

# EXPEDITIONS

authored by **ACROSS SOUTHERN TIBET** | published in **April 1, 1936**

[The following brief account of Captain Kingdon Ward's important journey in south-eastern Tibet has been kindly communicated by him at the moment of going to press. There has been no time to prepare an accurate map of the route, which can, however, be followed generally on Survey of India maps 82 and 83, scale 1: 1,000,000.—Ed.]

My Tibetan journey of 1935 was somewhat unexpected and hastily arranged. I therefore set out lacking much of the equipment I would have taken had I contemplated such a journey before leaving England. In March, with a friend, I walked across the Naga hills from Assam to Tamanthi, on the Chindwin river in Burma, and returned through the semi-independent Shan State of Thauungdut and Manipur, where we arrived early in April. Here I learnt that I might go to the Assam Himalaya, so I hurried back to Assam. Delayed by an attack of fever I did not reach Tezpur (83B) till the 25th April, which was rather late in the season. I had two of my old Tibetan servants with me, and twenty-four coolie loads, including bedding, tents, a vast quantity of botanical drying-paper, 2,000 silver rupees, and two boxes of stores. By the 30th April we were climbing the outermost range of the Assam Himalaya, following the only through trade-route which exists between the Bhutan frontier and the gorge of the Brahmaputra, 300 miles distant. It is not surprising, therefore, that the Assam Himalaya should be the least-known section of the range. Ascending through dense sub-tropical jungle, succeeded by warm, temperate rain-forest almost equally dense, we crossed the Pankim La (10,000 feet) and descended 3,500 feet to the picturesque Sherchokpa village of Shergaon (83A). I was in a new world. South of the Pankim La the rainfall is about 120 inches; at Shergaon it is about 60 inches, with a long dry spell and frosts in the winter. Consequently the hills are covered with an open park-like forest of pines and oaks. At Shergaon I met by appointment one of the ruling monks of Tawang,<sup>[1]</sup> who was most friendly. He gave me permission to proceed to Chayul Dzong, which is on the Loro Chu, the main source of the Subansiri, and north of the main Himalayan range whose snow-peaks are visible from Tezpur.

Travelling leisurely northwards, though somewhat delayed by recurring attacks of fever, I crossed the Manda La (about 11,000 feet) and reached Dirang Dzong, on a large tributary of the Bhareli river. Thence I marched westwards to Senge Dzong, and made preparations for the crossing of the main Himalayan ranges. We left Senge Dzong on the 3rd June, crossing the 14,000-foot Se La that day. Instead of descending to Tawang we continued northwards over the ranges, and crossing three high rocky passes in very bad weather (for the monsoon had broken), reached the cold stone village of Luguthang (83A). There is no cultivation here, and the villagers live on their flocks, importing such grain as they need. Here I was able to put a small correction on the map. Luguthang is shown on the Mago river. This is incorrect; a high range of mountains separates the Mago river from the Luguthang river, which follows an independent course to the Tawang river. From Luguthang we crossed the high Trukyer La, descended to a river, Gorjo Chu, up which lies the main road to Dirang Dzong, crossed the low Chera La (whence Gori Chen, 21,464 feet, on the main Himalayan range was visible), and on the 8th June reached Mago. We were now at the very foot of the main Himalayan range. Starting again on the 12th June, we crossed the Tulung La (17,250 feet) on the second day, and the Pen La (17,350 feet) on the third

day, in very bad weather; but descending from the latter pass to the dry Tibetan plateau, we reached Karta, steeped in sunshine under blue skies. Continuing northwards we reached the Loro Chu (Subansiri), and turning east, descended the arid valley to Chayul Dzong (82D). Obtaining permission from the magistrates to proceed, I dumped half my loads here, and on the 24th June continued my journey eastwards, with twelve coolie-loads.

Crossing the unknown Drichung La (82H), a pass over 17,000 feet high, I descended into Charme and on the fourth day reached Sanga Choling, where there are two magnificent monasteries. Having been well received by the dzongpons and lamas here, I asked for and obtained permission to go to Tsari. We then crossed the Cha La (16,610 feet) into Tsari, and went down the flower-carpeted valley to Chichkar. On the 6th July we continued down the heavily forested Tsari valley to the last Tibetan village, Migyitun, at an altitude of under 10,000 feet. From Migyitun I made the long pilgrimage to the sacred lake Tsogar ('Snow Lake'<sup>5</sup>) into which several large glaciers descend. Three passes are crossed on the way; the view of the lake girdled by snow-peaks and glaciers from the third and highest pass, about 18,000 feet, is superb.

Retracing our steps to Migyitun, and thence half-way to Chichkar, we turned off to cross the easy Bimbi La, and descended to Kyimdong Dzong. We found a considerable river flowing eastwards from some snow-peaks, below the Bimbi La; and noted that the map is a good deal out here.<sup>1</sup> At Kyimdong we were only half a day's journey from the Tsangpo, my limited objective. But the friendly dzongpon having given me permission to go by another route, I decided to cut across the river bend, via the unknown Lang La, and strike the Tsangpo lower down at Lilung. This we did in wet weather, the Lang La proving tiresome but not difficult. After a ten hours' march down the Lilung river from Molo we reached the Tsangpo after dark on the 18th July, after eight consecutive days through unexplored country. We did not halt here, but pushed on down the Tsangpo to Tsela Dzong (82K), where, being tired after sixteen days' hard marching, I rested three days.



Photo: F. Kingdon Ward The Assam Himalaya as seen from the Tibetan pleatau to the north; Loro Chu (source of the Subansiri) in the foreground



photo: F. Kingdon Ward The Tsangpo a little east of Lasha. Altitude 11,000 feet. Dry region



### The great bend of the Tsangpo

Leaving Tseladze on the 26th July, we reached Temo Gumpa that evening, and on the following day, in fine weather, did the 1 wnty-four mile march to Tumbatse, crossing the 15,000-foot Temo La en route. Two days later we reached Tongkyuk Dzong (82K); I now obtained permission to visit the Po-Yigrong country, and as this appeared to entail crossing the great snowy range seen from the Tsangpo by Lord Cawdor and myself in 1924 I was naturally jubilant. And so it proved. Going north from Tongkyuk we crossed a snow range by a difficult pass called the SobheLa (82k), and on the 3rd August descended to the Po-Yigrong, in a warm, temperate valley. The Po-Yigrong appeared to flow from the west. There were great snow-peaks on both sides of it, but especially on the south side. I decided to follow the river to its source, and so, if the maps were anything like correct, reach the Lhasa-China road somewhere. On the 4th August we started to explore Po-Yigrong. Seventeen days later we crossed the high Lochen La (about 18,000 feet) at the source of the river. There were magnificent glaciers here—one blocking the main valley was about ten miles long—and some very high peaks, but bad weather prevented my seeing the greatest peaks. The Po- Yigrong flows from the west, not from the north as conjectured on maps, and is entirely glacier-fed from both sides. It is a truly wonderful river,

flowing in a gorge comparable to that of the Tsangpo itself. Here and there are villages in short basins; and one, Ragoonka, on a high shoulder, at the old ice-level of the valley. Crossing another high pass in dirty weather, we reached the Lhasa-China road fifteen miles north of Gyamda on the 23rd August and Gyamda itself on the following day (82F).

<sup>1</sup> The positions of Kyimdong Dzong and Chichkar are known from the late I u ut.-Colonel Morshead's reconnaissance survey of 1913, but the intervening country and the position of the Bimbi La were known only from the report of the explorer A. K., who crossed the Bimbi La in 1883.—F. K. W.

Leaving again on the 28th, we travelled for two days towards Lhasa (82C), and then turned south to explore the mountainous country between the Lhasa road and the Tsangpo. Crossing only one snowy range by the lofty Ashang Kang La, we followed a long ice-worn valley down from the heights to the hot, dry Tsangpo valley at Trumda, which is about seventy miles below Tsetang. Crossing the river, we continued due south, roughly following the 93rd meridian^ passed through Guru Namgye Dzong, crossed the Kongmo La (17,520 feet) (82H), and found ourselves back in Tsari. Taking a different route back to Sanga Choling, I crossed in succession the Rip La and the Takar La, and on the 14th September reached Sanga Choling, where I rested a few days. Resuming the march, we went upstream to the village of Bung (82D), in order to cross the unknown Mo La. This proved to be about 18,000 feet, and from its inhospitable fastnesses we descended to the pretty village of Dikiling, and so to the Nye Chu, a tributary of the Loro Chu. Thus on the 21st September we were back in Chayul Dzong after a journey which had lasted for ninety days. On the 27th we set out for India, and after a cold journey (for we had no winter clothing), we reached the comparative warmth of Mago, within the forest region, on the 5th October, following the same route as on the way out. From Mago we again diverged, taking the main road (so called) up the Gorjo Chu and over the Tze La (15,550 feet). This necessitated crossing another pass, the Poshing La, not high, but uncommonly difficult on the south side. On the 10th October we reached human habitations again at Tem-bang, after a big march, and on the 11th, after another long day, Dirang Dzong (83A). From here to Shergaon I again followed my outward route over the Manda La; it is only three days' journey. Only one range now separated me from the Assam plain. However, it proved quite impossible to cross the Pankim La, as the path on the south side (which is hardly distinguishable from the stream bed) was a raging torrent. We had, therefore, to turn east once more and seek a lower pass. Four days' marching down a picturesque valley brought us to a tribal village called Jamiri, and from there we were able to reach the Bhareli river by crossing the last range at 6,000 feet. The going through the jungle was not good, as the rains had only just ceased, but we got through without any great discomfort. Three days later I reached Tezpur, after a six months' journey. Throughout the expedition I was collecting plants, of which I found many entirely new species. The geographical results are not less interesting, especially the definite location of a great snowy range, and its general direction, north of the Tsangpo bend, including numerous large glaciers. It is worth noting that these glaciers are the largest known north of the Tsangpo. In the course of five months I covered 500 miles of unexplored route and crossed twelve new passes. Botanically, the whole region traversed is terra incognita, and its vegetation throws much light on the flora of Tibet.

F. Kingdon Ward.

## A TRIP TO NORTHERN SIKKIM

On the 23rd May 1935 Mrs. Townend, Honorary Secretary of the Eastern Section, accompanied by Mrs. Atkins and Miss Griffin, left Gangtok for a tour in northern Sikkim, with the object of visiting certain places which had been suggested as suitable sites for the Himalayan Club huts.

The party followed the usual route up the Tista valley to Thangu (12,800 feet), the last rest-house in the western or Lachen branch of the valley. From here the ordinary route was abandoned, and a yak-path was followed up the Jha Chu<sup>1</sup> valley for about nine miles, and camp was made near the head of the valley, below Kangchenjhau, and close to the beginning of the ascent to the Sebu La. Rai Sahib Faqir Ghand Jali, the State Engineer of Sikkim, sent a road munshi with the party to take notes on the suggested hut sites.

<sup>1</sup> The Jha Chu is spelt Ja Chu and wrongly marked on the Survey map 78A as the northernmost stream. It is really the middle stream, the northern one being the IM wilung Chu (spelt Palong on the map) while the short southern branch, coming down from Chombo, is called the Chungdang Chu. Kangchenjhau is shown as Kangchima on the map. A rough sketch-map of NE. Sikkim was given in the Himalayan Journal, vol. vii, 1935, p. 140, but S. of I. map 78A should be studied with this paper.

The sheltered position of the valley, the grassy flats on each side of the stream on the hill-sides, and plenty of juniper for firewood make almost any spot in the upper portion of the valley suitable for a hut. A specially well-situated little maidan, about half a mile short of the foot of the ascent to the Sebu La, was selected as a good place, largely because it commands a splendid view of the lovely mountain Ghombo, which is obscured by intervening hills from any camping-place immediately below the Sebu La. The upper part of the valley is a favourite grazing-ground for yaks during the warm part of the year, so milk, and generally butter, are obtainable there. According to the contour lines on the map, the altitude of this part of the valley is 16,000 feet.

Mr. G. B. Gourlay crossed the Sebu La both from west to east and from east to west in 1933, and took excellent photographs of the route, so Mrs. Townend thought it would be more useful to make her way out of the Jha Chu valley northwards, where a track is marked on the Survey map, but about which little seemed to be known in Gangtok. She was fortunate in having an excellent Sirdar from Lachen and twelve local porters, who are accustomed to graze their yaks all over this country and Lhonak, and who, therefore, know the names of the grazing-grounds, mountains, and rivers, and can often tell tales of how they came by them. Thus there was no difficulty in finding the way, and the journey was made extremely interesting.

A steep climb of about 500 feet out of the valley brought the party on to upland grass country, with the snows of Kangchenjhau close above on the east. There is no track, but the country can be crossed anywhere. The route is a constant switchback over the lower slopes of Kangchenjhau and is a great deal more arduous, but infinitely more beautiful and interesting, than the regular track from Thangu to Gyagong (map, Gayokang). Camp was made close to the spot, named Deutang on the Survey map, after a march of about nine or ten miles. The following day, instead of rejoining the ordinary route the party skirted the Gayobo lake and, keeping at about the 17,000-foot contour, made their way in 4 ½ hours to the Gordama lake,<sup>1</sup> camping at the north-

east corner of it. The next morning they walked to the southern end of the lake, climbed the moraine at the south-west corner, and reached a small frozen lake, flanked on either side by snow mountains and receiving on its southern shore the north-east glacier of Kangchenjau, which falls into it in magnificent terraces of clean green and white ice. Returning by the western shore of the Gordama lake, they arrived back at the camp site at 11 a.m., 3 ½ hours after leaving it. From there a march of 2 ½ hours round the northern and western slopes of Lachi<sup>1</sup> and across a bit of the plain on which the Tso Lhamo lies brought them to their next camp, about half-way along the western shore of the Tso Lhamo. From here the ordinary route was followed over the Donkhya La to Mome Samdong, where the road munshi, who had gone round by the valley route via Chungthang, rejoined the party.

<sup>1</sup> Gordama should be Guru Dongma—meaning ‘The place where the Guru rested\*—the Guru being Guru Rimpoche. The story is that he stayed here on his way to Tibet and bathed in the lake.

A short excursion was made up the valley, which runs westwards from Mome Samdong to the foot of the eastern ascent to the Sebu La, to see if there were good sites there. About 1 ½ miles from Mome the valley is blocked from side to side by a big moraine bank. A little short of this there is a hot sulphur spring and a small, level, grassy maidan, where it would be possible to build a hut, but since it seemed that a hut at Mome Samdong would serve people using the Donkhya La route, the Karpo La (at present little known), or the Sebu La, Mrs. Townend did not make any observations about this spot.

This valley is rich in wild life. There were quantities of rock-pigeons and of *Grandala coelicolor* (Hodgson’s grandala), beautiful deep sapphire blue birds about the size of mynahs, and a pair of wolves, who seemed to resent intruders in their valley and made their way slowly up the mountain-side, stopping every now and again to howl.

At Mome Samdong there are three wide grassy terraces in the angle made by the stream from the Sebu La and the Lachung river. There are already some rough stone huts belonging to the yak-herds scattered about, and a hut could be built anywhere on any of these terraces. Mrs. Townend selected the middle one and a spot near an outcrop of rock, where a tiny clear streamlet flows down from the 1 Mountains behind. There is no wood for fuel at Mome, but it is such a favourite yak-grazing station that there is generally plenty of dry yak-dung which can be used as fuel.

The remainder of the route was over the ordinary track back to Gangtok, and took six days.

At this season of the year, late May and early June, the flowers, particularly the rhododendrons and primulas, which cover the mountain-sides between about 11,000 and 14,000 feet are so magnificent that they alone would make a journey to Thangu or to Mome Samdong worth while.

<sup>1</sup> It is possible to climb over the bare sandy hill of Lachi which separates the two lakes, and so avoid going round it.

The cost of the trip worked out at Rs. 12 per head per day, without riding-ponies, and took eighteen days from and back to Gangtok. The weather on the whole was good. It often rained in the late afternoon in the Lachen and Lachung valleys, but was consistently fine beyond Thangu and north of the Kangchenjhou group and the Donkhya range. The local people say that it does not rain much there even during the monsoon.

## TOUR TO DZONGRI AND THE GUICHA LA

(Communicated by the Hon. Secretary, Eastern Section)

Most people who have been to Dzungri have approached it via Pamionchi and Yoksam and have returned via Phalut.<sup>1</sup> Col. Tobin made the journey in the reverse direction a few years ago and was of the opinion that it was a better arrangement. A party of seven, setting out on the 23rd September 1935 from Darjeeling, followed his example and have proved the advantages of his method. The first night out from Darjeeling is spent at 10,074 feet, and the next at 11,766; beyond that the path never drops below 9,500 feet and keeps mostly between 12,000 and 14,000 feet, crossing one 15,000-foot pass during the 7 ½ marches to Dzungri. Acclimatization consequently takes place without any trouble. Another advantage is that the panorama of the snows lies ahead all the time, and yet a third is that, if the return is made via Yoksam, there is a drop of 7,000 feet in seven miles instead of a trying ascent. Six out of the seven members of the party were strongly of the opinion that it would be pleasanter to return over the same route via Phalut. It is beautiful throughout, as well as cool, whereas from Mon Laptsa, three miles south of Dzungri on the Yoksam route, the track plunges into thick forest and for six or seven days drops to deep, hot river valleys and climbs steeply over thickly wooded ridges, with few good views of the snows except from Pamionchi.

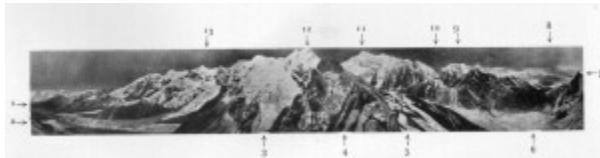
It is surprising that more people have not been to the Guicha La, considering that it can be reached from Darjeeling in nine or ten marches. It is not only beautiful, but an extremely interesting trip, taking one into the heart of the snows round Kangchenjunga. Several days could be spent with advantage at Dzungri and at Ghemthang, as the grassy alpine meadow below the Guicha La is called.



The Guicha La from the south



Cloud Gap and Simvo from the Guicha La



Panorama from Guicha La

The party who made the trip in 1935 consisted of Mr. and Mrs. H. P. V. Townend, Mr. L. R. Fawcus, Dr. W. A. Jenkins, Mr. R. Gardiner, Miss Atkins, and Miss Griffin. They were accompanied by Nursang as Sirdar and thirty-four Sherpa and Bhutia porters, many of whom had taken part in the Mount Everest and Kangchenjunga expeditions and some of whom were on Nanga Parbat in 1934. The trip took eighteen days. Ten nights were spent in tents. The marches between Phalut and Dzongri were long, and when travelling for pleasure it would be well to make one or possibly two more camps on that part of the journey. No ponies were taken, nor would it be possible to get them more than a day or a day and a half's march beyond Phalut, owing to the roughness and steepness of the track.

<sup>1</sup> See Survey of India map 78A; also Tours in Sikkim, and accompanying sketch-map.

In spite of the early date (the departure from Darjeeling was on the 23rd September), the weather was good. It was an exceptionally fine early autumn. Normally speaking, it would be better to leave Darjeeling about the middle of October. Light single-fly mountain tents are not advisable, as heavy rain-storms are frequent along the Singalila ridge.

The path follows the ordinary tourist route as far as Ghiabhanjan. It then climbs steeply up to the ridge again, and follows more or less along the crest, often in a series of steep stone staircases, till within a few miles of Migothang, when it drops on the Nepal side to a beautiful camp site. It then crosses the ridge by the Ghara La (14,000 feet) and traverses four more passes, skirting mountain tarns commanding fine views of the snows, and finally descends from the Oma La, 15,000 feet, into the Gamothang valley at 12,250 feet, another fine camping-place. A long climb



out of this valley and a traverse round the end of a huge mountain spur is followed by another descent into the Gherab Chu valley, which would also make a good camping- place. Several more climbs up and down bring one at last into the Ghurang Ghu valley, below Dzungri. From here it is a fairly steep climb of about three miles to the upland of Dzungri, where there is a yak-herd's hut and generally a lot of yaks grazing. The snows are now very close. The track passing northwards over the Dzungri uplands descends 1,000 feet in a series of zigzags through rhododendron forest to the valley of the Praig Ghu and follows up beside the river, through woods and then past groups of rose-bushes, barberry, and other thorny shrubs, till it emerges at about the same altitude as Dzungri (13,140 feet) on to the grassy, flower-sprinkled meadows at the head of the valley, which are known as Alukthang or Wangle- thang (thang = meadows). Three splendid snow-peaks, Pandim, Tingchingkang, and Jubonu, make the eastern wall of the valley. High rocky hills close in the west and behind them lie the Dome and the Forked Peak. A good view of these peaks may be had by climbing a short way up the eastern slopes of the valley. The head of the valley is blocked by a splendid view of Kangchenjunga. Camp might be pitched almost anywhere in the upper part of the Alukthang valley. An excellent place is on a flat, square, grassy space close to the eastern slopes where woods still cover the lower hill-sides and where there is a cave. Beyond this there is only a short march of seven miles before the meadow of Chemthang at the foot of the ascent to the Guicha La is reached. The altitude is about 15,800 feet and firewood has to be brought from the Alukthang valley. Pandim still towers up on the east. A high ridge joining Pandim to a peak about 19,000 feet high, called the Guicha Peak on some old maps, rises close in front and blocks out the view of Kangchenjunga. To the west magnificent glaciers sweep down from a row of unnamed snow-peaks, which link up with the Dome and the Forked Peak. Between Pandim and the Guicha Peak there are two saddles, and there was some doubt as to which of these was the true Guicha La.<sup>1</sup> The Sirdar and all the porters who had been in those regions before, questioned individually as they came into camp, showed no hesitation in pointing to the definite saddle on the shoulder of Pandim and immediately above the camp. Freshfield's description in Round Kangchenjunga tallied much more closely with the more indefinite and apparently slightly lower saddle more to the west (i.e. nearer the Guicha Peak). Subsequent inquiries seem to have established fairly definitely that the more easterly is the Guicha La, and to this pass the party climbed early the next morning. There is no path and the ascent is made up a steep scree, with occasional patches of rock coming through it. Hard snow was lying a short distance above the camp and it was easier to climb on this than on the treacherous scree. The ascent of about 900 feet took about an hour and a quarter. The view from the top was splendid. The Talung glacier lies immediately below, and across it, exactly opposite the pass, is the narrow cleft of the 'Cloud<sup>5</sup> or 'Zemu Gap<sup>5</sup> between Simvo and Kangchenjunga. Slightly more to the west rises the huge mass of Kangchenjunga, its western shoulder obscured by the Guicha Peak, which, though only 19,000 feet, looks very impressive owing to its proximity. To the right, the Talung valley loses itself in a mass of rocky peaks, and close on the right a magnificent line of aiguilles mount towards the summit of Pandim.

It was tantalizing to have to return to Dzungri from this spot instead of crossing the pass and following the Talung valley to Singhik in the Tista valley, or crossing the Cloud Gap into the Zemu valley. The Talung valley is choked with dense rhododendron jungle and the few people who have descended it strongly advise others not to attempt it until some sort of a path is cut.<sup>2</sup>

In April 1925 Mr. Tombazi, and in early May 1926 Capt. Boustead, reconnoitred the Cloud Gap, approaching it up the Tongshyong glacier, which joins into the Talung glacier a little to the east of the Guicha La. Capt. Boustead succeeded in crossing the Gap, but he was constantly in danger from rock-falls and avalanches. He was only able to descend on to the Zemu glacier and returned immediately as he had no tents or stores with him. In view of the report recently given by Mr. Cooke of the excellent snow conditions and the small number of avalanches in the month of November on Kabru, it would be interesting to try the Cloud Gap at that season.<sup>[2]</sup>

1. S. of I. map, Gocha La, Tours in Sikkim map, Gochak La (see Notes, p. 149).

2. See Dr. Allwein's account of the Passanram and Talung valleys in Himalayan Journal, vol. v, 1933, p. 58 et seq.

The tour in 1935 took eighteen days, but it would be better to spend at least three weeks over it. The total cost per head, including freight on the tents and stores to and from Calcutta, but not railway fares to Darjeeling, was Rs. 10 as. 12 per day (Appendix 1). A list of the marches, with the time taken over each, and suggestions for rearranging the marches in order to take longer and make the daily mileage less, is shown in Appendix 2

#### Note on Porters' Rations in Sikkim

In the Himalayan Journal, vol. iv, 1932, p. 132, Mr. G. B. Gourlay gives a scale of porter's rations. Since then the prices of food-stuffs have fallen so much that the present cost of rations works out at 3 as. 3 pies per head per day for the following amount of food:

1 lb. rice	1 oz. ghee
1 oz. tea	1 oz. dry chillies
2 ozs. sugar	1 oz. dall.
1 oz. salt	

This is a slightly smaller quantity than the amounts given by Mr. Gourlay, but it is all that the Sherpa and Bhutia porters asked for in Darjeeling, and they kept fit and were quite contented with it.

#### Appendix 2

##### Notes on the Route to Dzungri

It is usual to allow 4 ¼ days for the marches between Phalut and Dzungri, but they are then long and strenuous. The path, where there is one, is rough and never level for more than a few hundred yards. For parties with more time it would probably add to the pleasure to make six marches of this part of the trip. The difficulty about camping-places along the crest of the ridge between Chiabhanjan and Migothang is that water is to be found only at a few spots. The springs

near possible camping-sites are small and the water in the ponds is muddy, but it can be made fairly palatable to drink by being treated with alum

<sup>1</sup> Pamionchi is spelt Pemionchi and Pemayangtse on various maps. See Notes, p. 149.

At Phaluk, about 1 ½ hours' march from Chiabhanjan, there is a small pond or pokri and sufficient level ground for pitching small tents. About 1 or 1 ½ hours' march farther north, where Dahtareki is marked on map 78A, there is a pond and apparently level ground several hundred feet down the ridge on the Nepal side. A short way beyond this there is a fairly good camping-ground, with a small pond, known as Burma Pokri, on the ridge, immediately to the right of the track. About half a mile still farther north there is a small spring and a place for camping, which is variously known as Nayathang (thang — meadow) or Nay a Orha (orha — cave) and which lies a little way down from the ridge on the Nepal side. If it is intended to camp here it is advisable to send one or two men ahead with instructions to dig a hole to catch the water from the spring, as otherwise there may be delay in collecting enough for a big party. There is another spring immediately north of Mount Lampheram, where Sago is marked on the map, with possible sites for pitching small tents, though there is not much level ground. Beyond this, until Migothang is reached, the ridge is so steep and rocky that there are no good camp sites, though there are one or two springs.

Ordinary Camps, with heights in feet	Hours of marching, time ex- clusive of rest for lunch	Lowest temp. early (October) °F.	Suggested Camps, with heights in feet	Hours of marching, time ex- clusive of rest for lunch
Phalut <sup>1</sup>	6 ½		Phalut (11,350)	4 ¾
Burma Pokri (c. 11,800) <sup>2</sup>	6 ¼		Phaluk <sup>3</sup>	4
Migothang (12,800)	6 ½		Sago <sup>4</sup>	4
Gamothang (12,550)	7 ½	32°	Migothang (12,800)	5
Churang Chu (12,250)	5 ¼	16°	Lake <sup>5</sup> below and on N. sideOmaLa (c. 14,800)	
Alukthang (13,400)	5	15°	Cherap Chu <sup>6</sup>	4 ¾
Chemthang (15,570)		8°	Dzongri (13,200)	6
Guicha La (16,600)	1 ¼		Alukthang (13,400) <sup>7</sup>	
Chemthang	¾	24°	Chemthang	5

(15,570)		(15,570)
Alukthang Cave	3 ¼	
Dzongri (13,200)	3	12°
Praig Chu	4 ½	
Bridge(7,420)		
Yoksam (5,950)	5	
Pamionchi (6,900)	6 ¾	

The times given in the table on p. 137 are actual marching times and do not include a midday halt for rest and lunch, though they do include short halts for photography and making observations. It would be worth while spending one or two nights at Dzongri and climbing the rock peak of Kabur and the hill which Freshfield calls the 'Belvedere'. It would also be interesting to halt for two or three nights at Chemthang in order to have time to explore some of the neighbouring glaciers, as well as to climb the Guicha La. According to the Sirdar, Nursang, it is possible to go a further day's march to the west (presumably north of the Guicha peak) to a small but very beautiful lake, but we have not been able to test the truth of his statement.

#### THE SHAKSGAM VALLEY, 1935

During 1935 Dr. and Mrs. Visser, with Dr. R. Wyss, Khan Sahib Afraz Gul, and Surveyor Muhammad Akram, carried out further exploration of the side valleys and glaciers of the upper Shyok and extended the survey of the Shaksgam. Unfortunately the promised paper giving details of the work has not yet reached me and I have only been able to draw up a very brief summary of the second part of the journey from letters received from the Khan Sahib during the progress of the expedition.

After working in the Shyok valley the party assembled at Daulat- beg-oldi at the end of June, crossed the Kadpa-ngonpo La to the amphitheatre at the head of the Yarkand river, which was discovered by Hayward in 1868, and which was surveyed by Wood in 1914. From here they crossed into the Shaksgam by the easy pass north of 'Pass G', by which Clifford and Cave came out of the Shaksgam in July 1926, and reached the Kyagar glacier on the 11 th July. The Kyagar lake appears to have been about five miles longer than when we discovered it on the 5th July 1926 and about the same length as it was when seen by Cave at the end of August. The old boat which we had left behind was repaired and used on the lake, though I gather that it is pretty well on its last legs.

After three days' reconnaissance Dr. Wyss found a way across the Kyagar glacier near the snout. According to the Khan Sahib, who was with me in 1926, the glacier has changed considerably in the last ten years; the portion which stretches into the Shaksgam valley is narrower, many of the great pinnacles having broken off, and a large number of these floating seracs encumbered the lake. Dr. Wyss's route was at the extreme end of the snout close by the rock wall of the Shaksgam valley, a route which, according to Minchinton, was impracticable in 1926. The Khan Sahib and Muhammad Akram crossed with four coolies on the 17th and 18th under the guidance of Dr. Wyss, with one camp on the glacier.

There was no difficulty between the Kyagar and the next glacier down the Shaksgam, the Singhi, which the Khan Sahib reports to be about eighteen miles long. It is pinnacled like the Kyagar, though the pinnacles are somewhat smaller and less difficult to negotiate. The party crossed between one and two miles from the snout, taking about six hours over the passage. The Shaksgam contains much more water below the Singhi and is fed by glacier streams on the left bank, which caused some difficulty. The third large glacier, the Staghar, has considerably lower pinnacles and only reached the left bank of the Shaksgam. It seems to have degenerated since it was seen by Professor Desio of the Duke of Spoleto's expedition in 1929; the Khan Sahib reports its length to be about eleven miles. The party was able to pass between its snout and the main Shaksgam river without great difficulty. About six miles below the Staghar is the Urdok glacier, first ascended by Sir Francis Younghusband in 1889. This glacier, though much crevassed and covered with moraine debris, presented no difficulty. The Khan Sahib ascended this glacier and surveyed it while Muhammad Akram crossed the next large glacier, the Gasherbrum, with the intention of surveying down the Shaksgam as far as the Sarpo Laggo glacier, which descends from the Muztagh pass. By now, however, in early August, the glaciers were all melting at a great rate and all rivers and streams were becoming swollen and dangerous. Shortage of rations and rising waters compelled the two survey detachments to start back on the 12th. Between the Urdok and the Staghar considerable difficulty was experienced in fording (the rivers, several loads were lost, and one of the party was only with the utmost difficulty saved from drowning. The Kyagar glacier was recrossed on the 16th and the 17th August by a route far up from the snout at a level where the pinnacles do not exist. Two days were taken on this crossing.

The full results of the survey are not yet available, but it is understood that over 1,000 square miles of the side glaciers of the Shaksgam have now been mapped. Owing to the difficulties caused by the swollen rivers, Muhammad Akram's party was unable to reach Durbin Jangal or the Aghil pass, so the problem of the lower course of the Zug-Shaksgam is still unsettled. In 1926 we showed it tentatively as making a bend and finding a way into the Shaksgam below Durbin Jangal, but this supposition is based largely on the lie of the land and the rough heights of the form-lines sketched in by De Filippi's expedition in the neighbourhood of the Surukwat and Bazar Dara. I would not be in the least surprised to hear that the Zug-Shaksgam turns out to be the main source of the Surukwat river, but the problem is not yet solved.

K.M.

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<sup>[1]</sup> I prefer the spelling Tawang to Towang which is given on S. of I. map 83 (1924). My authorities are Morshead's reconnaissance survey 1913, Bailey in G.J. 1 < i 4, J. c. White in G.J. 1910, and others. Morshead visited Tawang; in his report he says: 'Very great care has been exercised in regard to the orthography of the names occurring on our map.'—F. K. W.