind, which becomes fainter and fainter towards the morning, and then freshens into a north-east breeze.

*Rain and Snow.*—The rain-fall is very slight. In the more elevated districts of Rupshu, Nubra, Zankar, and Ladak Proper, it rains, or rather drizzles, for an hour or two, about three times a year. Snow falls oftener, but in no quantity.

In Ladak Proper it is never more than 6 inches deep. The snow-fall in the Dras district is, however, considerable, and the Zoji-la Pass, leading from it into Kashmir, is closed by it for five months from the end of November. A greater depth of snow also falls in Zankar than in Central Ladak. In spring it causes great avalanches. The extreme height of the snow-line is 20,000. It lowers on approaching the Indian Himalaya. On the southern face of this range it is perhaps as low as 18,000 feet.

*Temperature.*—The climate is characterized by great extremes of heat and cold, and by excessive dryness. In Rupshu the thermometer falls as low as

CLIMATE.

9° F. in September. The minimum temperature of the month is 23·5°, and the mean temperature 42·93°. The mean annual temperature of the Indus valley is 37·5°.

*Table of annual mean temperature.*

DISTRICTS.				Height.	Annual temperature.
Rupshu	...	...	...	15,634 feet.	28·72°
Zankar	...	...	...	13,154 "	39·00°
Nubra	...	...	...	12,763 "	39·00°
Ladak	...	...	...	11,500 "	37·00°
Parik	...	...	...	11,196 "	42·00°
MEAN				12,885 "	35·14°

*Daily range of temperature.*

DISTRICTS.				Height.	Daily range.	Extreme range.
Rupshu	...	...	...	15,634	40·28°	57·00°
Ladak	...	...	...	11,500	33·00°	39·75°
Parik	...	...	...	11,196	32·50°	39·50°

By the above table it will be seen that the difference between the temperature of day and night increases with the elevation.

*Moisture.*—The excessive dryness of the climate is due chiefly to elevation, by which the air is so rarified as to be incapable of holding much moisture in suspension. It is also partly due to the great radiation of heat from the bare soil, by which any moisture is rapidly evaporated. The dryness of the climate increases with the height. The temperature of the dew point is so very low that the disposition of dew is quite unknown in the more elevated parts. (*Cunningham.*)

*Table of moisture.*

MONTHS.	District.	Height.	MOISTURE.			Dew point.	Greatest Depression.
			Dry.	Wet.	Depression.		
September	Rupshu	15,634	67·5°	40·5	27·°	18·9°	31·0°
September	Ladak	11,500	65·7°	42·9	22·8°	24·6	23·5°
October	Parik	11,196	55·8	37·2	18·6	20·5°	19·7°

## GOVERNMENT.

*Thunder and Lightning.*—The total absence of thunder and lightning is most remarkable, and appears to be dependent on the excessive dryness of the climate. During 23 months General Strachey only twice heard a very faint roll of thunder, accompanied by clouds and a few drops of rain.

*Earthquakes.*—Earthquakes also are of rare occurrence, and never severe. (H. Strachey.)

## COINAGE.

In Ladak one meets with the coinage as well as the merchandize of all the surrounding countries. The only native coin is the silver *Jud* or *Jo*, which is worth  $\frac{1}{4}$  rupee.

The foreign coins met with are—

The *golden tila* of Bokhara and Khokand, the common gold coin of the Mahomedan countries.

They weigh about  $\frac{2}{3}$  of an Indian tola, and are of nearly pure gold.

In Leh 25 or 26 tilas exchange for a silver ingot of 166 $\frac{2}{3}$  tolas.

In Yarkand 27 to 29 tilas are given for a silver ingot.

The *Chinese silver ingot*, called *Yambu* by the Yarkandis, *Dotsat* or *Tamikma* (horses' hoofs) by the Tibetans, and *Kurus* (*i. e.*, hoofs) by the natives of India. They consist of plain bars of pure silver often bent like a horse-shoe, and are imported from Yarkand, to which country they are brought from Kathay, or Northern China. A silver ingot weighs about 166 $\frac{2}{3}$  tolas, and therefore is valued at the same number of rupees. Six of them are worth about 1,000 rupees. In Dr. Cayley's trade report a silver ingot is valued at Rs. 170. (*Cunningham—H. Strachey.*)

*Nepal silver coin*, the *tanka*, is worth  $\frac{1}{2}$  rupee, or two *jo*.

*Mogul rupee*, almost pure metal, is now rarely met with, as also are the *Nānak Sāhi* and *Govind Sāhi* rupees of Ranjit Sing's time.

Other coins met with in addition to the British rupee are the copper dumps of Bisahar, and the *Serjo*, or golden *jo*, of Chinese Tibet. General Strachey observes that "gold, though abounding in the markets of Nari, is rather bought and sold as an article of merchandize than itself used as money. The gold grains, in their natural state, are bound up in little scraps of paper and rag, and must be examined and weighed by any one receiving them. They are called *Serjo*." Dr. Cayley gives the value of this gold dust at Leh to be Rs. 13 per tola.

## GOVERNMENT.

*Former Government.*—The Government was formerly a mild despotism, under a ruler who bore the title of *Gyalpo*.

*The prime minister.*—The conduct of affairs was generally entrusted to the prime minister, or *Kahlon*. His power was apparently absolute, but was really curbed by the wide-spread authority of the monastic establishments and by the partial independence of the petty *Gyalpos* and district *Kahlons*. His office was almost hereditary, *i. e.*, it was restricted to a member of one of the families of the principal district *Kahlons*. Many of the nobility were petty chiefs of valleys which had once been independent. There was a *Gyalpo* in Nubra, Gya, Zanksar, Pashkyum, &c.

## HISTORY.

*Government officers.*—The Deputy Kahlon was called the *Kahlon Rigsen* or *Nonokahlon*: the other officers were the *Lonpos*, or governors of towns, and *Kharpons*, or commanders of forts. In Leh, also, there were the *Makpon*, or commander-in-chief, the *Chagsot*, or lord high treasurer, the *Shogam-Chagsot*, or head collector of taxes, *Shakpon*, or chief justice, the *Khrimpons*, or magistrates, *Kaka-Tadsi*, or master of the horse, and the *Chagsi-goba*, or kotwal.

*Inferior officers.*—The inferior officers were the *Mipons* or *Gobas*, the headmen of the villages, and the *Shogumpa*, or provincial collectors of taxes and customs.

*Relations with surrounding states.*—The relations with the surrounding states were chiefly confined to political relations with Baltistan and Rudok, commercial ties with Yarkand and Kashmir, and to religious connection with Lhasa. The difficulties of the passage of the Karakoram mountains prevented the Chinese Governors of Yarkand and Khotan from attempting the conquest of Ladak, and the poverty of the country offered no temptation to the Mahomedan rulers of Kashmir. The relations with these states were therefore friendly. With Baltistan, however, there existed a continual state of border plundering.

*Administration of justice.*—The administration of justice was formerly patriarchal. An assembly of 5 or 7 elders was called by the district Gyalpo, or Kahlon, or by the village Goba, to decide cases. More form was observed at the capital, Leh. The complainant laid his case before the Lonpo, or mayor, who reported it to the Kahlon. The Shakpon, chief justice, was then directed to assemble a regular court of 5 or 7 members, according to the importance of the case.

*Punishments.*—The punishments were stripes, fines, and imprisonment. In extreme cases banishment, or death. Death was seldom awarded, and still more rarely carried out. Criminals were either crucified or thrown into the Indus bound hand and foot, and weighted with stones. Banishment, or rather ignominious expulsion from society, preceded by stripes and branding, was the usual punishment for murder. For child murder a woman was sentenced to the loss of one hand in addition to the above expulsion.

*Present Government.*—The laws of Ladak still continue in force under the Kashmir rule, with the single exception of death for the slaughter of kine. The country is now governed by five thanadars, each in charge of a district. They are independent of each other, and accountable only to the Maharajah himself. The principal thanadar lives at Leh. They exercise military as well as civil authority over their districts. (*Cunningham.*)

## HISTORY.

The earlier history of the country is mixed up with the usual fables, which endeavour to trace their origin to divine interposition and to dates considerably earlier than the creation of man. It will therefore suffice if we give short notices of facts which are known to have occurred. The first is the invasion of Ladak by the Baltis in the beginning of the 17th century. Ali Mir, the chief of Skardo, taking advantage of a state of anarchy in the country, marched upon Leh with a large force, and burnt all the temples and monasteries, together with their valuable libraries. About 1625 there

was a second Balti invasion. The Balti troops were, however, signally defeated by the Ladakis, under Gyalpo Siunge Namgyal, at Kharbu. The Gyalpo after this added the district of Rudok to his kingdom. About 1670 the Ladakis invaded Khapalu, a dependency of Baltistan. The Baltis, though assisted by the Mahomedan Governor of Kashmir, were defeated at Sarirū (locality unknown). Shortly after this success, the Ladakis were called upon to meet an alarming invasion of Sokpos, a Mogul tribe. Being defeated in several actions, they called for the aid of the Governor of Kashmir, who despatched a large force without delay. This force crossed the Indus at Khalsi by two wooden bridges, and at Thanskya completely defeated the Sokpos, and drove them out of the country.

From this time the Gyalpos of Ladak began to pay tribute to the Governors of Kashmir.

In 1834, Golab Sing of Jummoo, having consolidated his power in the newly-acquired province of Kishtwar, sent a large force from this valley to invade Ladak. It was commanded by Wazir Zorawer Sing. The following account of the invasion and conquest of Ladak is given by Basti Ram, thanadar of Leh, who was one of the principal officers of the expedition. The force entered Ladak by the Bhotkol Pass, at the head of the Sūrū valley. It was here opposed by the Ladakis under Mangul, who were, however, driven from their position. The Dogras halted eight days at Sūrū. The troops were prohibited from cutting the corn, which was then ripe. This politic conduct was rewarded by the immediate submission of the district zemindars. Zorawer Sing now built a fort at Sūrū, which he occupied for a month. After this he advanced into the Pashkyum district, and was opposed by the Ladakis at the bridge of Pashkyum. The Dogras were again victorious. The Ladakis by a skilful manœuvre effected their retreat across the bridge, which they then destroyed. The Dogra force, however, crossed the river on *mussucks* without opposition. Pashkyum was now abandoned, and the chief of the place fled to the fort of Sod, where with the district zemindars he determined to hold out. The Dogras, after a ten days' siege, took the fort by assault, and the Gyalpo and about 600 Ladakis were taken prisoners.

A whole month was now wasted in fruitless negotiations with the district zemindars. Akabut Mahomed Khan, Gyalpo of Ladak, meanwhile advanced with a force of 22,000 to Mulbekh. He sent envoys to Zorawer Sing, proposing that the Dogras should send confidential agents to treat with the Ladaki chiefs. These were accordingly sent, and were treacherously seized by the Ladakis. In the meanwhile the Kahlon (prime minister), marching by a circuitous route, attacked the Dogras in rear, and took many prisoners. Zorawer Sing now retreated to the fort of Langkurchu (Kartse), where he remained unmolested four months. He was then opposed by a large Ladaki force under the Kahlon, but sallying out of the fort, defeated it. One thousand two hundred Ladakis were taken prisoners, and about 400 were overwhelmed by the fall of a snow-bed. Among the prisoners were the Kahlon and the Master of the horse. After this victory the Dogras again advanced upon Pashkyum, and thence *via* Shergol to Mulbekh. Halting here fifteen days, they proceeded by Kharbu to Lamayuru, and were there met by an envoy from the Gyalpo, suing for peace. Zorawer

Sing now advanced upon Leh, where he remained four months. It was finally arranged that the Gyalpo should pay Rs 50,000 for the expenses of the war, and a yearly tribute of Rs. 20,000. After arranging these terms Zorawer Sing fell back upon Lamayuru, but hearing that the chief of Sod had re-taken his fort, he advanced on that place by forced marches. The Ladakis retreated, and were surprised and defeated by the Dogras at Sürū. The zemindars again tendered their submission to Zorawer Sing, who then marched into Zankasar. The chief of this district agreed to pay a tax of Rs. 3-8 for every house. About this time there was an insurrection at Leh, instigated by Mihan Sing, the Sikh Governor of Kashmir. Zorawer Sing at once advanced to quell it, and was met by the Gyalpo at Shushot. The balance of the tribute, Rs. 13,000, was now demanded from the Ladakis, and besides this the additional expenses of the army. The government of the country was bestowed upon the Kahlon of Banka, and the Gyalpo was allowed as a jagheer the large village of Tok, opposite Leh. Zorawer Sing having now despatched a force of 15,000 men to Padam, the capital of Zankasar, and taken that place, returned to Jummo. The Maharajah was much displeased with him for making over the government of Ladak to the Kahlon of Banka. A year after, news arrived that the new king had revolted, and that the Dogra garrisons were beleaguered in the different forts. Zorawer Sing at once started off with 3,000 infantry, and in two months arrived in the district of Padam, but, owing to the swollen state of the river, could do nothing for two months more. He then advanced through Zankasar to Leh.

The new Gyalpo, fled at his approach, but was seized in Spiti and brought back a prisoner to Leh.

The former Gyalpo, Akabut Mahomed, was now reinstated, and Zorawer Sing again returned to Jummo. After a year, about 1839, he re-entered Ladak with 5,000 men for the purpose of seizing the Kahlons of Banka and Basgo, who were plotting against the Gyalpo. They had been treating with Ahmed Shah of Baltistan, whom they wished to help in a general rising against the Dogras. Zorawer Sing seized upon this as a pretext for invading Baltistan. This he did in 1840, and leaving a garrison at Skardo, brought Ahmed Shah and his favourite son prisoners into Ladak. In May 1841, Zorawer Sing invaded Rudok territory, and plundered the monasteries of Hanle and Tashigong. Both Rudok and Garo submitted without opposition. On the 7th November, news was heard of the approach of Chinese troops from Lhassa. Two detachments of Dogras were surrounded and taken prisoners. Zorawer Sing, with a small force, now gave battle to 10,000 Chinese. He was killed and his troops thrown into disorder. About 700 were taken prisoners, besides which many died from the extreme cold of this bleak, elevated region, and from frost bite. Amongst the prisoners were Ahmed Shah of Baltistan, and his son, and the Kahlon of Basgo. During the winter the Chinese re-occupied the whole of the Garo territory, and in the spring of 1842 invaded Ladak and besieged the new fort at Leh. They were, however, defeated by the Dogras, and fell back upon Rudok, where they took up a strong position. This was turned by the Dogras, and the Lhassan Wazir was allowed to retire on the single condition that the old boundary line between Ladak and Chinese territory should be re-established.

## MILITARY RESOURCES.

In 1846 a slight disturbance in Zankar was promptly repressed by Basti Ram. Since then the whole country has been quiet. The neighbouring districts of Gilgit and Chilas have been added to the Maharajah's dominions, which now extend from the sources of the Shyok to the head of the Gilgit river. (*Cunningham.*)

## HOT SPRINGS

Are numerous. The principal are those at Puga, Shoosal, Kiam, Gogra, Panamikh, and Changlung. A description of each will be found in the Gazetteer.

## MANUFACTURES.

The artificial productions of the country are confined to the manufacture of blanket and coarse woollens, chiefly for home consumption, and of black tents, ropes, &c., made from the hair of the yak. The blanketing is made up in pieces, one foot wide and from 11 to 15 yards long. The price per piece varies from Rs. 2 to Rs. 3. It is only purchaseable in small quantities in Leh. Any quantity of sacking can, however, be purchased, there being a constant demand for it for bags for the conveyance of goods. About 120,000 yards of blanketing and sacking are annually expended on the carrying trade. The total value of the manufacture is only Rs. 7,500. (*Cunningham.*)

*Spinning, weaving, and dyeing* is carried on in almost every household. Professional weavers are found in a few of the most populous villages. The shortness of its staple renders the goat's down (Lena) so difficult to spin, that the Ladakis do not attempt to manufacture it themselves, but sell the raw material to the Kashmiris.

*Wool-cleansing* is either effected by rubbing it with cones of the dried clay called *Pulsa*, or by sprinkling it with a powder of the same clay. This cleansed wool is only used for the better sort of woollen stuffs. The art of bleaching is unknown.

*Felling* is practised to a limited extent, and also basket-work. There are a few cobblers, carpenters, and braziers in the country, chiefly found at Leh. Printing and painting are roughly carried on in the monasteries. (*H. Strachey.*)

## MILITARY RESOURCES.

There was formerly no regular army in Ladak. Every family was obliged to furnish one ready armed soldier at the call of Government. The Kahlons, Lonpos, and Gobas also furnished from 10 to 4 men each. In 1834, 22,000 armed peasants collected to oppose Zorawer Sing. A larger number could not well have been assembled, as the number of houses was not more than 24,000. On a call to arms the soldiers were told off for the cavalry or infantry, by simply selecting all those who had horses, or rather ponies, for the former branch. Their arms were swords, matchlocks, and bows and arrows. The *Makpon*, or Commander-in-Chief, was either a member of the royal family, or one of the provincial Kahlons. The soldiers were obliged to find their own food. Each man was therefore generally attended by another male



## MINERAL PRODUCTIONS.

member of his family, who carried the joint provisions. The forts of Eastern Ladak were nearly all castellated monasteries, the defence of which was intrusted to the monks, assisted by the neighbouring peasantry. They were generally perched on high rocks, and quite destitute of water. In Western Ladak there were several castles belonging to petty chiefs, such as Pashkyum and Sod, which were better calculated for defence. The best means of defence, however, consisted in the general inaccessibility of the country during one-half of the year, when the passes were closed by snow, and to the power of breaking down the bridges over the Indus and other unfordable streams during the summer. Under the Maharajah of Kashmir, the country is held by a few garrisons of tolerably well appointed infantry, who are quartered in the different forts erected by Zorawer Sing and his successors, such as those at Leh, Kargil, Dras, and the bridge-head at Khalsi. They are all built on the same plan, and in similar situations, on the banks of streams. The total number of Dogra troops in the country is about 600. (*Cunningham*).

## MINERAL PRODUCTIONS.

*Limestone* is the most prevalent rock. It forms the range that divides Rupshu from Zankar, and is also found throughout the latter district, and on both banks of the Indus, on the Fotu-la and Hanu Passes. It also occurs at both sides of the Pangong Lake, and extends from the Saser Pass to the Karakoram range. Owing to scarcity of wood only the wealthy can afford to use lime mortar in building their houses.

*White marble* is met with at the head of the Muglib valley, and near the Kumdan glaciers, in the bed of the Shyok river.

*Gypsum* is found at the sulphur mines on the banks of the Puga stream. No use whatever is made of it by the people.

*Clay*.—Extensive deposits of the finest clays of all colours are found throughout the country. They are all lacustrine formations.

The most remarkable deposits, of a pale straw colour, occur at Lamyuru, and at the head of the Yunam river, above the Yunam Tso.

*Steatite* was found by Vigne on the banks of the Dras river, near Tashgam.

*Gold* occurs in the beds of the Indus, Shyok, and Zankar rivers. General Strachey says that it is collected in the bed of the Zankar river, between Pidmo and Chiling, by Lahoulis. They come over for two or three months in summer. Each gold-washer pays a tax of Re. 1 for his year's license. Before the establishment of the Dogra Government the river was also much frequented by Balti gold-washers. Gold is much more abundant in the eastern parts of Chinese Tibet, where it is worked in mines.

*Iron* was found by Dr. Thomson near Yelchung, where there is a mine.

*Sulphur* (*muzi*) is obtained only at Puga in a mine worked by the Kashmir Government. The quantity exported is very small.

*Tincal*—or crude borax (*Tshale*), is also found in the Puga ravine. It is taken from here by traders from Kulu and Lahoul into India, where the pure borax is extracted from it. (*Cunningham*.)

*Soda* is found in the Thogji Chanmo plain, the banks of the Tsokar being quite white with it. The salt found here is natron, or subcarbonate of

## POPULATION.

soda. It also is found in extensive patches on portions of the Kuen-luen plains. The Ladakis use soda to assist in decocting their tea, and the higher orders use it as a substitute for soap. (*H. Strachey*.)

*Salt* (Tsha) is also found on the banks of the Tsokar, where it is collected by the Rupshu shepherds (*Chumpas*). It is only fit to give to cattle.

*Garnets* of an inferior kind, and of a dark-brown colour, were found at Puga by Dr. Thomson. Their existence is unknown to the natives.

*Jade* occurs in a now disused quarry near Bulakchi, on the banks of the Karakash.

## PASSAGE OF RIVERS.

The rivers are generally crossed by fording. Gal is the Tibetan term for a ford. In summer, the morning is the best time for fording, for after 10 or 11. A. M. the waters are much increased by the melting snows.

*Ferry* (*Grukha*).—The common people are usually ferried over on a single inflated skin, but great men are usually taken over on a raft, formed by placing a bed on two inflated skins. The Shyok, opposite Satti, is crossed by boat in summer.

*Bridges*.—There are two kinds of bridges met with in Ladak—

(1).—The *Shing-zam*, or wooden bridge, made usually of large beams of poplars. Good specimens are to be seen at Leh and Khalsi.

(2).—The *Chug-zam*, or suspension bridge, is common on the Indus and Shyok, above their junction. It is formed of two stout ropes of twisted birch twigs, about the thickness of a man's arm. The ropes are suspended about 5 feet apart at the ends, but are drawn nearer together in the middle by the weight of the side ropes and road-way. The side ropes are also of birch twig, and in them is laid the road-way. The latter consists of three ropes (of the same size as the suspension ropes) laid side by side. In the best bridges the side ropes are connected by a close wattling of wicker work from end to end, to prevent passengers, as well as sheep and goats, from slipping through. The *Chug-zam* is a very cheap and easy mode of bridging a stream, and is, when new and well constructed, quite safe. The passage of old bridges is, however, often both difficult and dangerous. In them the suspension ropes form a great curve; the sides are frequently unwattled and completely open, and the road-way sometimes reduced to a single rope. (*Cunningham*.)

## POPULATION.

Moorcroft, in 1822, estimated the population to be about 165,000. General Cunningham says that in 1848 there were 23,000 houses in the country, which, at the rate of five per house, gave a population of about 125,000. He accounts for the decrease as follows:—

Carried off by small-pox in 1834	...	...	...	14,000
Lamas emigrated to Lhassan territory	...	...	...	9,000
Perished during the wars	...	...	...	15,000
Emigrated (chiefly Mussulmans) to Baltistan	...	...	...	1,000
Total decrease				39,000

## POPULATION.

Dr. Bellew, in 1873, reckoning the number of houses at 30,000, and at the rate of seven per house, estimated the population to be about 210,000. It is very unequally distributed. In parts of Rupshu there is only about one person to every 8 square miles. Ladak Proper is the most populous district, there being about seventeen persons to the square mile. There are a greater number of females than males in Ladak. The Ladakis have a strongly marked Tartarian or Mongolian countenance, and are stoutly built. They are short, and squat, with broad, flat, ugly faces, high cheek-bones, large mouth, and narrow forehead. Nose broad and flat, with wide nostrils and little or no bridge. Eyes small, narrow, oblique, and nearly always black. Ears large and prominent, with particularly long lobes. Hair black, coarse and thick. It is usually cut quite close in front, and at the sides being collected at the back into a plait or pigtail. Moustaches are nearly always worn, but they are small, and the beard is very scant. The average height of a man is about 5 feet 2 inches, that of a woman 4 feet 9 inches. They are cheerful, willing, and good-tempered, very ready for a laugh, and not quarrelsome, unless excited by *Chang* (a sort of beer). They also are honest and truthful, and though slow, not muddle-headed. Major Godwin-Austen says that the Ladaki writers excel the Indian Munshis in the understanding of a map. (*Cunningham—Drew.*)

*Caste.*—The great mass of the people are of one race or caste. They intermarry and eat together, and are all eligible as members of the national priesthood. But in the northern provinces there is a numerous class called *Bem*, or low, which includes all the dancing women and their attendant musicians, also all smiths and carpenters, and, in fact, handicraftsmen of every kind. The old aristocracy and the monks are nearly all of the agricultural class. (*Cunningham—H. Strachey.*)

The *Argons* are half-caste, mostly of Kashmiri and Tibetan parentage. They vary between the two in language and manners, but generally adhere to the Mussulman religion.

The *Gulam-zadas*, or slave born, have sprung into existence since the Dogra conquest, from the connexion of the Dogra sepoy with Ladaki women. The result of this crossing of breeds is not good. The half-castes are generally thoroughly untrustworthy. (*Drew.*)

Four races inhabit Ladak, *viz.*, the Champas, Ladakis, Baltis, and Dards. The three first belong to the Tibetan race.

The *Champas* lead a nomadic life on the upland valleys of Rupshu. They are a hardy, cheerful set of people, and spend their lives in tents. As a rule, they do not intermarry with the Ladakis. Their religion is the same, but their young men do not become *lamas*. There are not more than 100 families of Champas in the country.

The *Khamba* are wandering, professional beggars from the country east of Lhassa. They come in summer to Ladak, living in small tents.

*Baltis.*—Colonies are found in the Dras and Sürū valleys, also at Shushot, opposite Leh.

*Dards.*—A few are found in the Dras valley, and in some villages along the Indus.

*Dress.*—The men wear a thick, warm, woollen cloak. It is usually of a dirty white, for they only wash once a year, and never wash their clothes. Coarse woollen or felt leggings are worn, secured by a garter wound

spirally round from the ankle upwards. The head dress is either a quilted skull cap, or a sheep skin cap with the wool inside, and a large flap behind to protect the neck and ears. The old-fashioned bonnet (*tipi*) is still a good deal worn. The end overhangs on one side of the head. The boots are of felt, with soles of sheep or goat skin, and are usually ornamented in front with small bits of coloured cloth. (*Cunningham*).

The Bhot is fond of ornament, and decorates his bonnet with branches of flowers. He wears rings of gold or silver-wire strung with beads of red coral or green turquoise in his ears, and carries a big boss of amber or agate suspended as a necklet charm on his breast. From his belt hang the several indispensable items of his travelling equipment. His single-bladed knife hangs on one side, with a flint case (*Chukmuk*); and a pouchbag for tea, tobacco, and odds and ends, with his bright iron pipe, hangs on the other. Suspended obliquely across his back, and like a quiver in shape, is his tea churn.

*Women's dress.*—The women wear a black woollen jacket with a large striped woollen petticoat of many colours, generally blue and red, reaching below the mid-leg. Over all a sheep skin is worn, with the wool inside, secured in front by a large iron or brass needle. The poorer classes wear the outside of the skin plain, but those in better circumstances cover it with coarse woollen baize, either red, blue, green, or yellow, with a broad border, always of a different colour. Their heads are always bare, the hair being arranged in a border of narrow plaits, which hang round the head, like a long fringe. From the forehead, over the division of the hair, they all wear a long narrow band of cloth studded with coarse, many-flawed turquoises, which hangs down behind as low as the waist. It is usually finished off with a tassel of wool, or a bunch of cowries. The ears are covered by semi-circular woollen lappets, fastened to the hair, and edged with fur, generally of the otter skin (*Kundur*). These ear-flaps are always red, the inside being woollen and the outside brocade. All classes wear besides a profusion of necklaces of cornelian, turquoise, or amber, and they have also massive ornaments of silver and brass, studded with turquoises. The complexion is improved by a process called *Shogolo*. This consists of smearing the cheeks and forehead with the juice and seeds of the ripe berry of the belladonna plant. Much pains are bestowed in arranging the bright yellow seeds effectively, and the result is that the face appears sprinkled with grains of gold, and sparkles with a rich brightness. (*Cunningham—Bellew.*)

*Food.*—That of the common people usually consists of thick barley cake, or of barley-meal, with a broth of turnips, to which are added a few peas and a seasoning of salt and pepper. Meat is seldom tasted by the poorer classes. Tea is drunk two or three times a day by the upper classes. It is made in a strong decoction with soda, and seasoned with salt and churned butter. Three meals are taken during the course of the day, *viz.*, at sunrise, mid-day, and sunset.

*Liquors.*—All classes are exceedingly fond of spirituous liquors. The principal is *Chang*, a sort of beer. This is made from fermented barley and wheat flour, and has a most disagreeable sour smell. It is sometimes distilled, and a clear spirit is obtained, something like whiskey, but of a villainous flavour. The people are allowed to drink *Chang*, but all spirits are proscribed by law. (*Cunningham—Drew.*)

## POPULATION.

*Social customs.*—The most remarkable is the system of polyandry, which is strictly confined to brothers. A woman has usually two husbands, but three, and even four, are not uncommon. This system prevails, of course, only among the poorer classes. The rich, as in all eastern countries, generally have two or three wives each.

The children always take the name, and obey as head of the family, the eldest brother. Polyandry is the principal check on the increase of the population, and is well adapted to this poor country, which does not produce sufficient food for its inhabitants. (*Cunningham—Bellew.*)

Another curious custom is, the father and mother of a grown-up family retire from active life as soon as their son has married and had a child. They give up their house and land to their son, and go into a small house near at hand, taking only one or two cattle, and retaining just enough land to support themselves. After this is done they have no claim on the son, who becomes legal owner of the family property. (*Drew.*)

The people are very sociable, and every event is made the pretext for a feast, the principal occasions being births, marriages, and deaths. Huge bowls of *Chang* form the chief attraction, and merry drinking songs are sung, often accompanied by a fiddle or drum. The funeral feast varies according to the rank of the deceased. For a rich man a large party of *lamas* assembles, and reads prayers daily till the body is burned, *i. e.*, fifteen or twenty days after date of decease. While the body is in the house a piece of cloth is fixed over the door-way, as a sign of mourning. The *lamas* are regaled with food and tea daily. When the body has been burned, they are presented with the clothes and cooking vessels of the deceased. The ashes of a Gyalpo, or Kahlon, or other great man, are carefully collected and made into an image of the deceased.

A Dungen or pyramid is erected on the spot for the reception of an urn, which contains the figure, and also rolls of prayers, beads, wheat, barley, rice, and pieces of the holy *Shukpa*, or pencil cedar, and of sandal-wood. In the lofty districts of Rupshu, where no wood is procurable, the bodies of the dead are always exposed on hills to be eaten by vultures and wild dogs. (*Cunningham.*)

*Amusements.*—Polo has been adopted by the higher classes. It is more popular in Baltistan and Dardistan. Dr. Bellew mentions having seen it played at Kargil.

*Buildings.*—The finest buildings in the country are the monasteries, or *Gonpas*. These are always perched on heights, more or less lofty, and have generally a very picturesque and imposing appearance.

The outer walls are formed by the dwellings of the monks. The interior, if large, is divided by other buildings into several open courts. One room, more spacious and lofty than the rest, is set apart as a temple. The outer walls are whitewashed, and the battlements ornamented with broad bands of red, and surmounted with numerous small flags, and with poles tipped with yak's tails.

The principal monasteries are those of Lamayuru, Hemis Shukpa, Hemis, and Hanlé.

*Houses.*—The houses are all very much alike, and usually consist of two or three storeys. The foundations and lower parts are stone, and the upper

## RECKONING TIME.

walls are built of large sun-dried bricks. In the better houses some of the rooms are of considerable size, 25 feet long by 18 broad; but they are always very low, never exceeding 8 feet. The roof is supported by wooden pillars. It is formed of poplar spars, laid about 1½ feet apart. The beams are covered with small pieces of poplar branches. The whole is then covered with a layer of leaves and a thick coat of well-beaten clay.

The floors are generally of earth, but the better sort are paved with small slit pebbles. The principal room has generally a balcony, facing either south or west. The doors are mere rough planks joined together by wooden tendons. *Purdahs* are also used. There are no windows, but one or two loop holes admit a little light, and form the only exit for the smoke, there being no chimneys. The houses of the poorer classes are generally of two storeys, the lower storey being for the cattle. The roofs are coarsely made, and the rooms are small, and very low, sometimes under 6 feet in height. A flight of earthen steps leads to the upper storey. (*Cunningham.*)

## POSTAL ARRANGEMENTS.

Are simple and effective; but the transmission is generally slow. Each village *Goba*, or headman, has to furnish a courier to carry the post from his own to the next village. Along the high roads the couriers are all horsemen, and the post is carried from 20 to 35 miles a day. The latter is the express rate. Letters from Kashmir usually reach Leh (220 miles) in ten days, and in six days if the despatch is urgent.

(*Cunningham.*)

## RECKONING TIME.

Two modes are used—

- (1).—The cycle of 12 years, for common computations, such as a man's age, or the date of any recent event.
- (2).—The cycle of 60 years, borrowed from India, which is used both in writing and in accounts.

In the cycle of 12 years, each year is named after a particular animal, such as :—

- (1.) Byi-lo, the Mouse-year.
- (7.) Ta-lo, the Horse-year.
- (12.) Phog-lo, the Hog-year.

The cycle of 60 years is much more elaborated. The first cycle is counted from A. D. 1026. The Hindus have a distinct name for each year of the cycle, but the Tibetans have adopted the Chinese nomenclature, which is formed by coupling the names of the 12 animals of the other cycle with the names of the 5 elements, considered as both male and female alternately. The first element, male and female, is coupled with the first two animals, next with the 11th and 12th animals, and so on; by which the change of names is preserved throughout the whole series. The 14th cycle began in 1806, the 15th in 1866; so 1876, the present year, is the 10th year of the 15th cycle. (*Cunningham.*)

## RELIGION.

## RELIGION.

The religion is a modified form of Indian Buddhism, and was introduced into Ladak during the reign of Asoka, upwards of 2,000 years ago. In A. D. 899 it was formally abolished, but was finally restored in A. D. 971, and has since continued to be the dominant religion of Tibet.

It is contained in a voluminous work called the *Kah-gyur*, or "Translation of Precepts," because it is a version of the precepts of Sakya made from the Indian language. Sakya Muni, the founder of the Buddhist faith, is usually called *Chom-dan-das* by the Lamas, but *Sakya Thubpa*, or the "mighty Sakya," by the people. There are several sects of Lamas, or monks. The most ancient is the *Nyiampa*. To it belong most of the Lamas in Ladak and Nari. They all wear red dresses. It was founded in the middle of the 8th century. In the 14th century the great sect of *Gélukpa* was founded. Its founder built the temple of Gahldan, and was the first great abbot (*Khanpo*) who occupied the Gahldan chair, which has been filled by a succession of abbots to this day. The Gelukpa sect wear yellow dresses. It is now the most numerous in Tibet, and both the *Dalai Lama* of Lhassa and the *Tashi Lama* of Tashi-Lhun-po belong to it. Besides these two great Lamas of the yellow sect there is a third great Lama in Bhutan, called the Dharma Raja. He is head of the Dukpa sect, who wear red dresses.

All who have taken vows of celibacy are called by the collective name of *Gedun*, the clergy. A monk is styled *Lama*, a nun *Ani*. Most of the Lamas in the country wear a red coat with sleeves and long skirt, secured by a red girdle. They generally have their heads shaved, or the hair cropped short, and go about bare-headed. The higher Lamas, however, wear semi-circular red caps.

The ritualistic instruments are three in number. The bell, the sceptre or thunder-bolt, and the prayer cylinder. The bell is used during the performance of daily service. The sceptre is called the *Sera-pun-dze*. It is said to have flown away from India and to have alighted at Sera in Tibet. An annual festival has been established in its honour. The prayer-cylinder, the *Mani Chhos-khor*, or the precious religious wheel, is a very ingenious instrument. The body of it is a metal cylinder about 3 inches in height, and from 2 to 2½ inches in diameter. The axis is prolonged to form a handle. The cylinder is filled with rolls of printed prayers and charms, which revolve as the instrument is turned round. Every Lama carries a *Chhos-khor*, which he keeps perpetually turning by a gentle motion of the hand, assisted by a cubical piece of iron fastened by a chain to the outside. Some of them have the sacred sentence *Aum! Mani padme hun?* engraved on the outside.

Cylinders about one foot in height are placed in rows round the temples, and are turned by the votaries before entering. Still larger ones are sometimes seen near villages turned by water.

*Religious Buildings.*—The principal are as follows:—The *Gonpa* or monastery. This word signifies a "solitary place," because monasteries, according to the directions of Sakya Muni, are always built far from the bustle of towns and villages. A general description of a monastery is

## RELIGION.

given under the heading "*buildings*." Convents are only separate monasteries walled off from the rest of the buildings.

*Lhá khang*, "God's house," or temple. These consist of single rooms square and unadorned outside, and filled with images and pictures. The images are generally about half-life size, made of unburnt clay and painted.

*Lábrang*, a Lama's house. Where no monasteries exist, the Lamas live in separate houses, called *lábrang*.

*Chhod-ten*, an "offering receptacle." A dedicatory pyramid erected in honor of Sakya Thubba or of some of the holy Buddhas. It consists of a square basement, surmounted by four steps, on which stands the dome, or principal part of the edifice, which in shape is an inverted truncated cone. The dome is surmounted by a lofty pinnacle, crowned by a sacred crescent-shaped emblem. These buildings vary from 15 to 30 feet in height, and are carefully constructed of brick, plastered over and painted.

*Kagani* is a large Chodd-ten with a road-way leading under it. It is placed at the entrance to villages and houses. (*Drew*.)

*Dungten*, a "bone-holder," is a pyramid erected either over the corpse of a Lama, or over the ashes of a king or person of consequence. The ashes are placed in an urn together with numerous relics. *Vide* Funeral ceremonies. (*Cunningham*.)

*Mani*, a dyke, or pile of stones. These are long and thickly built up walls, covered with thousands of flat stones bearing the holy inscription "*Aum! Mani padme hun*"! This, according to Klaproth, signifies, "Oh! the jewel in the lotus. Amen"! General Cunningham translates it, O "lotus-bearer *hun*"! Occasionally it is seen on the side of hills, the letters being formed of stones fixed in the earth, and of so vast a size as to be visible at a considerable distance. The *Mani*, or sacred walls, are from 4 to 5 feet high and from 6 to 12 feet broad, varying in length from 10 and 20 feet to nearly  $\frac{1}{2}$  a mile. Very large ones are met with near Leh. They are also seen near villages and by the road side. The path invariably divides and goes on both sides of the wall, so that the passenger may always keep it on his right. The inscribed slabs covering these walls are votive offerings from all classes of the people. They are bought from the Lamas and deposited on the *mani* for the attainment of some particular object, such as the birth of a son, or a good harvest. (*Cunningham—Drew*.)

Cairns are met with at the summit of almost every mountain pass. They are crowned with the horns of wild sheep, ibex, &c., placed here as votive offerings by shepherds. (*Drew*.)

*Tshá-Khang*, an image-room, containing images and medallions. The images are sometimes of metal and sometimes of clay, gaudily painted. The room is also furnished with numerous instruments of worship, with lamps, bags of grain, and bowls of butter, the latter sustaining a wick which constantly burns. It is hung with banners, and the walls are often adorned with paintings. The Lamas periodically assemble here to worship. The people occasionally pass in and bow, but no women (so Mr. Drew understood), not even the nuns, enter the image-room. The service is performed at sunrise, noon, and sunset. It consists of the recitation or chanting of portions of their scriptures, accompanied by music. The musical instruments used are large sliding trumpets about 6 feet long, large drums,



## REVENUE.

and large brazen cymbals. During the service incense is kept burning, and offerings of fruit, grain, and even meat are made to the figures of Sakya Thubpa, &c. (*Cunningham—Drew.*)

The Lamas are jovial and good-natured. They will willingly conduct Europeans over their monasteries, and even into the sacred image-rooms. The superior of a monastery is always appointed from Lhasa, but the rest are recruited in the country, the second son of every family being dedicated to the priesthood. They wear the Lama dress, but pursue the ordinary avocations of life till called to the cloisters, when they renounce the world and assume the celibate life of the monk. With nuns the monastic life is apparently optional, and is only adopted by the friendless and homeless. (*Bellew.*)

Some of the monasteries are endowed, some get help from Lhasa, but the greater part are supported by the people. Many of them have libraries. The books are merely long narrow sheets, collected between two boards. The characters are beautifully formed.

*Printing.*—Printing has long been known and practised in Tibet, but only by engraved stereotype wooden blocks and not by moveable types. New works are rarely undertaken, but the printing of the standard religious works is still carried on with the same old blocks that were in use upwards of 100 years ago. For the ordinary prayer rolls, a thin brownish paper is used, but a much finer paper is used for books. (*Cunningham.*)

*Mask dance by Lamas.*—Dr. Bellew gives a description of a curious mask dance which he witnessed at the monastery of Hemis. "At length we were conducted to a court in which a company of Lamas entertained us with, a pantomime performance, the subject of which none of us understood. It was a very grotesque spectacle in imitation, we were told, of Chinese devil dances. The designs on the rich silken robes of the monks were evidently from the celestial empire. Most of the masks represented the heads of wild animals, and there were some of ogres and demons. The performance consisted of a wild sort of dance round a flag staff in the centre of the court of the principal temple. The musicians commenced some very lively and discordant music, and the dancers at once set in motion, began to caper and whirl, and fling their limbs about, the whole circle the while keeping its form and revolving round the centre pole."

Moorcroft observes that these dramatic representations usually form part of the ceremonials at religious festivals.

Formerly the chief sources of the revenue were—

## REVENUE.

- (1).—A tax on dwellings.
- (2).—A duty on merchandize.

The poorer classes, being unable to pay either in money or kind, were obliged to pay by bodily service as labourers. The duties were partly taken in money and partly in kind. The tax on houses was regulated according to their size, from Rs. 7 for a large, to Re. 1-12 for

## REVENUE.

a small house. Under the Gyalpo's rule there were 18,000 houses paying in all Rs. 36,000. The monasteries and crown villages were exempt from this tax.

The following was the gross revenue under the Gyalpo's rule :—

House tax	...	...	...	...	Rs. 30,000
Customs	...	...	...	...	" 18,000
Tax on brokers	...	...	...	...	" 5,700
Presents from Government Officers	...	...	...	...	" 5,000
Amount alienated for support of monasteries	...	...	...	...	" 8,000
Amount derived from crown villages	...	...	...	...	" 4,000

Total revenue, Rs. 70,700

The salary of the Kahlon, or prime minister, consisted of half the amount derived from the customs, and half of that derived from the tax on brokers, *i. e.*, Rs. 11,850.

The Gyalpo's income was about Rs. 49,000. But his actual income was nearly double this amount, for he was chief trader in his own dominions; and, as all his traffic passed duty free throughout Ladak, he always realized between Rs. 40,000 and 50,000 a year. His average income from all sources thus amounted to one lakh of rupees (£10,000).

The various charges defrayed by the state were few in number and small in amount, as all the principal public officers had the privilege of trading duty free. The salaries of the paid officers amounted in all to about Rs. 20,000 per annum.

The military charges were *nil*, as each family was obliged to furnish one soldier, whenever called upon to do so, and to feed him during his term of service. (*Vide Military resources.*)

*Revenue under Kashmir rule.*—Under the Maharajah Golab Sing's rule, although the number of inhabited dwellings had diminished, yet the number of paying houses was about the same, for all the crown villages had been appropriated. The assessment was, however, different, as a much greater number of houses were taxed at a higher rate. A heavy tax was also imposed by him upon all monasteries; the large ones paying from Rs. 500 to Rs. 900 a year, and the smaller monasteries Rs. 60 each. The following were the sources of the revenue under his rule :—

Tax on houses	...	...	...	...	Rs. 45,500
Customs	...	...	...	...	" 18,000
Tax on brokers	...	...	...	...	" 5,700
Presents, or fees	...	...	...	...	" 5,000
Monasteries	...	...	...	...	" 6,300

Total revenue, Rs. 80,500

The five thanadars of Ladak receive salaries varying from Rs. 200 to Rs. 500 per mensem. The principal thanadar lives at Leh, and receives a salary of Rs. 500 a month. He is also permitted to trade on his own account

## WEIGHTS AND MEASURES.

to a limited extent, and his profits, together with fees and presents, bring him in about Rs. 20,000 a year. The Maharajah is the chief trader in his own dominions, more particularly in the export of saffron and the import of wool.

The following is the total expenditure under the Maharajah's rule :—

Civil expenses	...	...	...	Rs. 18,000
Military	..	...	...	,, 86,000
				Total Rs. 64,000

The surplus, about Rs. 25,000, is transmitted to the Maharajah, generally in goods. (*Cunningham.*)

## WEIGHTS AND MEASURES.

The weights of Ladak are the *Batti* and *Man* (or maund)—

1 Batti = 2 Indian seers, or 32 chitaks.

8 Batti = 1 man of 16 seers.

“The only other Ladaki measure with which I am acquainted is the *Khāl*. It is the universal measure for all kinds of heavy produce, but more especially for grain. It is of two kinds :—

(1).—The *Dek-khāl* or Weight Khāl.

(2).—The *Shor-khāl* or Measure Khāl.

The common Khāl, whether by weight or measure, is the well-known quantity of a sheep's load (*Luk-khāl*), which is equal to 8 Battis or a maund of 16 seers. This is usually named (*khāl*), but when larger measures are mentioned, the prefix is always used, such as—

*Ta-khāl* (a horse-load) = 4 maunds, or 64 seers.

*Yak-khāl* (a yak-load) = ditto. (*Cunningham.*)

The following weights and measures are taken from General Strachey's reports—

*Lineal measures.*—The smallest in common use is the *Sor* or *Sormo*.

1 Sor = a finger breadth (the Indian *angul*).

5 Sor = 1 Lakpa or hand breadth.

2 Lakpa = 1 Bito, or short span with the fore and little finger.

12 Sor = 1 Tokang, or full span with the thumb.

1½ To = 1 Skangang, or short cubit from elbow to wrist.

2 To = 1 Tugang, or long cubit with the hand extended. (The long cubit, or Tu, averages about 16 English inches.)

4 Tū = 1 Domgang, or fathom.

500 Dom = 1 Gyangtak, or mile (1,000 yards?)

8 Gyangtak = 1 Paktsat, or league. (No actual computations are ever made by the mile and league, journeys being reckoned by the day.)

Nyama = a day's journey.

Phet = ¼ day's journey. It is also called Tsal-lam, or “breakfast half-way.”

## WEIGHTS AND MEASURES.

Smaller distances are reckoned thus:—

Miktong = eyesight, or as far as one can see a man distinctly.

Dagang = Bow-shot.

*Corn measures.*—For corn and salt the Tibetans have a measure of capacity. Those generally used are the Bre (*Vulgo* De), the Bo, and the Kal.

20 De always = 1 Kal.

From 2 to 5 De = 1 Bo.

There are several varieties of Bre and Khāl, differing in size, name and use. The principal are—

Pogbre = Ration measure (the smallest).

Punbre = Interest measure.

Ongbre = Harvest measure, the largest of all, and used for agricultural purposes.

The measures are roughly made of wood, with a separate bottom, and sometimes bound with iron hoops.

### *Approximate English equivalents.*

1 Khāl = about  $\frac{2}{3}$  of a bushel.

1 Bre = about  $1\frac{1}{2}$  pints.

1 Bo (Na) = about 3 quarts.

*Weights, Troy.*—A Skarma (*i. e.*, *star*) = the grain or minim.

$2\frac{1}{2}$  Skarma = 1 Kagang.

4 Ka = 1 Shogang.

10 Sho = 1 Shangang.

50 Shang = 1 Shilka or Dotsat, or Chinese ingot (silver.)

The last of these, the Shilka, is the standard, and weighs about  $166\frac{2}{3}$  Indian tolahs.

### *English equivalents.*

1 Skarma = 6 grains.

1 Ka = 15 grains.

1 Sho = 1 drachm.

1 Shang =  $1\frac{1}{2}$  oz.

### *Avoirdupois.*

4 Shang or Pore = 1 Nyagang or Nega (*i. e.*, mark on steel yard).

20 Nega = 1 Kal.

10 to 15 Kal = a man's load.

The Nega =  $\frac{1}{12}$  of a Chinese ingot, or about  $\frac{1}{2}$  lb.

The Kal = 7 lbs. Avoirdupois.

The Tibetans do all their weighing with steel ards. (*H. Strachey.*)

## ROUTES.

In Tibetan every road is called *Lam*.

*Lam-chheu* is a high road.

*Gya-Lam*, a passable road.

The principal road is from Kashmir, *viā* Leh, to Yarkand. The only others of any importance, and used by traders, are the roads from Leh to Lhasa *viā* Garo, and to the Punjab, *viā* Rupshu, Lahoul, and Kulu.

## ROUTES.

The following roads have been used by the different invaders of Ladak:—

- (1).—The route from Skardo to Leh, leading up the Indus valley, by Ali Sher of Baltistan about 1600.
- (2).—The Rudok road from the east, by the Sokpos in 1686.
- (3).—The route from Kishtwar to Leh, *viâ* the Sûrû valley, used by Zorawer Sing in 1834.

Besides the above there are many less frequented and more difficult roads, used chiefly by the people of the country in passing from their own districts into the next, such as—

- (1).—The road over the Omba-la Pass between Sûrû and Dras.
- (2).—The road over the Vinge-la (or Kungi-la) between Zanksar and Purik. These by-paths are called *Lam-than*, or *Lam-dogpo*, *i. e.*, “little roads.” (*Cunningham.*)

# ROUTES IN LADAK.

No. 1.

## LEH TO SRINAGGAR *via* DRAS.

1. **LEH TO SNIMO**—18 miles.

Large village, right bank of Indus. Cultivation. At 5 miles pass Pitak village. Road then leaves river, and leads over a stony undulating plateau. Pass villages of Phayang, Tharu, and Umla. The latter up a lateral ravine on the right, some distance from the road. Zankar river joins Indus opposite Snimo.

2. **SASPOOL**—13 miles—31 miles.

Village, right bank of Indus. Pass village of Basgo, situated in a hollow. Then ascend to the Basgo *thang*, or plateau. Road leads over this wide gravelly plain, which is separated by a ridge from the Indus, and then rejoins the river bank. From Basgo an upper road leads *via* Timisgam to Khalsi. Good apricots at Saspool.

3. **SNUELA**—17 miles—48 miles.

Village, right bank of Indus. Extensive cultivation and fruit trees. Road follows river bank. Small hamlets seen on both banks. Several bluffs crossed *en route*.

4. **LAMAYURU**—(11,520)—18 miles—66 miles.

Camping ground under cliff, on summit of which is a large monastery. At 8 miles pass Khalsi village, road following river bank. At 9½ miles cross Indus by good wooden bridge, protected by a small fort at its north end. A road leads from Khalsi along right bank of Indus to Skardo.

After crossing the Indus the road leads south-west up the Wanla ravine. Stream crossed three times by wooden bridges. Road in parts difficult, leading over wooden galleries, built up along the face of the cliffs on the bank of the Wanla stream. A road leads from here south to Padam (106 miles).

5. **KHARBU**—16 miles—82 miles.

Village, left bank of Kanji river. Road leads west up gentle ascent of 2,000 feet to the summit of the Fotula Pass (13,446). Easy and gradual descent to small village of Hesku on right bank of the Kanji river. Cross river here by spar bridge, and proceed down left bank 5 miles to Kharbu.

6. **SHERGOL**—(10,290)—18 miles—100 miles.

Village, left bank of Wakha river, at junction of Phugul stream. Small monastery. Cultivation considerable. Road continues down left bank of Kanji river for a few miles; then, turning to the left, leads, by an easy ascent, to the top of the Namyik-la Pass (13,000); gradual descent of 5 miles to monastery of Mulbekh, on right bank of Wakha river. Thence follow the latter river 4 miles to Shergol. Near Mulbekh colossal figure of *Chamba* carved in the rock. Pass villages of Takcha, Charak, and Wakha.

7. **KARGIL**—(8,787)—20 miles—120 miles.

Large, scattered village, at junction of Sūrū and Wakha rivers. Capital of the Kargil district. Extensive cultivation and fruit trees. Collectorate and Fort here. River crossed by three or four bridges (wooden).

Road from Shergol follows right bank of the Wakha river. At 8 miles pass Lochan village; at 15 miles Pashkyum, both on right bank. The river flows through a narrow passage. Road in parts narrow and difficult, and crosses river six or seven times by bridges. From Pashkyum it leads over a stony plateau, which lies in the angle between the Wakha and Sūrū rivers, for 5 miles to Kargil.

## LEH TO SRINAGGAR.

8. CHANAGUND—(8,675) - 6 miles—126 miles.  
Village, right bank of Dras river. A little cultivation. Fruit trees plentiful. Travellers either halt here or at Kirkitchu on the opposite bank at the junction of the Kuksar or Shingo river.
9. TASHGAM—(9,390)—18 miles—144 miles.  
Village, left bank of Dras river. Prangos and lucerne cultivated. Road follows up right bank of the Dras river, ascending and descending a succession of spurs. At 13 miles pass small village and police station of Kharbu. At 17 miles cross river by log bridge. Road near it very difficult.
10. DRAS—(10,144)—15 miles—159 miles.  
A large, scattered village, on left bank of Dras river. It is the capital of the Dras district, and contains a small Fort and Collectorate. Barley, prangos, and lucerne cultivated. The road leads up the left bank of the river. Two or three hamlets passed.
11. MATAYAN—(10,700)—15 miles—174 miles.  
Village, right bank of Gumbar, a tributary of the Dras. Camping ground on left bank, 2 miles above village. Barley cultivation. No trees. Road leads up the Dras river. At 8½ miles cross river by bridge. At 9 miles pass Pandras village on left bank.  
Matayan is the last village passed in Ladak territory. Between it and Kashmir is crossed the Zoji-la pass (11,300). The ascent is easy, but descent into Kashmir territory steep. The road across it is fit for laden ponies in summer. From December it is closed for four or five months by snow. (*Drew.*)
18. SRINAGGAR—85 miles—259 miles.

*The following alternative route may be taken between Snimo and Lamayuru:—*

1. SNIMO TO 2—TARUTSE—10 miles.  
Pass Basgo village and take road to the right over a stony plateau.
3. TIMISGAM—17 miles—27 miles.  
Continue over plateau. Pass Yangthang village and monastery in ravine. About half-way pass Hemis Shukpa (a sacred grove of pencil cedars here).
4. KHALSI—(10,130)—10 miles—37 miles.  
Still continue over plateau. The road joins the river a few miles above Khalsi. This is a large village. Considerable cultivation, and fruit trees plentiful.
5. LAMAYURU—12 miles—49 miles.  
Cross Indus by wooden bridge at 1½ miles.

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### No. 1 A.

#### FROM SKARDO TO SRINAGGAR viâ DRAS.

7. SKARDO TO OLTING THANG—91 miles.  
Small village, left bank of Dras river, at junction of tributary from west. Road in parts bad. Difficult to lead a horse along it.
8. GANGANY—12 miles—103 miles.  
Small village, left bank of Dras river. Abrupt descent to tributary stream from west. Up left bank. At 5 miles Bilergu village on right bank. Road so far bad—a succession of ascents and descents. At 8 miles junction of Sürü river (right bank). At 10 miles Hardas village, left bank.
9. KIRKITCHU—10 miles—113 miles.  
Village, left bank of Dras river. Either halt here or at Chanagund on opposite bank. At 1 mile cross to right bank, joining the Leh route (No. 1). Up right bank. At 8 miles Kharbu, small village and police station, right bank.
10. TASHGAM—14 miles—127 miles.  
Village, left bank of Dras river (*vide Route No. 1*). At 13 miles re-cross to left bank by log bridge. Road near it very difficult.
19. SRINAGGAR—115 miles—242 miles (*vide Route No. 1*).  
(*Drew—Thomson.*)

## LEH TO YARKAND.

No. 2.

### SUMMER, OR *Tabistani*, ROUTE FROM LEH TO YARKAND.

1. LEH TO POLU DIGAR—10 miles.  
Camping ground and a few huts at south base of the Digar-la Pass. Small stream, a little pasture, but no fuel. From Leh road leads 4 miles due east to Sabu village, and then turns north.
2. DIGAR—(13,080)—14 miles—24 miles.  
Village, situated between Digar-la Pass and the Shyok river. Ascent of pass steep and rough. Pass through a narrow gap, and then down a long stony slope to Polu camp. From here descent is more gradual over bogs and peat beds, 5 miles to Digar. Digar-la, a very difficult pass. Yaks should be used.
3. SATTI (10,500)—17 miles—41 miles.  
Village, right bank of Shyok. At 5 miles Shyok river. Proceed down left bank, and cross by boat opposite Satti. Baggage animals must swim over. River fordable in winter.
4. TAGHAR—(10,500)—15 miles—56 miles.  
Village, left bank of Nubra. Barley and lucerne cultivation, and a good many trees. Proceed down right bank of Shyok to Tirit village, 7 miles. Then up left bank of Nubra, passing by Lúghjung village.
5. PANAMIKH—(10,840)—13 miles—69 miles.  
Large village, left bank of Nubra. Extensive cultivation, barley and lucerne (*chunpo*). Supplies should be taken in here for onward journey. At half-way cross rocky ridge. Charusa visible on opposite bank. At 12 miles hot springs.
6. CHANGLUNG—(10,760)—11 miles—80 miles.  
Small village, left bank of Nubra, the last inhabited place met with in Ladak territory on this route. Hot springs here, and a little cultivation. At  $3\frac{1}{2}$  miles pass Takcha village. At  $7\frac{1}{2}$  miles cross Tulumbuti stream by wooden bridge.
7. TUTIYALAK (13,000)—11 miles—91 miles.  
Camping ground, left bank of Tulumbuti stream. Fuel scarce; pasture plentiful. This place is called Pangdongsla by the Tibetans. Steep zigzag ascent of 4,000 feet to the Karawal-dawan ridge, 5 miles. Then down steep gravel slope to Tulumbuti stream. Cross it by ricketty spar bridge, and proceed up left bank to camp.
8. BRANGSA SASER OR SASER POLU (15,240)—15 miles—106 miles.  
Camping ground and a few huts at north-east base of Saser Pass, and on right bank of Shyok river. No supplies, fuel, or grass. Proceed north through narrow defile. Path very rough. At half-way Sarthang camp (also called Sar-Hauz-i-Khojah-Fateh) at foot of Saser Pass. Glaciers all round. Path now winds under a huge glacier, which it eventually crosses, leading over it for 3 miles. Passage dangerous. This is the summit of the Saser Pass (17,280). Path leads down from the glacier to Brangsa Saser.
9. BULAK-I-MURGHAI OR MURGHAI (15,200)—10 miles—116 miles.  
Camping ground, right bank of a tributary of the Shyok. Ford Shyok opposite Brangsa Saser. Proceed down left bank for a mile and then due east up a deep gully to Chungtash camp, 8 miles. From this place, where there is a large isolated rock, proceed down dry stony gully to Bulak-i-Murghai. Meet winter route from Leh at this camp.
10. KIZIL ANGUR (16,700)—16 miles—132 miles.  
Camping ground on left bank of a tributary of the Shyok, flowing down south from the Dépsang plain. No fuel or forage procurable. Follow up the course of the stream, and cross it repeatedly by narrow fords. Then leave it and pass over projecting bluffs. At 11 miles meet stream again, and follow up it to Kizil Angur. At 12 miles pass Burtsai camp. A difficult march. Road narrow and rough, and a risk from stone avalanches.
11. DAULAT BEGÚLDI (16,880)—20 miles—152 miles.  
Camping ground at north-west corner of the Dépsang plain. Continue up stream, path still difficult, and at 6 miles ascend up steep and stony gorge to the Dépsang plain (17,800). Cross this bleak, barren, undulating plateau, proceeding due



## LEH TO YARKAND.

north. Breathing difficult, owing to the great elevation and rarified atmosphere. From plateau descend into a wide deep gully. Cross shallow stream, which has a muddy bottom in which cattle stick. From it ascend to the Daulat Begüldi plateau. The winter route met with at this camp. It coincides with the summer route for the next two marches.

12. **BALTI BRANGSA OR BRANGSA KARAKORAM** (17,180)—22 miles—174 miles.  
Camping ground at north base of the Karakoram Pass, and left of a sandy ravine. Large rock here used as a shelter by travellers. No grass or fuel. Gradual rise to foot of the Karakoram Pass (18,550), which is crossed at 11 miles. Ascent sudden and steep. Descent also short and steep, and then gradual down a shingly gully to Balti Brangsa. Travellers and cattle suffer from the effects of the rarified atmosphere in crossing the pass. Pass Chajoshjilga camp at 12 miles.
13. **MALIKSHAH OR AKTAGH** (15,590)—28 miles—202 miles.  
Camping ground on right bank of Yarkand river. No wood or grass, and no water from the end of October to the end of April. Road follows down course of the wide shingly gully. Pass Kizil Tagh, Chadartash, and Wahabjilga camps. Latter at 14 miles. The Changchenmo route (western variation) meets the summer route at Malikshah; and the winter route branches off, following the Yarkand river.
14. **CHIBBA** (16,480)—10 miles—212 miles.  
Camping ground. No grass or wood. Water scarce. Proceed north over an elevated, arid, stony plateau. Breathing oppressed on the march.
15. **SUGET** (12,970)—21 miles—233 miles.  
Camping ground on right bank of Suget stream. Grazing ground much used by traders from Leh to Yarkand; fuel also obtainable. Ascent gradual for 6 miles to top of Suget-dawan Pass (17,610). Snow lies on it from September to April. Descent at first steep into a ravine. Then over high moraine banks of granite boulders, and across slope of a hill to Suget.
16. **SHAHDULA KHOJA**—8 miles—241 miles.  
Camping ground on left bank Karakash river on frontiers of Ladak and Yarkand, but lying in the latter territory. Small fort here with a garrison of 25 men. Fuel and grass plentiful. The road from Suget follows the course of the Suget stream, which at 4 miles joins the Karakash. From the junction it proceeds along the left bank of the Karakash to Shahdula. The winter route can be joined from here by following up the stream that flows down east from the Kirghiz Pass, Kirghiz jungle camp being two marches.
28. **YARKAND** (*via* SANJU Pass)—202½ miles—443½ miles.  
There are three routes from Shahdula to Yarkand, *viz.*, by the Kilik, Kilian, and Sanju Pass. The latter is the most frequented.

*The following alternative route may be taken between Leh and Satti, viz., by the Khardung Pass. This, though shorter than the route by the Digar-la, is more difficult, the great obstacle being the Khardung Pass:—*

1. **LEH TO CAMP AT FOOT OF KHARDUNG PASS.** (15,000)—13 miles.  
A few stone huts here. At 5 miles pass the small village of Ganles.
2. **KHARDUNG VILLAGE** (13,500)—14 miles—27 miles.  
Ascent of the Khardung Pass (17,900) begins at once. Last part of ascent very steep and rough. Descent also extremely steep for 1,200 feet, passing over a snow bed. Beyond this it is more gradual. This pass is impracticable for ponies; yaks must be used. There was snow on it in the middle of July. The village of Khardung lies on an alluvial plateau, bounded on one side by high cliffs.
3. **SATTI VILLAGE**—12 miles—39 miles.  
Follow course of Khardung stream, crossing it three or four times by rustic bridges to its junction with the Shyok at Khartsar village. Cross Shyok by boat to Satti on opposite bank. (*Montgomerie.*)  
This, the summer route, is open from four to five months in the year. Between Sarthang camp and Chibra there is very little grass, at some stages none at all.

## LEH TO YARKAND.

No. 3.

### WINTER, OR ZAMISTANI, ROUTE FROM LEH TO YARKAND.

2. **LEH TO DIGAR**—24 miles—24 miles. *Vide* Route No. 2.
3. **AGHAM** (10,500)—7½ miles—31½ miles.  
Village on left bank of Shyok, at junction of Digar stream.
4. **PAKRA** (11,000)—12 miles—43½ miles.  
Camping ground on right bank of Shyok. Cross river by ford, or on the ice.
5. **CHIMCHAK** (11,600)—10 miles—53½ miles.  
Camping ground on right bank of Shyok.
6. **LAMAKYENT** (12,200)—8 miles—61½ miles.  
Village on right bank of Shyok. Travellers either halt here or at Shyok on opposite bank. At the end of April the river between this and Agham was forded 16 times by General Strachey. Water from 1½ to 3½ feet deep. Valley uninhabited and barren. No villages above Shyok.
7. **CHUNG JUNGLE** (12,800)—18 miles—79½ miles.  
Camping ground on right bank of Shyok. Pasture good.
8. **DÜNGYALAK** (13,000)—18 miles—97½ miles.  
Camping ground on left bank of Shyok. In Turki the name signifies "The wild yak's summer pasture ground." This animal is often seen in the adjoining ravine.
9. **MANDARLIK** (13,300)—20 miles—117½ miles.  
Camping ground on right bank of Shyok.
10. **KUTAKLIK** (13,500)—12 miles—129½ miles.  
Camping ground on Shyok river, at junction of the tributary flowing into it from the Dépsang plain.
11. **SULTAN CHUSKUN** (14,000)—15 miles—144½ miles.  
Camping ground on left bank of Shyok and 10 miles below Brangsa Saser. Bulak-i-Murghai camp (on the summer route) lies 14 miles to the north.
12. **DAHNI-MURGHAI** (14,400)—18 miles—162½ miles.  
Camping ground on left bank of Shyok. At 10 miles Brangsa Saser on right bank.
13. **GAPSHAN** (15,150)—10 miles—172½ miles.  
Camping ground on right bank of Shyok. At 2 miles Kumdan camp. Pass two large glaciers. Another large glacier (Remoo) near Gapschan camp. Up to this point the route has followed up the bed of the Shyok river, crossing the stream repeatedly by fords or on the ice.
14. **DAULAT BEGÜLDI**—15 miles—187½ miles. *Vide* Route No. 2.  
From Gapschan the road follows up the Shyok a little way, and then turning north-east crosses a wild track of gravelly hillocks, and drops into a tributary stream. From this it rises on to the bleak plateau of Daulat Begüldi.
16. **MALIKSHAH**—50 miles—237½ miles. *Vide* Route No. 2.
17. **KHAFELUNG** (14,810)—20 miles—257½ miles.  
Camping ground on left bank of Yarkand river, at junction of a tributary from the south-west. Follow down course of Yarkand river. Valley for several miles covered with brushwood jungle (tamarisk).
18. **KASHMIR JILGA** (14,250)—11 miles—268 miles.  
Camping ground on banks of Yarkand river. Road continues down river bed.
19. **KUKAT AGHZI** (12,870)—25 miles—293½ miles.  
Camping ground in tamarisk jungle, on banks of Yarkand river. At 22 miles pass ruins of a fort (Nazar Beg Kurghan) at the entrance of a glen on the right. A road leads up this glen across the Kirphiz Pass to Shahdula (two marches).
20. **KULANÜLDI** (13,210)—15 miles—308½ miles.  
Camping ground on banks of Yarkand river in tamarisk jungle. The road continues down the river bed, passing through extensive patches of tamarisk jungle. Between this and Malikshah, the Yarkand river is crossed 18 times. This portion of the route was at one time unsafe, being infested by Kanjuti robbers. The Yangi-dawan Pass (15,800) over the Western Kuenlun is crossed 8 miles below Kulanüldi. The road to it is very difficult, passing through a narrow gorge which is blocked till June by a glacier.

## LEH TO YARKAND.

### 32. YARKAND—177 miles—485½ miles.

*Via* Yangi-dawan and Tupa-dawan Passes and Kugiar. (*Montgomery—Strachey—Trotter.*)

### No. 4.

#### LEH TO YARKAND, *via* CHANGCHENMO (WESTERN VARIATION).

1. LEH TO TIKZAY (11,000)—10 miles.  
Large village and monastery on right bank of Indus (above Leh). Cultivation. Road good.
2. CHIMRAY (11,890)—15 miles—25 miles.  
Village and monastery, situated in well-cultivated valley, a little distance from the right bank of the Indus. At 6 miles Indus fordable in September. Camping ground bad. A rest-house and supply depôt.
3. ZINGRAL (15,780)—8 miles—33 miles.  
Camping ground at head of Chimray valley. Small tank and grazing ground. Up valley for 3 miles till it forks. Up valley to eastward 1¼ miles to Sakti village. Ascent from here steep.
4. TSULTAK (15,950)—8 miles—41 miles.  
Camping ground at north-east base of Chang-la Pass. Small lake. Up most northerly of the two valleys an easy but stony ascent of 2 miles to top of the Chang-la Pass (17,600). Gradual descent of 4 miles. Road across pass bad for laden animals. Another road leads up the southern fork of the valley from Zingral camp and across the Kag-la Pass to Tankse. It saves 6 miles; but the Kag-la is a more difficult pass than the Chang-la.
5. TANKSE (12,900)—14 miles—55 miles.  
Large village on right bank of Lung-chu river. Rest-house and supply depôt. Supplies should be taken in here, as none are procurable between this and Sanju (360 miles). From Tsultak proceed down valley 6½ miles; easy road.  
Cross shoulder of hill into valley with stream running down south-east from Dorgu. Continue up valley to Tankse.
6. CHAKAR-TALAO (13,890)—14 miles—69 miles.  
Camping ground near small shallow pond, which is sometimes dry in summer. Coarse grass on further side of it. Valley above Tankse narrows to a gorge for 6 miles, then turns to the south and opens out. At 8 miles pass Muglib village. For 3 miles the valley is a grassy swamp, then narrows for 2 miles of gentle descent among rocky boulders.
7. LUKUNG (14,130)—7¼ miles—76¼ miles.  
A few huts, and small patch of cultivation, 2 miles from west end of the Pangong Lake. Small stream flows into lake.
8. CHAGRA (15,090)—8 miles—84¼ miles.  
Camping ground near west end of the Pangong Lake. One or two small huts and a serai. Fish in stream. Grass and fuel plentiful. All cultivation ceases here.
9. RIMDI (17,500)—13 miles—97¼ miles.  
Camping ground at north-east base of the Marsemik-la Pass at junction of two streams. Fuel scarce; grass plentiful. Kyang, Sna-po, and wild yak on the surrounding hills. 5½ miles gentle ascent to Lankar. Then steeper, but not difficult ascent to top of Marsemik-la Pass (18,400). Gradual descent down valley due north.
10. PAMZAL (14,790)—13 miles—110¼ miles.  
Camping ground on left bank of Changchenmo river. A serai here. Grass and fuel plentiful. Down valley to east; stony and narrow track for 2 miles along face of steep hill; valley then bends to the north. Road improves.
11. GOGRA (15,570)—12¼ miles—122¼ miles.  
Camping ground and serai in Kugrang valley. Up Changchenmo valley at half-way ford the river, and then north-north-west up Kugrang valley. Fuel plentiful; grass scarce.

## LEH TO YARKAND.

12. **KOTA JILGA** (16,730)—8 miles—130½ miles.  
Camping ground in Kugrang valley. Grass, water, and wood procurable. Road up stream good. Several steep ascents and descents. In crossing tributary streams are somewhat difficult for laden ponies. Pass ravine on right leading to Nischu.
13. **PANGTONG** (17,250)—7½ miles—138½ miles.  
Camping ground at south base of Changlung Pangtung Pass. Grass and an inferior fuel said to be plentiful. Steady and gentle ascent through a broad, stony ravine for 4 miles, then somewhat steeper.
14. **SAMZUNGLING** (17,310)—15 miles—153½ miles.  
Camping ground. A little grass on neighbouring hill; no fuel. Steady and not very steep ascent to the top of the Changlung Pangtung Pass (18,910). Road then passes for 1 mile over a high table-land, when it enters a ravine and passes along it for 9½ miles. Road very bad, frequently crossing the stream. Camp at junction of three nalas. This is one of the worst crossings on the whole road.
15. **DEHRA KOMPAS** (17,890)—19 miles—172½ miles.  
Camping ground at foot of low pass. No grass or wood. A little water obtained by digging. Road runs nearly due north up gentle ascent for 5 miles. Then for several miles of good road across the west edge of the Lingzithung plain. Cross a branch of the Karakash river.
16. **SHINGLUNG OR DUNGLUNG** (17,030)—18 miles—190½ miles.  
Camping ground on right bank of Karakash. Fuel (boortsee) abundant. Cross pass and down ravine. Strike Karakash at 5½ miles, and follow its course. Road good, but stony.
17. **KIZIL JILGA** (16,360)—14½ miles—204½ miles.  
Camping ground on right bank of Karakash. Fuel, grass, and water within reach. Down the river. Captain Biddulph's route from the Changchenmo valley is met with here. Road for first mile bad and stony down river bed. Then for 3 miles across an ice bed (slippery and difficult for laden ponies). Near camp, passage of Karakash difficult (in October), owing to admixture of ice and water.
18. **KHUSHKMAIDAN** (15,590)—17 miles—221½ miles.  
Camping ground on right bank of Karakash. Down river bed. At 5 miles water disappears in the ground; none to be found for 11 miles, when numerous springs are met with. Road excellent all the way. Fuel abundant; grass scarce.
19. **SHOB JILGA** (16,480)—20½ miles—242½ miles.  
Camping ground on right bank of stream that flows down from the Karatagh Pass. No grass or fuel, and no water in October. Fuel plentiful 4 miles below camp. Road down Karakash good, but stony. At 6½ miles pass Chungtash camp, from which Captain Biddulph's route branches off, following the Karakash. Road now bad up tributary stream to west for 3 miles, crossing it several times.
20. **KARATAGH** (16,890)—9 miles—251½ miles.  
Camping ground on banks of a lake which was frozen over in October. Water obtained by making a hole in the ice. Fuel plentiful. No grass. Up ravine. Road bad. Snow and ice nearly the whole way. Short but sharp descent from Karatagh Pass (17,710) into large plain covered with several inches of snow.
21. **MALIKSHAH**—22½ miles—273½ miles. *Vide* Route No. 2.  
Road the whole way good over a level plain, which (in October) was covered with snow. At half-way pass Tamba camp at east foot of a low double-topped hill. A route leads north from this place across rather a high and difficult pass to Fotash camp on the Karakash, and thence to Shahdula, but the preferable route is *via* the Suget-dawan.
24. **SHAHDULA KHOJA**—39 miles. *Vide* Route No. 2.
36. **YARKAND** (*via* SANJU PASS)—202½ miles—515½ miles.  
Summer route. (*Captain Trotter.*)

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### No. 5.

#### LEH TO YARKAND (*via* CHANGCHENMO VALLEY).

11. **LEH TO GOGRA**—122½ miles. *Vide* Route No. 4.
12. **SHUMMAL LUNGPA OR BHAO**—(17,020)—12 miles—134½ miles.  
Camping ground in ravine leading into the Changlung valley. Water and fuel

## LEH TO YARKAND.

plentiful. Grass very scarce. Cross Kugrang valley, and up Changlung valley to north-east. Stream runs in narrow gorge. At  $4\frac{1}{2}$  miles narrow steep descent and ascent across gorge coming from the north. At 6 miles hot springs. Valley bends to north. Road winds in narrow track on hill-side. Several steep ascents and descents. At 9 miles a large ravine leading east to the Changlung Yokma Pass. At 10 miles Shummal Lungpa ravine, running east.

13. **CAMP NEAR NISCHU** (18,630)— $14\frac{1}{2}$  miles—149 miles.  
No grass or fuel. Up valley  $3\frac{1}{2}$  miles to fork. Up ravine to eastward, at head of which appears a practicable pass. At 4 miles up ravine north-west. Steepish ascent to Changlung Barma Pass (19,300). Descend into broad shallow valley due east. Camp near black jagged hill.
14. **CAMP LINGZITHANG** (17,680)— $16\frac{1}{2}$  miles—165 $\frac{1}{2}$  miles.  
Fuel and water obtainable, the latter by digging. No grass. Down main valley, which at  $6\frac{1}{2}$  miles opens out into the Shumshul plain. Due north across this plain for 6 miles. Cross low ridge leading on to the Lingzithang plain. Proceed due north for 5 miles and camp in water-course.
15. **JUNGLE CAMP**—17 miles—182 $\frac{1}{2}$  miles.  
Camp by small pond. No grass or fuel. The latter obtainable on plain to the north. Cross plain for 9 miles, in direction of a rocky peak. Remaining 8 miles over low ridges.
16. **SUMNA** (17,150)— $21\frac{1}{2}$  miles—204 miles.  
Camping ground at north base of Kizil Pass. Road for 3 miles among low hills, then into broad valley north for 2 miles. Water here plentiful. Turn up broad valley west for 11 miles to red rock. Cross Kizildawan Pass (17,290), and at foot of it enter the Kizil Jilga ravine, in which lies the camping ground. Water, grass, and fuel 3 miles lower down.
17. **KIZIL JILGA**—9 miles—213 miles.
18. **KHUSH KMAIDAN**.—17 miles—230 miles. } *Vide* Route No. 4.
19. **CHANGTASH** (15,590)—7 miles—237 miles.  
Camping ground left bank of Karakash, at junction of tributary from Karatagh Pass. A large rock here. No wood or grass. A route leads from here over the Karatagh Pass to Malikshah (Route No. 4).
20. **SUMNAL** (15,540)—13 miles—250 miles.  
Camping ground left bank of Karakash, at junction of large nala from the west. Fuel and grass abundant. Follow down river bed. At 6 miles hot springs on right bank. Beyond this road in parts stony and bad. River crossed frequently.
21. **TAK MARPO** (15,000)—11 miles—261 miles.  
Camping ground in Karakash valley under yellow rock on left bank. Grass and fuel obtainable. Pass Zinchin camp on right bank. Latter part of road encumbered by huge boulders and rubbish. Difficult for laden animals.
22. **POLONG KARPO** (14,600)—21 miles—282 miles.  
Camping ground left bank of Karakash, near large rock. Grass abundant. Fuel found 5 miles above camp. Road good.
23. **SORA** (14,000)— $17\frac{1}{2}$  (P) miles—299 $\frac{1}{2}$  miles.  
Camping ground right bank of Karakash, in broad valley at foot of Eastern Kuenlueu range. Fuel and grass plentiful. Ground covered with natural salt-pans. At 5 miles river takes a sharp bend to the north-west, and is met here by its eastern branch. A road branches off from this point north-east, across the Yangi (or Elchidawan) Pass to Khotan, distant 160 miles, or from 11 to 16 days' march. Pass (19,500) closed for three months.
24. **JUNGLE CAMP**—17 miles—316 $\frac{1}{2}$  miles.  
At mouth of small ravine. Opposite mouth of Kara Jilga ravine. Fuel and grass abundant.
25. **SUMGAL**— $25\frac{1}{2}$  miles—342 miles.  
Camping ground right bank of Shyok. Fuel and grass abundant. A pond leads north-east from here to Khotan, about ten days' march; road bad. The Kuenlueu range being crossed (on this route) by the Hindutak Pass (17,379). A glacier pass only used by foot passengers.
26. **GULBASHEM** (12,385)—17 miles—359 miles.  
Camping ground right bank of Karakash, and favourite resort of Kirghis. Fuel and

## LEH TO YARKAND.

- grass plentiful. At 5 miles river much increased by springs. At 7 miles Fotash camp on left bank. A route leads from here up Fotash ravine, and across a rather difficult pass, to Tamba camp, thus avoiding the Suget Pass. It is not often used.
27. **BULAKCHI** (11,600)—10 miles—369 miles.  
Camping ground right bank of Karakash. Grass and fuel procurable. Pass jade quarries at base of Kuenluen range.
28. **SHAHDULA KHOJA**—13 miles—382 miles. *Vide* Route No. 2.  
At 6 miles strike road from Suget Pass. Road good.
40. **YARKAND**—202½ miles—564½ miles. By summer route.  
Though parts of this road (as far as Shahdula) are practicable for guns and wheeled carriage, it is, on the whole, only available for camels and horses. (*Captain Biddulph.*)

No. 6.

### LEH TO YARKAND (*via* CHANGCHENMO VALLEY).

(*Eastern variation.*)

10. **LEH TO PAMZAL**—110½ miles. *Vide* Route No. 4.
11. **KIAM** (15,400)—12 miles—122½ miles.  
Camping ground Changchenmo valley, left bank of stream from Képsang Pass (east), 2 miles above its junction with Changchenmo river. Hot springs here. Grass and fuel plentiful. Antelope, kyang, and wild yak in neighbourhood. Road over level sandy ground, covered with boulders, up left bank. At 9 miles ford river (morning the best time for fording). Road leads north from here to Gogra, 3½ miles. (Route No. 4.)
12. **LUMKANG** (17,501)—18 miles—140½ miles.  
Camping ground Changchenmo valley. Direction north-east-east. A little grass and fuel. Antelope numerous. Cross stream immediately north of hot springs. At 8 miles cross low spur. Then up Lumkang ravine.
13. **NISCHŪ** (18,630)—20 miles—160½ miles.  
Camping ground at junction of two streams, at south edge of Lingzithang plain. A little fuel. No grass. Direction north. At 4 miles Lumkang Pass (19,533). Gradual ascent to top, 8 miles, and gentle descent down Nischū ravine. No snow on pass at end of July. Road good. Roads also lead down to Nischū from the Changlung Barma and Changlung Yokma Passes, both good for laden animals. Captain Biddulph's route (No. 5) branches off north-west from this camp.
14. **BURCHATHANG** (17,425)—18 miles—178½ miles.  
Camping ground Lingzithang plain. No wood or grass. Water from small stream. Direction north. Good road follows left bank of stream. At 8 miles leave stream and cross several low, broad spurs, going over dry bed of a small lake. Pass low spur and descend ravine (sandy) to camp.
15. **TBOTHANG** (17,100)—20 miles—198½ miles.  
Camping ground north edge of Lingzithang plain, at foot of Lokhzung range, and on the northern shore of a salt lake. Little fuel. No grass. Direction north. Road good over plain, which is covered with saltpetre. No hills seen to east.
16. **HUZAKHAR** (16,684)—15 miles—213½ miles.  
Camping ground in the Lokhzung range, on east shore of small lake (water brackish). Spring of fresh water flows from high bank into the lake. Direction north.
17. **THALDAT OR MAPOTHANG** (16,300)—16 miles—229½ miles.  
Camping ground at southern edge of Kuenluen plain, and immediately south of a salt lake (partially frozen end of October). Direction north. Road for 12 miles down broad, sandy ravine. Then turn to left over spur to camp. No wood or grass. Water in lake brackish. An alternative route may be taken from here

## LEH TO SIMLA.

north-west *via* Patsalang, distance by it to Karakash 88 miles (10 miles longer than eastern road *via* Yangpa).

18. YANGPA (16,200)—25 miles—254½ miles.

Camping ground on left bank of stream from Kuenluen range (water brackish). A little fuel and grass. Direction north over extensive plain, covered with several lakes (water brackish with offensive smell). Patches of soda met with on this plain.

19. KARAKASH (15,491)—18 miles—272½ miles.

Camp on left bank of the river. A few stone huts on opposite bank. River from here flows west towards Shabdula. Fuel plentiful, and a little grass. Direction north, up sandy ravine. At 8 miles cross Kataidawan Pass (17,501). Then over dry bed of a lake, and from it by abrupt descent to the Karakash. A route leads from here north-east across the Yangidawan Pass to Khotan, 160 miles (*vide* Sora, Route No. 5).

24. SHAHDULA KHOJA—100 miles—372½ miles. *Vide* Routes Nos. 2 and 5.

36. YARKAND—202½ miles—574½ miles. By summer route.

(Johnson.)

### ROUTES FROM LEH TO YARKAND.

No.	Route	Total distance in miles.	Number of marches.
No. 1.	Summer route by Karakoram and Sanju Passes	... 443½	28
„ 2.	Winter route by Karakoram Pass and Kugiar	... 485½	32
„ 3.	Changchenmo route (western variation)	... 515½	36
„ 4.	Changchenmo route (Captain Biddulph's)	... 584½	40
„ 5.	Changchenmo route (eastern variation)	... 574½	36

It will be seen that the shortest route is by the Karakoram Pass, and Captain Trotter thinks that, in spite of its many difficulties, such as the Khardung and Saser Passes, the Yarkandi merchants will still continue to use it, in preference to the various routes leading from the Changchenmo valley. He observes that, "in addition to the intense cold, the principal objection to all three routes skirting or passing over the Lingzithang, is the extreme elevation at which the traveller has to remain for so many marches; the cattle are exhausted by this, and too frequently suffer, in addition, from the pangs of hunger and thirst. These difficulties nearly brought the first mission to Yarkand to a disastrous end, and the same causes have proved, and will probably continue to prove, sufficient to deter the experienced merchant from following this road. The older, shorter and better known route by the Karakoram is likely always to be preferred by the merchant, even in summer, whereas in winter an attempt to cross the Lingzithang plain must always result in disaster." Dr. Cayley, on the other hand, is in favour of the Changchenmo route. While on special duty in Ladak, he had serais and supply depôts built at certain places on the route, such as, Tankae and Gogra, and in every way encouraged the traders to travel by it. Many of them did so, and several caravans of camels came by it from Yarkand to Leh. Mr. Shaw is also in favour of it, especially the western variation, and thinks that when properly laid out, traders will gradually take to it. (*Cayley's, Shaw's, and Montgomerie's reports—Trotter*).

### No. 7.

#### LEH TO SIMLA BY KULU.

1. LEH TO SHUSHOT (10,500)—12 miles.

Large village, left bank of Indus. Extensive cultivation, poplar and willow trees. Cross Indus by good wooden bridge, at 7 miles. Camp in Golab-bagh. Road heavy between Leh and bridge.

2. MARSALANG (12,200)—13 miles—26 miles.

Village, left bank of Indus. Rest-house and supply depôt. Camping ground Attabagh near Atta. Considerable plantations of poplar and willow, and extensive cultivation. Indus crossed by good wooden bridge, leading to Chimray on right bank, where the Changchenmo route is joined. Road good up left bank of Indus.

## LEH TO GAR.

3. **UPSHI**—10 miles—35 miles.  
Village, left bank of Indus. Considerable cultivation. Poplar, willow, and fruit trees.  
Road good up left bank of Indus.
4. **GYA** (13,500)—18 miles—53 miles.  
Village and monastery, left bank of stream of that name. Barley cultivation. Rest-house and supply depôt. Road follows up Gya stream, crossing and re-crossing it. In parts stony, but not difficult.
5. **DEBRING**—19 miles—72 miles.  
Camping ground south-east base of the Tagalung Pass (18,042), which is crossed between it and Gya. Road from latter continues up Gya stream. Then up very stony steep ascent to top of the Tagalung. Descent also stony and steep. The road has been repaired of late years. No supplies at camp. Fuel plentiful. Grass and water scarce.
6. **RUKCHEN** (15,000)—16 miles—88 miles.  
Camping ground north end of Kiang plain. Generally a Tartar camp here.
7. **MORECHU**—12 miles—100 miles.  
Camping ground in Kiang plain. Small pond of fresh water, which in summer often dries up. Owing to this scarcity of water an alternative route is sometimes taken between Debring and Sumgal camps, by the Zara valley and Zara and Sangtha camps.
8. **SUMGAL OR SUMKIEL**—13 miles—113 miles.  
Camping ground right bank of Sumgal river, and at north-east base of Lachalang Pass, at junction of three streams.
9. **SUMDO**—20 miles—133 miles.  
Camping ground and rest-house near top of the Lachalang Pass (16,630). Ascent of this pass steep, but of late years the road across it has been much improved. Scarcely any snow on it after the 15th June.
10. **SARCHU OR LINGTI**—20 miles—153 miles.  
Camping ground at junction of the Lingti and Yunam streams, and on the borders of Ladak and Lahoul. Cross Tsarup (or Serab, or Cherpa) river by bridge. A route leads from Sarchu up this river and across the Pankpo-la Pass to the Tsomoriri Lake and Puga. It is only used by Lahouli traders, and is not practicable for ponies or horses.
11. **KANUNOR KILANG**—11 miles—164 miles.  
Camping ground at north-east base of the Baralacha Pass. A bridge here across the Yunam river. This is the last camping ground in Ladak territory. From it the Baralacha Pass (16,060) leads over the Himalayas into Lahoul. It is practicable for laden ponies. Closed by snow from October to end of June.
24. **SULTANPUR**—151 miles—315 miles.  
Capital of Kulu.
36. **SIMLA**—146 miles—461 miles.  
(*Montgomerie—Drew—Reynolds.*)

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## LEH TO PALUMPUR.

24. **LEH TO SULTANPUR**—315 miles.
30. **PALUMPUR**—71 miles—386 miles.  
Town in Kangra district. A fair held here each autumn to attract Yarkandi merchants from Leh. Jullundur, nearest railway station, 96 miles, connected by a cart road. (*Drew.*)

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## No. 8.

### LEH TO GAR (CHINESE TERRITORY).

5. **LEH TO DEBRING**—72 miles. *Vide* Route No. 7.
6. **THUGJI** (14,900)—14 miles—86 miles.  
Camping ground on northern bank of Tsokar Lake. Fuel and grass plentiful. Water from small stream. Generally a few Boti camps here, from which a few supplies and sheep are procurable. Road good, though sandy in places.



## LEH TO SKARDO.

7. **CAMP**—12 miles—98 miles.  
A route leads from here south across the Nakpogoding Pass to the Tasmoriri Lake.
8. **PUGA** (15,200)—13 miles—111 miles.  
Camping ground on right bank of Puga stream. Sulphur mines, borax fields, and hot springs near here. Fuel plentiful. Grass in patches. Cross Polakonka Pass (16,300). Ascent and descent very gradual. Down stream to camp.
9. **MAHIYE** (13,800)—13 miles—124 miles.  
Camping ground on right bank of Indus, opposite junction of Puga stream. No wood or grass. Cattle must swim over river to pasture on left bank. At ford water waist-deep. A route leads from here north to Shooshal over the Thatola Pass (33 miles).
10. **NIMA MUD** (14,000)—12 miles—136 miles.  
Two small villages on right bank of Indus. A little barley cultivated. Fuel and grass plentiful. Indus fordable. Water chest-deep. Current almost imperceptible (autumn). Routes lead from this to Leh down both banks of the river (both difficult). There are also two routes to Shooshal—(1) by Mahiye and Thatola Pass; (2) Tsaka-la Pass. Route to Hanlé *via* Nowi Camp, south.
11. **CAMP**—17 miles—153 miles.
12. **CAMP**—17 miles—170 miles.
13. **DORA** (13,800)—10 miles—180 miles.  
Camping ground on right bank of Indus, close by a small shallow lake. Clear fresh water. This is a winter station of the Rupeshu shepherds. The boundary of Chinese Tibet is a day or two's journey beyond camp.
18. **TASHIGONG**—55 miles—235 miles.
21. **GAR**—30 miles—265 miles.  
This is lower Gar, the winter station. (*Drew—Reynolds.*)

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### No. 9.

#### LEH TO SKARDO (*via* INDUS VALLEY).

4. **LEH TO KHALSI**—55 miles. *Vide* Route No. 1.
5. **SKIIBICHAN**—16 miles—71 miles.  
Village on right bank of Indus. Extensive cultivation. Road follows down right bank of Indus.
6. **YOGMA HANU OR LOWER HANU**—14 miles—85 miles.  
Village on right bank of Indus at junction of Hanu stream. A little cultivation and a few trees. Summer road (*via* Chorbat Pass) branches off here to the north.
7. **OORDAS**—16 miles—101 miles.  
Village on right bank of Indus in Balti territory. At half-way pass frontier village of Dah on right bank.
8. **MAROL**—21 miles—122 miles.  
Village on right bank of Indus, opposite junction of Dras river. It is also in Balti territory. Path difficult. Not fit for ponies.
14. **SKARDO**—80 miles—202 miles.  
This is the winter route. The summer road by the Chorbat Pass is much better. (*Drew—Montgomerie.*)

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### No. 10.

#### LEH TO SKARDO BY CHORBAT.

5. **LEH TO SKIIBICHAN**—71 miles. *Vide* Route No. 9.
6. **GOMA HANU OR UPPER HANU**—17 miles—88 miles.  
Village on left bank of Hanu stream. At 14 miles Yogma Hanu at junction of Hanu stream with Indus. The stream flows down through a narrow, impassable gorge. The road leads over shoulder of a spur to Yogma Hanu. Beyond this it is pretty level.

## LEH TO SIMLA.

7. CAMP AT FOOT OF HANU PASS—10 miles—98 miles.  
Road leads up Hanu stream. Pass Handangsmir on left bank.
8. PIUN—21 miles—119 miles.  
Village on left bank of Shyok in Balti territory. Cross Chorbit (or Hanu) Pass on the borders of Ladak and Baltistan.
16. SKARDO—90½ miles—209½ miles. (*Drew*).

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### No. 11.

#### LEH TO SKARDO (*via SHYOK VALLEY*).

2. LEH TO KHARDUNG—27 miles. *Vide* Route No. 2.
3. KHARTSAR (10,430)—12 miles—39 miles.  
Village on left bank of Shyok, situated in deep ravine. Cultivation and fruit trees.
4. DESKIT (9,950)—8 miles—47 miles.  
Large village on left bank of Shyok, opposite junction of Nubra river. Cultivation and fruit trees.
5. HUNDAR—9 miles—56 miles.  
Large village on left bank of Shyok. Fine orchards of apricot trees. River fordable in October and throughout winter months. A pathway leads from here due south over the Thanglasgo Pass (16,960) to the Indus, a little below Leh.
6. TERTSE—10 miles—66 miles.  
Village on left bank of Shyok. River fordable in October, flowing in several channels about 2 feet deep.
7. UNMARU—5½ miles—71½ miles.  
Village on right bank of Shyok. Cultivation and melons. Ford river at Tertse.
8. KHORO (10,300)—9½ miles—81 miles.  
Village on right bank of Shyok. The river below this enters a deep gorge.
9. WARIS (12,400)—8 miles—88 miles.  
Village some distance from right bank of Shyok. Road can no longer (in summer) follow the river, but proceeds north-west up a very narrow, rugged ravine. In winter the river can be traversed on the ice.
10. BOGH DAN (11,700)—7 miles—95 miles.  
Village on right bank of Shyok, in well-wooded ravine. From Waris ascend ridge on left (14,700).  
This ridge is on the borders of Nubra and Chorbit. Descent from it very abrupt (3,000 feet in less than 1 mile).
11. CHULUNKA—9 miles—104 miles.  
Village on right bank of Shyok, on frontiers of Ladak and Chorbit.
23. SKARDO—89 miles—193 miles.  
All short marches. (*Dr. Thomson—Genl. Cunningham.*)

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### No. 12.

#### LEH TO SIMLA BY SPITI AND WANGTU.

8. LEH TO PUGA—111 miles. *Vide* Route No. 8.
9. KABJOK (14,900)—17 miles—128 miles.  
Monastery at north-west end of Tsomoriri Lake. Summer camp and pasture ground of Rupshu shepherds 3 miles up the stream from the west. From Puga follow up stream to near foot of Polokonka Pass and then strike off due south across the Nakpogoding Pass (18,000). Near its south foot pass the Tsokiagr Lake and Tsakshang camp.
10. KYANGDUM (14,900)—13 miles—141 miles.  
Camping ground at south end of the Tsomoriri Lake. Road along west shore of the lake.
11. NARBU SUMDO (15,300)—11 miles—152 miles.  
Camping ground right bank of the Para river due south of the Tsomoriri Lake. It is on the borders of Ladak and Spiti.

## SPITI TO CHANGCHENMO.

17. DNEAR (IN SPITI)—87 miles—239 miles.

The Parang-la Pass (18,300) is crossed between the 13th and 14th stages.

24. WANGTU—81 miles—320 miles.

25. SIMLA—121 miles—441 miles. (*Drew.*)

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### No. 13.

#### SPITI TO CHANGCHENMO BY PARANG-LA AND PANGONG.

9. SPITI TO PUGA CAMP—128 miles. *Vide* Route No. 12.

10. MAHIYE—13 miles—141 miles.

Camping ground right bank of Indus, opposite the junction of the Puga stream. Ford Indus. Water waist-deep.

11. YAH-LE (15,000?)—10 miles—151 miles.

Camping ground. No supplies. Fuel and grass plentiful. Road due north.

12. MIRPA TSO—11 miles—162 miles.

Camping ground and fresh water lake. A little fuel. No supplies. Road leads north-east. At 7 miles cross Thato-la Pass (17,490). Road over it very stony.

13. SHOOSHAL (14,200)—12 miles—174 miles.

Large village and Government store-house on left bank of Shooshal stream. A route leads from here over the Tsaka-la Pass to the Indus. Another route also branches off north-west across the Kongta-la Pass, and down the Lung-chu valley to Tankse (55 miles).

Road from Mirpa Tso, north-east. At one mile cross Shooshal Pass (16,950). Descent steep.

14. KARPET (14,000)—12 miles—186 miles.

Small hamlet on west shore, Pangong Lake. Follow down Shooshal stream. Pass hot springs and Takang camp.

15. MANG (13,940)—10 miles—196 miles.

Small hamlet on west shore, Pangong Lake. Water from stream. Pasture and fuel plentiful. Road follows west shore of the lake. At 3 miles Mirak village.

16. LUKUNG (14,130)—14 miles—210 miles.

Camping ground at north-west end of the Pangong Lake. The Changchenmo route is joined here (*vide* Route No. 4). (*Montgomery—Reynolds.*)

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### No. 14.

#### SPITI TO CHANGCHENMO BY HANLÉ AND PANGONG.

6. SPITI TO NABBU SUMDO—87 miles. *Vide* Route No. 12.

7. DONGAN—18 miles—105 miles.

Camping ground. Road leaves Para river and leads north-east.

8. CAMP—19 miles—124 miles.

On high table-land. Cross Lanak Pass (18,100). Ascent, near top, steep. Descent at first gentle and then steep to bottom of a valley through which a stream flows.

No snow on pass in September.

9. HANLÉ (14,276)—18 miles—142 miles.

Village and monastery on left bank of Hanlé river. Fresh-water lake here.

10. MONKANG—19 miles—161 miles.

Camping ground. Road leads due north over Monkang plain. There is another route from Hanlé to the Indus, which follows the left bank of the Hanlé river.

11. TARA—12 miles—173 miles.

Camping ground right bank of Hanlé river.

12. NOWI (13,900)—11 miles—184 miles.

Camping ground right bank of Indus. Ford river, water waist-deep. Nima Mud camp, 10 miles below on right bank.

13. DACHUNG OR DONGLUNG—15 miles—199 miles.

Camping ground. Water from stream. No supplies. Fuel and grass plentiful. At 5 miles road leaves Indus. At 13 miles pass Ralmang monastery. At 3

## LEH TO KISHTWAR.

miles cross Tsaka-la (15,625), a very easy pass. Then follow down Shooshal stream.

14. SHOOSHAL—22 miles—221 miles. *Vide* Route No. 13.
17. LUKUNG—36 miles—257 miles. *Vide* Route No. 13.  
(*Montgomery—Reynolds.*)

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### No. 15.

#### MAHIYE TO LEH, DOWN INDUS VALLEY.

1. MAHIYE TO CHUMATHANG—14 miles.  
Village on right bank of Indus. Supplies procurable. Fuel and pasture plentiful. Hot springs. Road, down right bank of Indus, rough.
2. NI OR GNI—12 miles—26 miles.  
Small village on right bank of Indus. Fuel and pasture plentiful. Gold-fields here. Pass Kinma (or Kidmung) on left bank and Kesar on right bank. River fordable at former. In November, water breast-high. Road very rough, and many ascents and descents.
3. GYIK—12 miles—38 miles.  
Small village on right bank of Indus. Fuel and pasture plentiful. At 5 miles Ekekka on right bank. Road fair, but the rest of the march very rough, crossing awkward precipices almost impassable for yaks. Kangmar and Khere passed on left bank.
4. HERIYA—13 miles—51 miles.  
Village on left bank of Indus. Supplies procurable. Fuel and pasture plentiful. At 7 miles cross to left bank by wooden bridge, which is not fit for laden animals. Road at points very rough and steep. Road to Rupshu *via* Tiri ravine branches off here. At 8 miles Kyangyúm village on right bank.
5. SHEBA—14 miles—65 miles.  
Village on right bank of Indus. Supplies, fuel, and pasture procurable. At 3 miles re-cross to right bank by wooden bridge, impracticable for laden animals. At 7 miles Likche village on right bank. At 11 miles Ikna. Road between these two villages impracticable for laden animals, two lofty spurs being crossed by a succession of stone steps.
6. ENGO—10 miles—75 miles.  
Supplies, fuel, and grass procurable. Road stony in places.
7. TIKZAY—16 miles—91 miles.  
Large village and monastery on right bank of Indus. Cultivation. Changchenmo route met here.
8. LEH—11 miles—102 miles.  
At 4 miles Kharu village at entrance of Chimray valley. Road good. (*Reynolds.*)

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### No. 16.

#### LEH TO KISHTWAR (*via* SÚRÚ).

7. LEH TO KARGIL—(8,787)—120 miles. *Vide* Route No. 1.
8. CAMP—13 miles—133 miles.  
Road leads up Súrú valley. Pass village of Gonh on left bank.
9. SANKHO—13 miles—146 miles.  
Village on left bank of Súrú river, at junction of the Nakpo-chu from the west. Cultivation. Supplies and sheep procurable. A pathway leads up the banks of the Nakpo-chu, past Omba village, and across the Omba-la Pass to Dras. Ascent difficult; descent easy. Kartse, the capital of the district, lies opposite to Sankho, at the junction of the Pulumba-chu.
10. SÚRÚ (10,624)—18 miles—164 miles.  
Village on left bank of Súrú river. There is a fort here built by the Dogras in 1834.

## LEH TO KISHTWAR.

### 11. CAMP—10 miles—174 miles.

The road now leaves the Súrú river and leads up a tributary stream south-west towards the Bhot Kol Pass (14,370). It is crossed between the eleventh and twelfth stages, and is a difficult glacier pass. Impracticable for laden ponies, though it is possible to lead a horse over it. It leads down to the Wardwan valley. The road across it is closed by snow for six months.

### 22. KISHTWAR—132 miles—306 miles.

The road from Kargil is not fit for laden animals. A horse can be led along it. (*Drew.*)

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## No. 17.

### LEH TO KISHTWAR (*viá* ZANKSAR).

#### 4. LEH TO LAMAYURU (11,520)—66 miles. *Vide* Route No. 1.

#### 5. WANLA (10,900)—6 miles—72 miles.

Village on left bank of Wanla stream. Cultivation. Road from Lamayuru leads south-east up a valley. Cross ridge (12,500) and down a barren ravine to Wanla.

#### 6. HOFATA (12,400)—12 miles—84 miles.

Village on left bank of Wanla stream. A little cultivation. Poplars, willows, and some large juniper trees. Lucerne plentiful. For 2 miles road tolerably good, leading over the mountain side, but difficult for the next 7 miles. The Wanla ravine narrows considerably and is very rocky. In July the stream was unfordable here, and "it repeatedly becomes necessary to ascend to a considerable height to effect a passage." In other parts the road crosses the stream several times.

#### 7. FATOKSIR (13,900)—12 miles—96 miles.

Village at south base of the Sirsir-la Pass. Valley partially cultivated. Water from stream. Road follows up the Wanla valley, generally at some height above the stream to the top of the Sirsir-la Pass (16,372). Descend down barren, stony valley, and follow course of stream to Fatoksir.

#### 8. YELCHUNG (12,730)—16 miles—112 miles.

Village on left bank of Zankсар river and at foot of Singa-la Pass. Barley and buck-wheat cultivation. An iron mine in vicinity. Cross ridge and up wide arid valley. Ascent gradual, then steep ascent of a few hundred yards to top of the Singa-la Pass (16,600). Snow-bed on north face in July. Descent at first steep, then gradual. At about 15,000 feet the road is almost level, winding round a deep hollow in the mountains. After this it descends over dry rounded hills to Yelchung.

#### 9. NAERUNG OR NIRA (11,850)—6 miles—118 miles.

Village a short distance from right bank of Zankсар river. Extensive cultivation. Cross two ridges and then down barren, steep descent to Zankсар river. Cross by wooden bridge, 40 feet long and with no hand-rails. In July it is nearly 50 feet above the water. Steep, stony ascent to Naerung.

#### 10. PANCHE—10 miles—128 miles.

Village, Zankсар district. No supplies. Road leads due south. Cross Naerung Pass (16,000). Stony abrupt ascent. Descend by ravine on left to Panche. The road by the ravine on the right is shorter, but much steeper.

#### 11. NAMTSE—10 miles—138 miles.

Village, Zankсар district. Road continues south.

#### 12. ZANGLA—13 miles—151 miles.

Village on right bank of Zankсар river. Cross Chelang Labho Pass (14,850). Another route to Leh branches off from here to the east. Up the Zang-la stream and across the Char-char-la, Riberang-la, and Kanda-la Passes. It is very difficult, and is only open for two months (May and October).

#### 13. THONDE—12 miles—163 miles.

Small village on right bank of Zankсар river. Road leads up right bank at some height above the river over dry, stony plains.

#### 14. PADAM (11,873)—9 miles—172 miles.

Village on left bank of Zankсар river, formerly capital of the district. Road continues up right bank. At 4 miles junction of tributary from west. At 7 miles

## TRADE AND TRADE RETURNS.

Okti fort on left bank (small Kashmiri garrison). Opposite Padam cross to left bank by rather insecure rope-bridge.

15. **SANI** (11,560)—9 miles—181 miles.

Village on right bank of a tributary of the Zanksar river. Cultivation and pasture. A rope-bridge leads across to Tungring village, on opposite bank. Road from Padam leads north-west across grassy plain, and then up the tributary stream.

16. **ATING**—9 miles—190 miles.

Village on left bank of tributary of Zanksar river. Cross the left bank by rope-bridge. Pass Tungring on left bank and Markim on right bank.

17. **GOWEA**—10 miles—200 miles.

Cross stream and proceed up smaller tributary south-west. Between this and next stage cross the Umasi-la Pass (17,370). It is called Bardhar by the Dogras, and is a snowy difficult pass, in parts covered by glaciers.

26. **KISHTWAR**—98 miles—298 miles.

This road is not fit for laden animals, and is only open for four or five months in the year. (*Drew—Thomson.*)

**TRADE.**—The Tibetans of Ladak and Nari are not a mercantile people. Almost all the foreign commerce is in the hands of foreign merchants, and the trade of the Tibetans themselves is confined to exchanging their domestic productions among themselves or with their foreign visitors. Leh is the only place that has a permanent market for the buying and selling of goods for money. Besides this, there is only one temporary fair in all Ladak. It is called *She Changdus*, being held at the village of She near Leh every autumn, and consists exclusively of barter between the agriculturists of Ladak and the *Champa* from Rudok and Nari. The only articles brought by the latter are salt and wool. (*H. Strachey.*)

*Transit trade.*—The chief source of wealth in Ladak is the carrying trade, or transport of foreign produce from one country to another through its own territories. This trade it owes entirely to its central situation between Kashmir and India on the south, Yarkand on the north, and the Chinese provinces of Changthung and Rudok on the east. These different lines of traffic all pass through *Leh*, under which heading a short account of the development of Central Asian trade will be found.

The foreign trade of the country, in home produce, is confined to four natural productions—wool, borax, sulphur, and dried fruits. The first is the only one of any importance. The *lena*, or shawl wool, is exported to Kashmir, Nurpur, Umritsur, and Rampur, where it is manufactured into shawl.

The borax and sulphur are both found in the Puga ravine, but in no great quantity, and exported chiefly to the Punjab. The dried fruits consist of apricots and small seedless raisins. They are exported in considerable quantities. The raisins are sold in Simla at from 2 to 2½ seers per rupee. The whole value of the foreign trade in home produce does not exceed Rs. 80,000. (*Cunningham.*)

A comparison of the trade returns from 1867 to 1870 shows a steady progressive increase, due entirely to the improved state of the roads and to the measures taken for the proper protection of the traders in Ladak and Kashmir :—

Total value of imports into and exports from Ladak in—

	Rs.
1867	5,54,945
1868	10,38,401
1869	12,91,537
1870	15,47,956

## TRADE AND TRADE RETURNS.

Sir Douglas Forsyth considers that in future years precious metals and raw silk will be imported in greatly increased quantities from Yarkand, whilst the bhang, felts, &c., will remain nearly the same. Also, that in the exports from the Punjab to Yarkand, a great increase may be expected in the export of tea (especially green Kangra tea), piece-goods, brocades, indigo, and other dyes, skins and leather, and, above all, in arms (English rifles are in particular request). The opium trade was formerly very extensive, but since the expulsion of the Chinese from Yarkand, the admission of this article has been strictly prohibited. Dr. Cayley observes that the trade between "India and Eastern Turkistan will always be chiefly carried on by Yarkandis. A few enterprising Punjabis, and also some Guddis from Kangra, have of late years gone over to Yarkand, but the Hindustani merchants are not accustomed to such long journeys, and are less fitted to undergo the hardships and exposure of a march over the Himalaya and Kuenluen mountains than are the more hardy dwellers of Central Asia. Large numbers of Hindustani traders, however, go every year to Ladak to exchange their wares in the Leh bazaar."

The trade with Chinese Tibet is confined to the high road passing through the middle of Nari-khorsam. It is entirely in the hands of the Government. The trade agents of Lhasa (called *Chaba* by the Ladakis) are punctual in their annual visits to Leh. They stay there all the winter and spring. There are always two relays of them, one travelling, whilst the other resides and drives its trade in Ladak. They get cattle, porters, lodging, food and water, free all the way from Lhasa to Leh, and the same for the return journey. Their caravans consist of a score or two of men and several hundred cattle. The trade agent from Ladak to Lhasa is called *Lopchuk*. He is entitled to 200 yaks or dzo, and 15 saddle horses; also to free lodgings at Lhasa. The deputations of the *Lopchuk* were much interrupted by the inroads of the Dogras between 1835 and 1842. (*H. Strachey.*)

**A.**

*Imports into Leh from Yarkand and Changihang in 1869—(Coxley's Reports, 1869).*

NAMES OF ARTICLES.	QUANTITY IN MAUNDS OF 80 lbs.						Rate in Leh.	Value in Leh.	REMARKS.
	Yarkand.		Changthang.		Total.				
	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Rs.	Rs.	
Bhang ...	1,025	34	.....	.....	1,025	34	62-8 per md.	64,116	
Pushm ...	268	28	260	0	528	28	50 "	26,435	
Wool (sheep's) ...	.....	.....	160	0	160	0	15 "	2,400	
Coarse cloth ...	72	20	.....	.....	76	20	87-8 "	6,348	
Tea, brick, green ...	.....	.....	431	24	431	24	180 "	77,688	
" " black ...	.....	.....	91	8	91	8	90 "	8,210	From Lhasa.
Silk ...	127	1	.....	.....	127	1	400 "	50,810	On export to the Punjab, the silk has proved to be of lower value than was asked in Leh, — not more than Rs. 320 per maund.
Jade stone ...	0	28	.....	.....	0	28	.....	700	
Rewanchini ...	1	20	.....	.....	1	20	80 per md.	120	
Gillar patar*	6	0	.....	.....	6	0	40 "	240	
Thread, &c. ...	0	36	.....	.....	0	36	.....	56	
Soap ...	1	36	.....	.....	1	36	40 per md.	76	
Jadwar, Zadaori ...	.....	.....	2	0	2	0	1,600 "	3,200	Used as a medicine.
Borax ...	.....	.....	200	0	200	0	10 "	2,000	
Phulli ...	.....	.....	140	0	140	0	1-4 "	175	Soda-earth.
Salt ...	.....	.....	10,000	0	10,000	0	1 "	10,000	
Sulphur ...	.....	.....	220	0	220	0	15 "	3,300	
Saltpetre ...	.....	.....	84	0	84	0	10 "	840	
Mushru, &c. ...	119	thâns	.....	.....	119	thâns	.....	372	Silk and cotton fabrics.
Carpets ...	358	in No.	.....	.....	358	in No.	.....	2,518	
Felts ...	3,159	"	.....	.....	3,159	"	2 each	6,318	
Kimsan, &c. ...	1,879	"	.....	.....	1,879	"	1 "	463	Coloured leathers.
Dariari, &c. ...	4,046	thâns	.....	.....	4,046	thâns	.....	5,496	Silk manufactures from Yarkand.

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TRADE AND TRADE RETURNS.



Posteen, &c. ...	32 in No.	.....	32 in No.	.....	812
Socks, &c. ...	15 "	.....	15 "	.....	68
Broadcloth ...	6 thâns	.....	6 thâns	150 per thân	900
Tawar ...	1 thân	.....	1 thân	50 "	50
Chowris ...	603 in No.	.....	603 in No.	1-8 each.	905
Kuras, silver ...	338 "	.....	338 "	170 "	57,460
Gold-dust ...	3,160 tolas	450 tolas	3,610 tolas	13 per tola	46,930
Jewellery, &c. ...	9 boxes	1 box	10 boxes	.....	24,200
Gold thread ...	7 bundles	.....	7 bundles	.....	805
Embroidery, gold ...	2 thâns	.....	2 thâns	25 each	50
Caps ...	55 in No.	.....	55 in No.	1 "	55
Knives, Chinese ...	15 "	.....	15 "	2 "	30
Mamiran-i-Chini ...	30 tolas	.....	30 tolas	1 per tola	30
Musk bags ...	.....	450 in No.	450 in No.	10 each	4,500
Borese ...	.....	125 thâns	125 thâns	15 per thân	1,875
Zankos ...	.....	75 "	75 "	8 "	600
Pattu ...	.....	50 "	50 "	8 "	400
Kidakh ...	.....	2,000 "	2,000 "	0-8 "	1,000
Paper ...	.....	2,000 sheets	2,000 sheets	20 per 100	400
Incense ...	.....	4 boxes	4 boxes	.....	200
<b>TOTAL</b> ...	<b>1,505-3</b>	<b>11,588-32</b>	<b>13,093-35</b>	<b>.....</b>	<b>4,12,587</b>

Made of China and Russian furs  
 Russian.  
 China silk.  
 Yaks' tails.  
 Chinese silver coins or ingots.  
 Six boxes turquoises, 1 box coral, 1 box of manufactured jewellery.  
 Russian.  
 A drug.  
 Coarse woollen cloth.  
 Ditto ditto.  
 Strips of fine linen cloth used by Lamas.  
 Rs.  
 From Yarkand ... 2,78,799  
 „ Changthang 1,33,788  
**TOTAL ... 4,12,587**

TRADE AND TRADE RETURNS.

• Seaweed used as a medicine, &c.

**A.**

*Imports into Leh from Yarkand and Changthang in 1870.—Dr. Cayley's reports.*

NAMES OF ARTICLES.	QUANTITY IN MAUNDS OF 80lbs. FROM			Rate in Leh.	Value.	REMARKS.
	Yarkand.	Changthang.	Total.			
	Mds. Srs.	Mds. Srs.	Mds. Srs.	Rs. A.	Rs.	
Coarse cloth ... ..	85 10	.....	85 10	87 8 per md.	7,469	From Yarkand cotton.
Tea, green, brick ... ..	.....	531 0	531 0	160 0 "	84,960	Imported through Lhasa.
128 Tea, black, brick ... ..	.....	35 20	35 20	120 0 "	4,260	Ditto ditto.
Pushm, wool, white ... ..	198 4	794 0	992 4	60 0 "	59,526	
Pushm, wool, black ... ..	.....	92 0	92 0	40 0 "	3,680	
Wool, sheep's ... ..	.....	132 0	132 0	15 0 "	1,980	
<i>Bhang</i> ... ..	2,587 16	.....	2,587 16	50 0 "	1,29,317	
Silk, raw ... ..	49 0	.....	49 0	200 0 "	9,800	From Khotan.
Gillar patar (sea-weed) ... ..	12 0	.....	12 0	260 0 "	3,120	From China ; used as medicine.
Jade stone ... ..	3 18	.....	3 18	.....	1,300	
Toranj bheen (manna) ... ..	1 20	.....	1 20	70 0 per md.	105	Imported this year for first time.
Rewanchini (rhubarb) ... ..	7 16	.....	7 16	60 0 "	444	
Sulphur ... ..	.....	255 0	255 0	15 0 "	3,825	Chiefly from Puga.

TRADE AND TRADE RETURNS.

Saltpetre	...	.....	24 0	24 0	10 0 "	240
Salt	...	.....	8,500 0	8,500 0	1 0 "	8,500
Borax	...	.....	110 0	110 0	4 0 "	440
Phulli (soda-earth)	...	.....	125 0	125 0	1 8 "	188
Felt rugs	...	6,483 in No.	.....	6,483 in No.	2 0 each	12,966
Carpets, of sizes	...	1,560 "	.....	1,560 "	.....	11,175
Dariari, mushru	...	829 thâns	.....	829 thâns	4 0 ...	3,316
Lamb skins ( <i>Astrakhans</i> )	...	18 skins	.....	18 skins	0 8 ...	9
Kinman (coloured leather)	...	400 "	.....	400 "	20 0 per 100	80
Yaks' tails	...	202 in No.	.....	202 in No.	1 8 each	303
Russian leather (bulgai)	...	2 "	.....	2 "	15 0 "	30
Posteen	...	5 "	.....	5 "	50 0 "	250
Puttu	...	.....	250 thâns	250 thâns	6 0 "	1,500
Langos	...	.....	150 "	150 "	8 0 "	1,200
Āari-khoon (a drug)	...	30 tolas	.....	30 tolas	0 8 per tola	15
Kurus, silver ingots	...	194 in No.	.....	194 in No.	170 0 each	39,980
Gold-dust	...	3,205 tolas	.....	3,205 tolas	14 0 per tola	43,870
<b>TOTAL</b>	...	<b>2,944 4</b>	<b>10,598 20</b>	<b>13,542 24</b>	<b>.....</b>	<b>4,26,901</b>

Chiefly from Puga.  
Also found in Ladak.

Fabrics of mixed cotton and silk,  
chiefly from Andijau and Khotan.

Thick woollen cloth.

Rough, shaggy woollen cloth.

Agau. Imported for first time.

Of Chinese make.

TRADE AND TRADE RETURNS.

## B.

### *Imports from the Punjab into Ladak in 1869.*

NAMES OF ARTICLES.	QUANTITY IN MAUNDS OF 80 lbs. FROM								Rate in Leh.	Value.	REMARKS.
	Kullu.		Rampur.		Kashmir.		Total.				
	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Rs.	Rs.	
Buzzazi, piece-goods...	128	33	25	7	173	13	327	13	175 per md.	57,281	
Spices ... ..	137	18	10	24	101	12	249	14	40 ..	9,973	
Sugar ... ..	286	35	8	6	18	29	313	30	40 ..	12,550	
130 Lakhi, red skins ...	244	36	0	5	242	13	478	14	64 ..	30,214	
Indigo ... ..	35	3	7	10	26	34	69	7	160 ..	11,108	
Copper vessels ...	28	13	2	1	18	19	48	33	100 ..	4,883	
Iron ... ..	41	21	5	34	.....		47	50	30 ..	1,421	
Tea ... ..	69	1	.....		32	7	101	8	180 ..	18,216	Kangra and China teas.
Tamarind ... ..	14	27	.....		11	32	26	19	40 ..	1,060	
Preserves, &c. ...	8	16	.....		0	32	9	8	40 ..	368	
Rice ... ..	12	32	.....		.....		12	32	5 ..	64	
Sank, shells ... ..	9	16	.....		0	27	10	3	100 ..	1,008	
Nowáda ... ..	0	18	.....		0	18	0	36	80 ..	72	Sal-Ammoniac.
Lac ... ..	.....		.....		0	12	0	12	40 ..	12	

TRADE AND TRADE RETURNS.

TRADE AND TRADE RETURNS.

Haberdashery	4	17	.....	6	21	10	38	150	"	1,642
Senna	28	6	12	16	43	8	8	20	"	864
Soap	1	8	.....	.....	1	8	8	40	"	48
Treacle	7	1	.....	.....	7	1	1	25	"	176
Halls, &c., dye	15	32	.....	.....	15	32	32	20	"	316
Drugs	10	12	.....	13	24	23	36	40	"	956
Majest, red dye	0	16	.....	.....	0	16	16	20	"	8
Otter skins	6,797	in No.	305	in No.	1,000	in No.	8,102	in No.	4 each	32,408
Kulgi	328	"	.....	.....	328	"	"	1 per 3	"	109
Broadcloth	7	thans	2	thans	5	thans	14	thans	150 per than	1,750
Koran, books	1,006	in No.	.....	500	in No.	1,506	in No.	2 each	"	3,012
Brocades	15	thans	.....	10	thans	25	thans	100 per than	"	2,500
Tawar (silks)	.....	.....	.....	11	"	11	"	50 each	"	550
Snuff	.....	.....	.....	17	bottles	17	bottles	3	"	51
Guns, rifles, &c.	11	in No.	.....	60	in No.	61	in No.	.....	"	2,330
Powder and caps	.....	.....	.....	80	boxes	80	boxes	5 each	"	400
Corals	4	tolas	.....	.....	4	tolas	4	per tola	"	16
Shoes	164	pairs	24	pairs	.....	188	pairs	3 each	"	376
Combs	15	scores	.....	.....	15	scores	15	scores	1 per score	16
Dyes, aniline	10	boxes	.....	.....	10	boxes	10	boxes	20 per box	200
TOTAL	1,086	1	71	33	649	39	1,806	83	.....	1,95,957

Heron plums.

Chiefly English.

## B.

### Imports into Ladak from the Punjab during 1870.

NAMES OF ARTICLES.	QUANTITY IN MAUNDS OF 80lbs. FROM								Rate in Leh.	Value.	REMARKS.
	Kullu.		Rampur.		Kashmir.		Total.				
	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.			
Buzzazi (piece-goods) ...	145	22	12	8	175	15	333	5	175 0 per md.	58,297	Calicos, muslins, chintz, &c. Of Punjab manufacture.
Coarse cloth ...	9	0	.....	.....	.....	.....	9	0	87 8 "	788	
Spices ...	61	28	14	32	57	32	134	12	40 0 "	5,372	
Sugar ...	250	8	6	16	140	7	396	31	40 0 "	1,587	
Lakhi, red leather... 132	39	30	.....	.....	93	3	182	39	62 8 "	11,436	
Treacle ...	6	34	.....	.....	2	34	9	28	20 0 "	194	
Copper vessels ...	6	36	0	10	1	21	8	27	100 0 "	868	
Iron ...	32	24	1	38	.....	.....	34	22	20 0 "	691	
Tin ...	.....	.....	.....	.....	6	12	6	12	200 0 "	1,260	
Tea, Kangra ...	286	4	.....	.....	78	8	364	12	160 0 "	58,288	Chiefly green tea.
Indigo ...	3	14	3	8	3	39	10	21	120 0 "	1,263	
Tamarind ...	7	20	.....	.....	18	28	26	8	40 0 "	1,048	
Senna ...	6	0	8	32	15	36	30	28	20 0 "	614	
Drugs of sorts ...	8	16	.....	.....	14	13	22	29	40 0 "	909	
Preserves ...	7	20	.....	.....	7	24	15	4	40 0 "	604	
Opium ...	4	32	.....	.....	.....	.....	4	32	500 0 "	2,400	
Haberdashery, &c. ...	14	36	.....	.....	0	7	15	3	150 0 "	2,261	Including needles, buttons, English thread scissors, looking-glasses, &c.
Honey ...	13	32	.....	.....	.....	.....	13	32	25 0 "	345	
Soap ...	1	20	.....	.....	.....	.....	1	20	40 0 "	60	
Cardamums ...	0	18	.....	.....	.....	.....	0	18	20 per seer	360	
Quicksilver ...	1	37	.....	.....	.....	.....	1	37	200 per md.	385	
Thread, English ...	.....	.....	.....	.....	0	8	0	8	4 per seer	32	

TRADE AND TRADE RETURNS.

Snuff	...	.....	.....	1	20	1	20	160 per md.	240	
Rice	...	10	0	.....	.....	10	0	6 "	60	
Dál	...	4	16	.....	.....	4	16	8 "	85	
Otter skins	...	3,229 in No.	28 in No.	573 in No.	3,795 in No.	4	each	15,180		
Shoes	...	21 pairs	.....	.....	21 pairs	1	per pair	21		
Leather, English skins	...	.....	.....	3 doz.	3 doz.	40	per doz.	120		
Brocade	...	185 thâns	.....	147 thâns	332 thâns	100	each	33,200		
Embroidered cloth	...	26 "	.....	.....	26 "	40	"	1,040		From Benares.
Broadcloth and velvet	...	48 "	3 thâns	65 thâns	116 "	100	"	11,600		English goods.
Satin and merino	...	106 "	.....	186 "	292 "	50	"	14,600		Ditto.
China cups	...	.....	180 in No.	1,160 in No.	1,330 in No.	0	8	665		English crockery.
Kalgi, pheasant plumes	...	135 in No.	50 "	.....	185 "	40	per 100	74		
Aniline dyes	...	110 boxes	.....	7 boxes	117 boxes	10	each	1,170		All red colours; each box of ¼ lb.
Knives, scissors, &c.	...	.....	.....	231 in No.	231 in No.	.....	.....	192		English goods.
Gunpowder	...	25 flasks	.....	106 flasks	131 flasks	4	each	524		
Gun caps	...	132,000 in No.	.....	230,000 in No.	3,62,500 in No.	8	per mille	2,900		
Cartridges, rifle	...	.....	.....	8,000 "	8,000 "	50	" "	400		All of English manufacture.
Guns and rifles, English	...	68 in No.	2 in No.	675 "	745 "	100	each	74,500		
Pistols, English	...	.....	.....	6 "	6 "	50	"	300		
Swords and pistols, Kashmiri	...	.....	.....	12 "	12 "	.....	.....	165		
Silk fabrics	...	100 yds.	.....	18 yds.	118 yds.	.....	.....	179		
Corals	...	.....	.....	400 tolas	400 tolas	2	per tola	800		
Shawls from Punjab	...	57 pairs	.....	.....	57 pairs	.....	.....	3,210		From Amritsar and Nurpur.
Koran (copies of)	...	125 in No.	.....	.....	125 in No.	2	each	250		Printed copies.
<b>TOTAL</b>	...	<b>973 13</b>	<b>47 24</b>	<b>607 27</b>	<b>1,628 24</b>	.....	.....	<b>3,24,371</b>		

TRADE AND TRADE RETURNS.

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C.

Exports from Ladak to Yarkand and Changthang in 1869.

NAMES OF ARTICLES.	QUANTITY IN MAUNDS OF 80 lbs. TO						Rate in Leb.		Value in Leb.	REMARKS.
	Yarkand.		Changthang.		Total.		Rs. A.		Rs.	
	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.				
Buzzazi (piece-goods)	323	12	15	0	338	12	175	0 per md.	59,202	English calicos, &c., from the Punjab.
Coarse cloth	.....		25	0	25	0	87	8	2,188	
Spices	403	9	15	0	418	9	40	0	16,729	
Sugar	180	13	15	0	195	13	40	0	7,813	
Lakhi, red skins	338	17	6	0	444	17	62	8	27,777	
Tea	132	17	.....		132	17	180	0	23,836	Kangra and China teas.
Indigo	77	33	4	20	82	13	160	0	13,172	
Copper vessels	1	20	2	0	3	20	100	0	350	
Tin	3	0	.....		3	0	125	0	375	
Drugs, &c.	19	32	.....		19	32	40	0	792	
Anola	1	20	.....		1	20	20	0	30	A drug.
Haberdashery	6	0	2	0	8	0	150	0	1,200	Needles, thread, &c., &c.
Currants, dried	.....		25	0	25	0	150	0	375	} From Skardo.
Apricots	.....		100	0	100	0	5	0	500	
Dates, &c.	.....		2	0	2	0	40	0	80	
Saffron	.....		1	16	1	16	1,600	0	2,240	} From Kashmir.
Saffron leaves	.....		1	0	1	0	160	0	160	
Iron, &c.	.....		2	0	2	0	30	0	60	
Majeet, red dye	.....		16	0	16	0	20	0	320	From Skardo.
Rice	.....		150	0	150	0	5	0	750	
Barley, &c.	.....		1,430	0	1,430	0	1	4	1,788	} From Kashmir and Ladak.
Flour, &c.	.....		1,330	0	1,330	0	1	8	1,995	
Ghee	.....		56	0	56	0	20	0	1,120	
Silver	.....		1	0	1	0	3,200	0	3,200	English rupees.
Otter skins	8,853 in No.		19 in No.		8,863 in No.		4	0 each	35,452	
Fox skins	375		.....		375		1	0	375	
Felts	.....		2,650 in No.		2,650		2	0	5,300	
Carpets	.....		151		151		.....		850	} Imported from Yarkand.
Turquoises and corals	.....		8 boxes		8 boxes		.....		6,800	
Koran, books	2,000 in No.		.....		2,000 in No.		2	0 each	4,000	

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TRADE AND TRADE RETURNS.



Guns, rifles, &c. ...	70 "	.....	70 "	.....	3,730	The guns and rifles chiefly of English make.
Powder and caps ...	80 boxes	.....	80 boxes	5 0 each	400	English.
Aniline dyes ...	15 in No.	.....	15 in No.	20 0 "	300	
Brocade ...	31 thâns	10 thâns	41 thâns	100 0 "	4,100	
Merino, &c. ...	12 "	10 "	22 "	50 0 "	1,100	
Broadcloth ...	5 "	7 "	12 "	150 0 "	1,800	English.
Kashmir pushmina ...	18 pairs	10 pairs	28 pairs	100 0 "	2,800	Pushmina chadars, sheets.
Balti chadars ...	.....	15 "	15 "	40 0 "	600	
Embroidered cloth ...	.....	3 thâns	3 thâns	25 0 "	75	[Yarkand.
Dariari ...	.....	45 "	45 "	6 0 "	270	Silk manufactures from
Wooden slates ...	.....	75 in No.	75 in No.	1 0 "	75	} From Kashmir.
Wooden boxes ...	.....	75 "	75 "	2 0 "	150	
Shoes ...	.....	85 pairs	85 pairs	1 0 "	85	
Kimsan, &c. ...	.....	295 pieces	295 pieces	.....	73	Coloured leather.
Puttu chadars ...	.....	55 "	55 "	5 0 each	275	
Kurus, silver ...	.....	115 in No.	115 in No.	170 0 "	19,550	From Yarkand.
<b>TOTAL ...</b>	<b>1,687 18</b>	<b>3,198 86</b>	<b>4,786 9</b>	<b>.....</b>	<b>2,54,312</b>	<b>To Yarkand Rs. 1,96,828</b> <b>„ Changthang „ 57,889</b> <b>Total ... Rs. 2,54,312</b>

TRADE AND TRADE RETURNS.

TRADE AND TRADE RETURNS.

C.

Exports from Ladak to Yarkand and Changthang during 1870.

NAMES OF ARTICLES.	QUANTITY IN MAUNDS OF 80 lbs. TO						Rate in Leb.	Value.	REMARKS.
	Yarkand.		Changthang.		Total.				
	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.			
Buzazi (piece-goods)...	486	4	52	0	486	4	Rs. A. 175 0 per md.	Rs. 85,067	Chiefly Yarkand cotton cloth.
Coarse cloth	.....	.....	.....	.....	52	0	87 8 "	4,550	
Spices ...	203	16	5	0	208	16	40 0 "	8,336	
Tea, brick	.....	.....	64	0	64	0	160 0 "	10,240	Returned to Lhasa on account of fall of price in Leb.
Tea, Kangm	206	15	.....	.....	206	15	160 0 "	33,020	
Indigo	4	20	10	0	14	20	120 0 "	1,740	
Lakbi, red goat-skins	320	16	5	0	325	16	62 8 "	20,338	
Sugar	404	4	3	0	407	4	40 0 "	16,284	
Copper vessels	.....	.....	3	0	3	0	100 0 "	300	
Senna	19	8	.....	.....	19	8	20 0 "	384	
Hallela, preserves	2	32	.....	.....	2	32	20 0 "	56	
Drugs of sorts	10	8	.....	.....	10	8	40 0 "	408	A medicinal drug.
Tamarind	18	16	.....	.....	18	16	40 0 "	736	
Preserves of sorts	40	0	.....	.....	40	0	40 0 "	1,600	Of ginger, mango, and amlk.
Honey	6	32	.....	.....	6	32	25 0 "	170	
Haberdashery, &c.	10	32	.....	.....	10	32	160 0 "	1,620	Glasses, needles, thread, buttons, knives, &c.
Quicksilver	2	24	.....	.....	2	24	200 0 "	520	
Opium	7	20	.....	.....	7	20	500 0 "	3,750	
Tin	6	0	.....	.....	6	0	200 0 "	1,200	
Tüz, birch-bark	3	0	.....	.....	3	0	4 0 "	12	
Currants, dried	.....	.....	50	0	50	0	15 0 "	750	Used in making saddles.
Apricots, "	.....	.....	490	0	490	0	5 0 "	2,450	From Skardo.
Rice	.....	.....	75	0	75	0	6 0 "	450	Ditto.

TRADE AND TRADE RETURNS.

Ghee	...	...	...	...	...	...	1,000
Suttoo (flour)	...	...	...	...	...	...	855
Flour	...	...	...	...	...	...	210
Barley	...	...	...	...	...	...	573
Saffron	...	...	...	...	...	...	1,350
Majeet, red dye	...	...	...	...	...	...	460
Silver	...	...	...	...	...	...	9,600
Otter skins	...	...	...	...	...	...	15,552
Felt rugs	...	...	...	...	...	...	6,000
Carpets, of sizes	...	...	...	...	...	...	5,500
Broadcloth and velvet	...	...	...	...	...	...	9,000
Tawar, astin and merino	...	...	...	...	...	...	12,950
Brocade	...	...	...	...	...	...	19,100
Pattu chadar	...	...	...	...	...	...	150
Guns and rifles, English	...	...	...	...	...	...	76,300
Guns, Kashmiri	...	...	...	...	...	...	400
Pistols, English	...	...	...	...	...	...	600
Swords and pistols, Kashmiri	...	...	...	...	...	...	635
Gunpowder	...	...	...	...	...	...	664
Gun caps	...	...	...	...	...	...	2,912
Cartridges, rifle	...	...	...	...	...	...	400
Crockery, cups	...	...	...	...	...	...	325
Koran (copies of)	...	...	...	...	...	...	1,520
Leather, English	...	...	...	...	...	...	120
Scissors, knives, &c.	...	...	...	...	...	...	192
Corals	...	...	...	...	...	...	1,100
Shawls, Kashmiri	...	...	...	...	...	...	28,600
Saltuk and takta washk	...	...	...	...	...	...	150
Sargai, mushru	...	...	...	...	...	...	600
Sagri, leather	...	...	...	...	...	...	75
Kurus, ingota	...	...	...	...	...	...	12,700
Aniline dyes	...	...	...	...	...	...	1,200
Kalgi, pheasant plumes	...	...	...	...	...	...	73
TOTAL	1,752	1,926	3,678	4,14,296			

English rupees.

From Yarkand.

English manufacture.

Ditto.

All English goods.

Some printed, some manuscript.

English goods.

Wooden boxes and writing-boards.

Fabrics of mixed silk and cotton, from Yarkand.

From Kashmir.

To Yarkand Rs. 3,46,545  
To Changthang " 67,751

TOTAL Rs. 4,14,296

D.

Exports from Ladak to the Punjab during 1869—Cayley's reports.

NAMES OF ARTICLES.	QUANTITY IN MAUNDS OF 80 LBS. TO								Rate in Leh.	Value in Leh.	REMARKS.
	Kullu.		Rampur.		Kashmir.		Total.				
	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Rs. A.	Rs.	
Bhang	1,337	12	89	0	168	6	1,594	18	62 8 per md.	99,654	
Pashm, wool	93	10	.....	.....	56	0	149	10	50 0 "	7,463	
Silk	61	13	.....	.....	49	22	110	35	400 0 "	44,350	
Opium	.....	.....	.....	.....	53	13	53	13	600 0 "	31,990	Formerly sent to Ladak and now returned.
Phulli (soda-earth)	70	36	.....	.....	.....	.....	70	36	1 4 "	89	Soda-earth.
Gillar patar	4	16	.....	.....	.....	.....	4	16	40 0 "	176	Seaweed, used as medicine.
Coarse cloth	0	28	.....	.....	.....	.....	0	28	87 8 "	60	
Dried currants	0	17	.....	.....	.....	.....	0	17	15 0 "	6	
Jade stone	0	17	.....	.....	.....	.....	0	17	.....	400	
Silver	.....	.....	.....	.....	0	20	0	20	3,200 0 per md.	1,600	Broken silver from Yarkand.
Namda, felts	1,608 in No.	.....	96 in No.	.....	25 in No.	.....	1,729 in No.	.....	2 0 each	3,452	
Carpets	323 "	.....	8 "	.....	5 "	.....	336 "	.....	.....	2,838	
Dariari, &c.	451 thâns	.....	.....	.....	3,335 thâns	.....	3,786 thâns	.....	.....	4,561	Silk fabrics.
Mushru and chakman	44 "	.....	50 thâns	.....	7 "	.....	101 "	.....	.....	396	Silk and cotton fabrics.
Posteen	8 in No.	.....	.....	.....	.....	.....	8 in No.	.....	100 0 each	800	
Chouries	525 "	.....	.....	.....	44 in No.	.....	529 "	.....	1 8 "	854	Yaks' tails.
Kurus, silver	200 "	.....	.....	.....	172 "	.....	372 "	.....	170 0 "	63,240	
Gold-dust	1,453 tolas	.....	.....	.....	1,550 tolas	.....	3,003 tolas	.....	13 0 per tola	39,039	
Gold-thread	5 bundles	.....	.....	.....	.....	.....	5 bundles	.....	50 0 each	250	
Turquoise	1 box	.....	.....	.....	1 box	.....	2 boxes	.....	800 0 per box	1,600	
Jewellery	40 articles	.....	.....	.....	.....	.....	40 articles	.....	350 0 each	14,000	
Chinese knives	.....	.....	.....	.....	18 in No.	.....	18 in No.	.....	2 0 "	36	
<b>TOTAL</b>	<b>1,568</b>	<b>29</b>	<b>89</b>	<b>0</b>	<b>327</b>	<b>21</b>	<b>1,985</b>	<b>10</b>	<b>.....</b>	<b>3,16,860</b>	

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TRADE AND TRADE RETURNS.



**E.**

*Imports into Ladak from Kashmir territories during 1869.*

NAMES OF ARTICLES.	QUANTITY IN MAUNDS OF 80lbs. FROM						Rate in Leh.	Value in Leh.	REMARKS.
	Kashmir.		Skardo.		Total.				
	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.	Rs.	Rs.	
Iron ... ..	10	10	.....		10	10	30 per md.	308	
Honey ... ..	14	32	.....		14	32	25 "	371	
Tobacco ... ..	48	34	.....		48	34	20 "	975	
Rice ... ..	341	0	.....		341	0	5 "	1,705	
Soap ... ..	4	30	.....		4	30	40 "	190	
Majeet ... ..	.....		13	37	13	37	20 "	269	Red dye.
Saffron ... ..	1	38	.....		1	38	1,600 "	2,120	
Saffron leaves ... ..	1	0	.....		1	0	160 "	160	
Silver ... ..	5	9	.....		5	9	3,200 "	16,720	English rupees.
Lakhi, red skins ... ..	75	26	.....		75	26	62-8. "	4,728	Prepared in Kashmir.
Anola, hallela ... ..	12	0	.....		12	0	20 "	240	Medicinal drugs.
Oil ... ..	3	0	.....		3	0	25 "	75	
Currants, dried ... ..	.....		15	0	15	0	15 "	225	
Apricots, ,, ... ..	.....		85	0	85	0	5 "	425	
Butter ... ..	.....		46	0	46	0	20 "	920	
Chadars, pashmina ... ..	35 pairs		93 pairs		128 pairs		.....	5,288	
Pattu, &c. ... ..	39 thâns		.....		39 thâns		.....	246	
Miscellaneous, combs, paper, &c. ... ..	591 in No.		.....		591 in No.		.....	602	
Embroidered cloth ... ..	16 thâns		.....		16 thâns		8 each	128	
Kajri, horse-trappings ... ..	7 in No.		.....		7 in No.		8 "	56	
Swords, guns, &c. ... ..	15 "		.....		15 "		.....	425	Of Kashmir manufacture.
Shoes, &c. ... ..	3,204 pairs		.....		3,204 pairs		.....	3,185	
Chogas, cloth ... ..	2 in No.		.....		2 in No.		80 each	160	Embroidered robes.
Hashia (borders of shawls) ... ..	250 yards		.....		250 yards		1 per yard	250	
Wooden slates ... ..	64 in No.		.....		64 in No.		1 each	64	Takhta Mashk used in Lhassa.
Sultak, wooden boxes ... ..	65		.....		65 "		2 "	130	Used for carrying flour.
Stone vessels ... ..	.....		35 in No.		35 "		1 "	35	
<b>TOTAL</b> ... ..	<b>518</b>	<b>19</b>	<b>159</b>	<b>37</b>	<b>678</b>	<b>16</b>	<b>.....</b>	<b>40,002</b>	

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TRADE AND TRADE RETURNS.

**E.**  
Imports into Ladak from Kashmir territories in 1870.

NAMES OF ARTICLES.	QUANTITY IN MAUNDS OF 80 lbs. FROM						Rate in Leb.	Value in Leb.	REMARKS.
	Kashmir.		Skardo.		Total.				
	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.			
Soap	1	0	.....	.....	1	0	40 0 per md.	40	
Rice	355	34	.....	.....	355	34	6 0 "	2,135	
Dál	7	16	.....	.....	7	16	8 0 "	59	
Honey	31	23	.....	.....	31	23	25 0 "	789	
Tobacco	109	13	5	0	114	13	20 0 "	2,288	
Majeet, red dye	.....	.....	23	30	23	30	20 0 "	475	
Ghee	1	32	.....	.....	1	32	25 0 "	45	
Saffron	2	25	.....	.....	2	25	.....	2,329	
Horse-shoes	5	10	.....	.....	5	10	40 0 "	205	
Apricots, dried	.....	.....	352	0	352	0	5 0 "	1,760	
Currants, "	.....	.....	20	0	20	0	15 0 "	300	
Túz, birch-bark	3	0	.....	.....	3	0	4 0 "	12	Used in making saddles.
Specie	5	31	.....	.....	5	31	3,200 0 "	16,480	English rupees.
Otter skins	13 in No.	.....	.....	.....	13 in No.	.....	4 0 each	52	
Shoes, &c.	1,957 pairs	.....	.....	.....	1,957 pairs.	.....	1 0 per pair	1,957	
Sagri, green leather	257 "	.....	.....	.....	257 "	.....	0 8 each	129	
Stationery, pen boxes, &c.	458 in No.	.....	.....	.....	458 in No.	.....	1 0 "	458	
Chadars, puttu	58 "	.....	.....	.....	58 "	.....	10 0 "	580	
Kajri, horse-trappings	31 "	.....	.....	.....	31 "	.....	8 0 "	248	Of embroidered cloth.
Chadars, balti	.....	.....	74 pairs	.....	74 pairs	.....	.....	1,255	
Chadars, puttu	.....	.....	115 tháns	.....	115 tháns	.....	2 0 "	230	
Koran (copies of)	43 in No.	.....	.....	.....	43 in No.	.....	40 0 "	1,720	Manuscript copies.
Embroidered cloth, chikon	10 tháns	.....	.....	.....	10 tháns	.....	8 0 "	80	
Shawls, Kashmir	814 pairs	.....	.....	.....	814 pairs	.....	100 0 per pair	81,460	
Guns, Kashmir	25 in No.	.....	.....	.....	25 in No	.....	25 0 each	625	
Swords and pistols	22 "	.....	.....	.....	22 "	.....	.....	460	
Cups of stone	50 "	.....	.....	.....	50 "	.....	1 0 each	50	Of balti green soapstone.
Saltuk, wooden boxes	12 "	.....	.....	.....	12 "	.....	2 0 "	24	Used in Lhasa for hold- ing flour, &c.
<b>TOTAL</b>	<b>523</b>	<b>24</b>	<b>400</b>	<b>30</b>	<b>924</b>	<b>14</b>	<b>.....</b>	<b>1,18,185</b>	

TRADE AND TRADE RETURNS.

TRADE AND TRADE RETURNS.

**F**  
Exports from Ladak to Kashmir territories in 1869.

NAMES OF ARTICLES.	QUANTITY IN MAUNDS OF 80 lbs. TO				Rate in Leb.	Value in Leb.	REMARKS.
	Kashmir.	Skardo.	Total.				
Pushm, white	Mds. Srs. 614 0	Mds. Srs. 8 34	Mds. Srs. 622 34	Ra. A. 50 0 per md.	Ra. 31,143	From Yarkand and Changtheng.	
Pushm, black	92 39	8 37	92 39	25 0 "	2,325	Ditto ditto.	
Bhang	11 0	2 0	19 37	62 8 "	1,236	Ditto ditto.	
Tea, brick, green	158 25	18 18	160 25	180 0 "	28,912	From Lhasa.	
Buzazi (piece-goods)	.....	1 13	18 18	175 0 "	2,228	Englieb, from Punjab.	
Coarse cloth	.....	1 15	1 15	87 8 "	116	From Punjab.	
Sagar	.....	.....	.....	40 0 "	55	Ditto.	
Borax	15 14	.....	16 14	10 0 "	154		
Phnili (soda-earth)	25 24	.....	25 24	1 4 "	33		
Copper vessels	.....	21 15	21 15	100 0 "	2,138	From Punjab.	
Iron	.....	4 14	4 14	30 0 "	132		
Silk	.....	0 2	0 2	400 0 "	20	From Yarkand.	
Jade stones	0 7	.....	0 7	.....	200	Ditto.	
Pushmins thread	2 9	.....	2 9	320 0 per md.	712	Spun in Ladak.	
Dried apricots	0 16	.....	0 16	5 0 "	2	From Skardo.	
Cotton	0 8	.....	0 8	40 0 "	8	From Yarkand.	
Nunda, felts	751 in No.	54 in No.	805 in No.	2 0 each	1,610	Ditto.	
Carpets	25 "	.....	25 "	.....	172	Ditto.	
Pushmina chadars	12 pairs	.....	12 pairs	.....	240	From Baltistan.	
Puttu	19 in No.	.....	19 in No.	.....	152	Made in Ladak.	
Posteen	2 "	.....	2 "	.....	24	Lamb's skin, made in Ladak.	
Shoes	.....	7 pairs	7 pairs	1 0 per pair	7	Made in Srinagar.	
Guns and swords	.....	4 in No.	4 in No.	.....	70	Indian make.	
Korans (copies of)	.....	6 "	6 "	2 0 each	12	From Punjab.	
Chowries (yok)	.....	.....	.....	1 4 "	6	From Yarkand.	
Gold-thread, false	5 in No.	.....	5 "	5 0 per bdl.	5	Russian, from Yarkand.	
Davari	1 bundle	.....	1 bundle	6 0 per than	84	Silk fabric, from Yarkand.	
Mushru	14 than	.....	14 than	4 0 "	24	Silk and cotton, from Yarkand.	
Silks, Chinese	6 "	.....	6 "	50 0 "	100	From Yarkand.	
	2 "	.....	2 "	.....			
TOTAL	920 22	66 30	987 12	.....	71,919		



TRADE AND TRADE RETURNS.

F.

Exports from Ladak to Kashmir territories during 1870.

NAMES OF ARTICLES.	QUANTITY IN MAUNDS OF 80lbs. TO						Rate in Leh.	Value in Leh.	REMARKS.
	Kashmir.		Skardo.		Total.				
	Mds.	Srs.	Mds.	Srs.	Mds.	Srs.			
Pushm, white	348	4	7	6	353	10	Rs. 60 per md.	21,195	
Pushm, black	58	19	4	0	58	19	40 "	2,339	
Tea, brick	207	15	11	30	211	15	160 "	33,800	
Copper vessels	.....	.....	4	36	11	30	100 "	1,175	
Buzzazi (cotton piece-goods)	115	35	1	.....	4	36	175 "	865	
Phulli (soda-earth)	.....	.....	1	2	115	35	1-8 "	174	
Iron	0	14	.....	.....	1	2	20 "	21	Purified borax from Puga.
Borax	0	.....	.....	.....	0	14	10 "	4	
Rhubarb	0	20	.....	.....	0	20	60 "	30	
Silk, raw	0	16	.....	.....	0	16	200 "	30	
Sulphur	256	0	.....	.....	255	0	15 "	8,825	From Puga.
Salt	8,500	0	.....	.....	8,500	0	1 "	8,500	From Changthang.
Numda, felt rugs	2,067	in No.	160	in No.	2,227	in No.	2 each	4,454	
Carpets, of sorts	395	"	19	"	414	"	.....	3,750	
Mushru, daryai	22	thans	.....	.....	22	thans	4 each	86	Fabrics of silk and cotton, from Yar-hand.
Balti chadars	25	pairs	.....	.....	25	pairs	20 per pair	500	
Puttu, Ladaki	14	in No.	.....	.....	14	in No.	.....	140	
Tawar, satin	1	thán	.....	.....	1	thán	60 each	60	Chinese, from Yar-hand.
Yak's tails	27	in No.	.....	.....	27	in No.	1-8 "	41	
Musk-bags	7	"	.....	.....	7	"	12 "	84	
Posteens, lamb-skins	22	"	.....	.....	22	"	12 "	264	Ladak aktina.
Incense	2	packets	.....	.....	2	packets	12 "	24	From Libassa.
TOTAL	9,484	3	28	84	9,513	37	.....	81,893	



