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SOME VALLEYS AND GLACIERS IN HUNZA: A paper read at the Evening Meeting of the Society on 23 January 1928 by

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DURING the summer of 1923 I was climbing in Switzerland with Mr. Henry F. Montagnier, a Fellow of our Society, and a prominent member of the Alpine Club. Sitting on the balcony of his chalet one evening, Mr. Montagnier expressed a desire to undertake another journey to the Himalaya—he had already been there some twenty years ago—and asked me if I would accompany him, provided the necessary leave and permits could be obtained. At that time we had an idea, only roughly formulated, of going up to Kashgar by the ordinary Leh route, and returning to India via Hunza and Gilgit; but without having arranged anything definite I returned to India in the autumn of that year.

I was in Kashmir during the summer of 1926, and whilst passing through Srinagar, took the opportunity of calling upon Sir Aurel Stein in order to discuss with him our proposed journey. Sir Aurel was most helpful and gave me much useful information about travel in Central Asia. He did not anticipate that we should meet with any particular difficulty, but suggested that the journey proposed was a little dull in view of the fact that we should not leave a perfectly well-known high-road. In the meantime however both Mr. Montagnier and I had sent in our official applications to travel to Kashgar in 1927, and in view of the fact that constant references between the various Government Departments, as well as to China, were necessary, we thought it best to keep to our original plan.

Mr. Montagnier arrived in India towards the end of March and we travelled up to Srinagar together, arriving at that place on the 20th. I had already received permission to travel in Chinese Turkestan, but a few days later my companion found that he could not obtain the necessary passports, though he was accorded permission to travel anywhere in Hunza and the neighbouring British territory. This necessitated a change of plans, and we were a little undecided as to what to do. Fortunately Sir Aurel Stein was again in Srinagar, and at his suggestion we resolved

to travel direct to Hunza as soon as the passes were open, thence to establish a base in the vicinity of the Shingshal pass, or possibly beyond it, and from that place to work forward and try to explore the unknown country between the farthest point east in the main Shaksgam valley reached by Sir Francis Younghusband in 1889, and the most westerly point reached by Major Mason's Shaksgam Expedition in 1926, and thus fill in the small but doubtless highly interesting blank patch on the map. This was not to be, however, for reasons which will be explained later; but I have included in this paper some hints and suggestions which I hope may be of use to some future party intending to explore this region.

We were disappointed at having to make this last-minute alteration to our plans, but the thought of travelling in quite unknown territory compensated us for a great deal. I had long wished to see Hunza and its people; but the journey to Hunza is long and costly, rather beyond the means of the average soldier in India, and it was only due to the kindness and hospitality of Mr. Montagnier, who paid the entire expenses of our expedition, that I was at last enabled to visit this most fascinating country.

We left Srinagar on 12 May 1927 by boat, arriving at Bandipur, on the far side of the Woolar lake, two days later in heavy rain. Here we received news that heavy snow had fallen on the Tragbal, thus delaying our start for a day. Profiting by the experience of the Vissers in 1925, I had decided to employ only porters until we reached the Astor valley, and this arrangement enabled us to go steadily forward without a check. On the night of the 21st we crossed the Burzil pass, heavily coated in snow but in good condition, and with the pass behind us the onward journey was monotonously free from incident. Arrived at Gilgit on May 31 we found that the Political Agent, Major Loch, had made all arrangements for our onward journey, and had also asked the Mir of Hunza to provide us with a corps of specially selected men who would carry our loads when once we left the main valley.

There is still some exploration to be done in Hunza territory, for this reason, that through the main valley of Hunza runs the easiest route to Central Asia, the goal of most travellers that way. Many have passed, but few have thought it worth while to stop and explore. Sir Francis Younghusband was, of course, the pioneer. After him came General Sir George K. Cockerill, who also covered much new ground, and many years later called the attention of Fellows of our Society to the fact that there was still a large unexplored area in this comparatively accessible part of Asia  $(G.\mathcal{F}. 60, 2, \text{August 1922})$ . In 1925 the Visser Expedition performed a prodigious amount of work and cleared up the majority of the remaining problems. The story of that expedition is familiar from the recent account in the  $\mathcal{F}ournal$  (68, 6, December 1926) and from the charming book written later by Madame Visser ('Among the Karakoram Glaciers,' Visser-Hooft, Arnold 1926).

The main Hunza valley is, of course, well known and has been often

described. It is, however, so impressive and leaves such different impressions on different people that I feel it will not be out of place to describe my own briefly here.

Crossing the river at Gilgit one soon turns north into the Hunza valley. For the first march or so the scenery is not particularly striking, being monotonously barren and rocky, only relieved here and there by patches of cultivation round the infrequent villages. Leaving the little hamlet of Chalt we passed through a series of well-cultivated and prosperouslooking villages, of which the most interesting is undoubtedly Nilt. The fort, of which but little now remains, is on the top of a steep precipice. By climbing above this place under heavy fire, and so gaining command of the fort, the late Colonel (then Lieutenant) Manners-Smith gained the Victoria Cross in the little Hunza campaign of 1891, so admirably described by Knight in his 'Where Three Empires Meet.' Looking up the valley behind Nilt there is a truly wonderful but very foreshortened view of Rakaposhi at close quarters; all the more wonderful from the fact that one suddenly turns a corner and there right before one is this enormous mass of snow and ice.

A few miles higher up the valley closes in somewhat, and at Tashot, where the river is spanned by a modern suspension bridge, we crossed into Hunza territory. The gorge here is very narrow and precipitous, Rakaposhi rising majestically above everything. The valley soon opens out again, and there are many fruit trees and crops in plenty. The path was gay with wild roses and lined with aromatic trees, which gave off a perfume strangely reminiscent of orange blossom. The journey from here on to Baltit was a sheer delight, for every turn in the road brought fresh glimpses, either of Rakaposhi or of the wonderful mountain behind Baltit, Boyo Shubran, of which Boboli Moting, or the "Finger Peak," is the most prominent feature.

A little below Baltit is the village of Aliabad, some 7000 feet above sea-level, and from this place one obtains what I would venture to call one of the finest mountain views in the world, certainly one of the most magnificent in the whole Himalaya. The height of Rakaposhi has been computed at 25,550 feet; Aliabad has an uninterrupted view of some 17,000 or 18,000 feet of snow and ice. As we passed there was hardly a cloud in the sky, and the wonderful array of hanging glaciers and precipitous ice-cliffs gleaming in the brilliant sunlight and rising vertically above the emerald fields of the village was a sight never to be forgotten.

We were now joined by our surveyor, Torabaz Khan, and his servant, whose services had kindly been lent by the Surveyor-General in India. Torabaz had been unable to join us before we left Srinagar and had now reached us by arduous double marches, of which he did not in the least complain.

The Mir had sent ponies to meet us at Aliabad, and the short journey up to Baltit was accomplished with speed and comfort. His picturesque

capital is built round the sides of a rocky knoll, on the top of which stands the ancient castle of the Mirs, dominating the whole valley. The wonderful impression of impregnability and aloofness which the scene leaves upon the mind is heightened by the terrific snow-capped crags which appear to rise almost sheer behind the village. The castle is approached through a veritable rabbit warren of alleys and byways, and one eventually gains access to the principal building by a rickety staircase, its wooden hand-rail smoothed and polished by the rubbing of countless hands. Here are stored all the Mir's treasures: presentation swords, gimcrack clocks, a set of Russian china crudely coloured; on the floor a modern Bokharan carpet; on the walls a varied assortment of pictures, photographs of former Political Officers, oil paintings, and a portrait of a late Archduke of Austria, cheek-by-jowl with a highly coloured advertisement of a well-known patent food. But turn for a moment to the window and here is a panorama which almost defies description. Immediately below are the roofs of the surrounding houses, each with a large square hole in it, the sole means of ventilation in Hunza houses. Behind stretches mile after mile of cultivated land, emerald green just now with the fresh young shoots of the wheat. The village of Aliabad is just visible in the far distance, and Rakaposhi towers over all. Here of old the Mirs of Hunza held their Courts, and the people from the street below did homage to their ruler as he showed himself at the castle window.

The people of Hunza do not know Rakaposhi by that name, but as Dumani, the "Mother of the Clouds." I believe that in early days an officer was touring in the district of Bagrot on the other side of the mountain, and there was given the name Rakaposhi.

We spent some days in Baltit, as beyond that place supplies are not obtainable, and it was necessary to make careful arrangements with the Mir, who agreed to forward our various necessities at stated intervals. During our stay the Mir entertained us to dinner one night with a musical entertainment. First one of the court musicians sang old Persian songs to his own accompaniment on the Rabab, a many-stringed instrument not unlike a lute. The one on which he played was said to have been brought from Kabul more than a hundred years ago. Later on the dining-table was removed, we seated ourselves round the walls, and the Mir's orchestra, salaaming as they entered, grouped themselves on the floor. There were five performers: two Saronais (sometimes replaced by two flutes), two tenor drums played with the flat of the hand, and two little drums like miniature tympani, giving different notes and played with slender sticks. I was interested to observe that these last were occasionally tuned by holding them in front of the fire to make the parchment contract. The percussion instruments were out of all proportion to the rest, and whatever melody there may have been was completely drowned by the beating of the drums.



The Malangutti glacier and Dasto Ghil



Looking down the Zardigarban towards Yazghil and Kanjut

I explained our intentions very fully to the Mir, but he himself, although perfectly willing to let us proceed, expressed grave doubt as to the advisability of exploring towards the Shaksgam at this time of the year. In the late spring, usually early in June, the snow on the great mountain ranges of Hunza starts to melt; the main river and all the streams in the numerous side valleys rise quickly and remain unfordable until the approach of the cold weather stops further melting and the rivers fall to their normal winter level. The side streams of Hunza are, for the most part, unbridged, and as the cliffs and crags with which the country abounds are difficult and often impassable, one has frequently to wade a stream fifteen or twenty times in a march. Neglect to consider this most important matter may land one in serious difficulties, for one might enter a valley just before the melting of the snow and find oneself unable to get out again for several months. This has been well brought out by Madame Visser in her book, and I stress it here as it is the principal factor on which successful exploration in Hunza depends.

We left Baltit on June 11, intending to cross into the Shingshal as early as possible. The normal method of getting into that valley is to wade the Hunza river at Pasu and proceed straight up the Shingshal gorge to Dikut, fording the river several times on the way. The snow water had already started to come down when we reached Pasu, and, while we ourselves could doubtless have got up the gorge, it would have been quite impossible to get the laden porters across the now swollen stream. When once the river has closed the gorge there is little intercourse between the peoples of Shingshal and Hunza, but it is still possible to reach the valley by crossing the arduous Karun Pir, a pass 15,932 feet above sea, and by this route we had perforce to proceed.

We camped about four hours' march below the summit. It was bitterly cold and a little snow fell during the night. Leaving early the following morning, we had a steep climb over deep snow, but the cold mountain air was delightfully refreshing after the heat of the valley below. A little before reaching the top of the pass there is a fine view to the left up the Karun glacier, at whose head is a fine peak, Karun Koh (Point 22891), but from this point not very impressive.

A strong wind was blowing when we reached the summit, and soft powdery snow was being whirled in all directions, giving the impression that steam was rising from the ridges. The Shingshal side of the pass was, most unfortunately, deep in cloud, and there was little to be seen of the magnificent array of snowy peaks which must be visible from here on a clear day. We could however look across to the gorge at Pasu, and could also see the Momhil and Lupghar Yaz glaciers, pushing their rather unattractive and dirt-covered snouts into the valley below. It was bitterly cold on top, and we stayed only long enough to take a few photographs. I hurried on, hoping to find some sort of path as soon as we got below the snow-line, but was disappointed to find none. On the

Shingshal side the whole mountain side is composed of enormous shale slopes, lying at such an angle that they are only just stationary, and one gets down as best one can. We seemed to be traversing these shale slopes for hours, and tired out, reached our camp at Dikut, a small level but uninhabited spot at the junction of the Shingshal and Lupghar Yaz streams, towards the evening.

Above Dikut the Shingshal is impassable for a few miles, as great frowning cliffs and shale slopes thousands of feet high come right down to the very water's edge, and one proceeds, even in mid-winter, when the water is at its lowest, across the Momhil stream and thence over the Unmusar spur. The bridge across the Momhil is quite a test of nerves, for, high above the river, it has no hand-rail and is approached by a narrow path which is little more than a ledge cut in the steep rock face. From here on the road presents no difficulties, but there is an extremely trying climb to the top of the Unmusar spur, whence one looks down to the Shingshal river, thousands of feet below, and away in the background is the range on which is the Karun Pir.

The whole of this region must be one of the most desolate in the world. There is not a sign of vegetation, and a solitary eagle and a few choughs were the only birds. Everything here is grim and desolate, and the general effect of the scenery is depressing in the extreme. There is no colour; only huge rock precipices and great shale slopes, rising up above one as far as the eye can see. Even the glaciers with which this country abounds are dirty and covered with débris, and the giants of the Karakoram, but for which the country could only be described as hideous, seem to lift their heads above this scene of desolation almost in disdain. The valleys themselves are on such a gigantic scale that one does not at first realize to what enormous heights the surrounding snow-peaks rise, and it is only after careful inspection that the huge hanging glaciers and ice-falls on the mountain sides are recognized and proclaim these peaks to be of the first magnitude. In this district one looks in vain for signs of former glaciation, for the friable nature of the shaly hillsides has long since obliterated any traces.

The remainder of the Shingshal valley does not differ from the scenery I have already described. One can hardly call it a pleasant country in which to travel, for there are no paths as we know them, and the day's march consists in traversing endless stony slopes, alternated with occasional scrambles amongst the boulders in the river-bed.

Before reaching Shingshal we camped one night on the edge of the Malangutti glacier. It was a relief to find a spring of clear fresh water and a few stunted willows here. The Malangutti differs from the other glaciers in this region in that it is snowy white and free from débris, but we noticed upon it a few erratic blocks of granite. At present the glacier—which was fully explored by the Vissers in 1925 and found to be 18 miles in length—runs right down to the Shingshal, but it exhibits signs

of retreat. At its head is a very steep ice-fall, and, rising behind, the beautiful peak of Dasto Ghil. In common with the Vissers, I found that General Cockerill's name for this mountain, Malungi Yaz, was unknown to the local people, who speak only of Dasto Ghil, or "The sheep-fold," as it means in the local language. The passage of the glacier presented no difficulty, and I was much amused when our porters removed their foot gear, preferring to cross the ice barefoot.

We arranged to spend several days in Shingshal, as this now appeared to be the most suitable spot in which to establish a base upon which we could draw for our further supplies. While here I managed to collect a great deal of information concerning the manners and customs of the Shingshalis, which differ considerably from those of Hunza.

We had arranged all the details for the onward journey to Shaksgam, and there appeared to be no reason why our labours should not be brought to a successful conclusion. Montagnier and I were sitting out under the trees discussing the various problems which might call for solution when a messenger suddenly arrived from Hunza with an urgent telegram, and we were greatly surprised and disappointed to learn that it ordered us on no account to proceed beyond the Shingshal Pass. I cannot, for obvious reasons, discuss the causes which led to our being stopped, and at the time the important thing was for us to decide what we were going to do. It appeared that the only other piece of unexplored country in this part of the world was the Ghujerab valley, and this had been found impassable by the Vissers. It did not seem very hopeful, but we eventually decided to try the Ghujerab as, even if defeated, we could always return the way we had come.

There is no bridge at Shingshal, but the villagers erected one for us. Stout poles were planted on both sides of the river, and between them a thick rope of plaited yak's hair was stretched. Over this was placed a wooden runner, or inverted U-shaped piece of wood, and, trussed up like fowls, we were hauled across, the first man swimming across with the draw rope. The passage of a river in this fashion is more sensational to the onlooker than to the performer, and in actual fact far less terrifying than crossing by means of a birch-twig bridge. In the former case one simply holds tight and is pulled across, the rope breaking or not as the case may be; while in the latter one has to climb across the horrible swaying erection by one's unaided efforts—a much more difficult proceeding. The passage of ourselves, porters, and kit occupied the best part of a day, and we camped but a short distance away, at the entrance to the Zardigarban valley.

The Zardigarban valley is narrow and very steep. At its head is a little plateau, known as the Zardigarban Pamir, one of the Shingshal grazing grounds. Away to the right was the pass of the same name, across which runs the path, which we should otherwise have taken, leading to the Shingshal Pass and on to the Shaksgam. The Zardigarban here turns

sharply to the left, and it was up this valley that our route now lay. We were surprised to find that the valley was about a quarter of a mile wide. It had a stony and boulder-strewn bed, but was practically devoid of water, in spite of the presence of large ice-fields at its head. During the passage of this valley the path ascends an enormous moraine, the glacier of which must have, at some former period, entirely blocked the valley. From the top of this we obtained a view up the Shekhdalga valley, in which is a small glacier of no particular interest. We descended from the moraine, crossed the Shekhdalga, and proceeded on up the Zardigarban once more. A small torrent was now visible, passable anywhere. The sun was shining brilliantly and the radiation from the boulders in the river-bed became extremely trying. Although we were now well above 15,000 feet I have never experienced the effects of lassitude so much, nor felt such an overwhelming desire to sleep. Nor was I alone in this feeling, for I noticed that it was only with real effort that the party covered the remaining mile or so to our camping-place at Jachfarbask. Here I saw two whitecapped redstarts and a solitary chough, the only signs of bird-life all day.

The camp at Jachfarbask was pitched just below the snout of the Boesam glacier, from which small showers of stones were continually falling. We spent two nights in this place, and the temperature never once rose above the freezing-point. The first evening was beautifully clear, with hardly a cloud in the sky, and looking down the valley we had a magnificent view of Yazghil, with one of the Kanjut peaks towering behind. Just before darkness finally descended upon us I saw, silhouetted against the sky-line, a large herd of burhel, but they soon scented us and quickly disappeared with a clatter of falling stones.

It was my idea, whilst at Jachfarbask, to ascend one of the higher ridges in the hope of being able to look down into the Ghujerab and fix some points for our map. With this object in view Torabaz and I, taking only sufficient porters to carry the planetables and cameras, set off to climb a high ridge at the extremity of a long line of fantastic aiguilles, to the west of camp. We toiled laboriously over rocks and shale for the first two hours, and then came to a steep snow-filled gully. From a preliminary study of this place by field glasses I had made up my mind that this was the best means of approaching the ridge, but on closer inspection I considered the snow to be too soft and steep for safety, and we therefore crossed to a ridge of rocks, hoping to gain the col by this means. We were some three hours on the rocks, which were glazed with ice in places. It now commenced to snow and the wind was bitterly cold. After reaching the top of the rocks, not without difficulty, we found ourselves faced with another snow-slope, far more dangerous than the first, on the top of which was a cornice of from 15 to 20 feet thick. This alone would have been sufficient to stop us gaining the ridge, and there was nothing left therefore but to retrace our steps. On the way down it ceased to snow, and the sun came out and dispelled the clouds, which had been gathering all

the morning, for a few minutes. The panorama which now unfolded itself made the day's efforts worth while, for we were about 18,000 feet above sea-level and well above the immediately surrounding country. Away to the south-east a magnificent vista of snowy peaks, which must have comprised most of the giants of the Karakoram, came gradually into view. First Yazghil made its appearance, soon to be dwarfed by the two Kanjut peaks, and others still bigger but many miles away. The whole horizon was one vast world of ice and snow, with glaciers coming down in all directions. I was almost glad when the clouds closed over this scene of wonder, for it would have been hard indeed to turn one's back on such a sight.

From our camp at Jachfarbask to the top of the Boesam Pir Pass took just about two hours. The going was easy but rather dangerous in one place where the path runs beneath a line of large rocks precariously balanced on the top of a small wall of ice. The height of the pass by hypsometer is 15,700. The main Boesam glacier (which flows down the Zardigarban valley) is formed by two small and very steep glaciers which flow from the peaks a little to the west, and unite just beneath the summit of the pass. To the north-east is a large snow-filled basin, formed by two large moraines, in the centre of which is a small glacial lake which was completely frozen over when we passed. We continued down the valley, which is here called the Drui valley (from the fact that it has a lake at its head, Drui meaning lake in the Wakhi language), and soon mounted on to a huge moraine, which completely fills the valley for a distance of several miles. Several small glaciers flow down from the lateral valleys, but so torn and tumbled is the whole place, it is almost impossible to trace the course of these glaciers once they push their way into the main valley. On the eastern side of the valley was another small range of fine snow-covered peaks, from which three more small glaciers descended. We now came to the snout of the moraine, and were surprised to note that the river issuing from it was only a few inches deep and fordable anywhere. Some of our porters had passed this spot with the Visser party, and told me that it was only with great difficulty that the party was able to cross this river at all. I must point out that we had now had a succession of cloudy days ever since leaving the Shingshal, which meant that the melting of the snow was held up for the time being. The Shingshal men who were guiding us thought that with a continuance of this weather we should be able to get right down the Ghujerab without undue difficulty.

We camped on a small pamir known as Shakshagin, and here I noted *Primula Stuartii* for the first time. Opposite the camp was a small but very steep glacier which did not quite reach the main valley. The lower Drui shows signs of having been filled with small glaciers at one time, which flowed from the many lateral valleys, the old moraines of which tend to divide the valley into a series of terraces, one above the other,

and between which are now small grassy plateaus, known locally as Pamirs. These pamirs are used by the people of Shingshal as grazing grounds for yaks and sheep. The Shingshalis also graze their flocks as far down the Ghujerab as they can get, but they never enter the Khunjerab, which is grazed only by the people of Gircha and Misgar.

The Drui joins the Ghujerab at Mandi Kushlak, a small collection of stone huts which were however unoccupied at the time. Here we were greatly surprised to find ourselves in a broad stony valley at least three-quarters of a mile wide. To the east we could see the two streams, the Ghidims and the Mai Dur, which uniting form the Ghujerab. At the heads of these two valleys are snowy peaks, which form the watershed between the Hunza and Oprang valleys. Although there are no known passes into the Oprang it seemed to us, from a careful study of the country, that several ways might possibly be found, but this would require the assistance of trained guides, as, although the ridges are not particularly high, a great deal of step cutting would be necessary. We were glad to note that in spite of the enormous ice-fields at the head of the valley the Ghujerab at present consisted of a trifling stream, only a few feet wide, across which one could jump almost anywhere.

A little way down the Ghujerab we mounted on to an enormous moraine, from the top of which we got our first view right down the valley. It looked uninviting; the same bare brown hills, with an occasional snowy peak on either side, and the usual hideous slopes of shale, in colour a monotonous brown. The most conspicuous point in the landscape was Point 21270, a snowy peak just beyond the Chapchingal valley, through which the Vissers entered the Ghujerab. They found themselves unable to get down the Ghujerab, but from the Chapchingal crossed into the Shingshal valley by the route I have just described, but in the reverse direction.

Some few miles down the Ghujerab is joined by another valley to which we gave the name Dih, as this is the name of the little encampment at the junction. Situated at a height of 12,350 feet it is the headquarters of Sadiq, our guide, when he is in the Ghujerab grazing his flocks. He had cultivated the ground round about his little hut and grew enough wheat to support himself and his family during their stay in the valley. Sadiq, who was the only member of our party who knew the lower Ghujerab, was one of the most intrepid and careful cragsmen I have ever seen. Before taking us over a difficult place he would invariably implore us to remove our climbing boots, as he considered them a terrible handicap, which, from the point of view of a Hunza man, who depends almost entirely on balance, they undoubtedly are.

We explored the Dih valley on the day of our arrival and decided to ascend a small peak on the opposite side of the river the following day, in order to fix more points. We left camp at five in the morning, waded through the ice-cold river, and were on the top of our peak by eleven.

There was hardly a cloud in the sky, and we had a fine view of the group of mountains to the south of the Ghujerab, of which Karun Koh was the most prominent on account of its nearness. A little to the west the junction of the Spe Syngo and Ghujerab rivers was visible, and it was at once apparent that if we could force a way up the former we should be rewarded with a magnificent view of Karun Koh at close quarters.

The following day we had the camp moved only a few miles down the valley, and while this was being done Torabaz and I set out to explore up the Spe Syngo. The lower part of this valley is very narrow and precipitous, and but for the fact that there were a large number of enormous boulders in the river-bed, some of them 20 to 30 feet high, which made it possible to cross the torrent here and there, it would have been very difficult to get up the valley at all, as the alternative would have been to traverse a number of difficult rock faces. Even as it was this procedure could not be altogether avoided, and at such times progress became very slow and tedious. About 4 miles from the junction the valley forks, the glacier of Point 20147 coming down the eastern branch, and that of Karun Koh down the western. Near the junction was a small grassy plateau and the remains of a rough stone hut. This place, known as Spe Syngo Wa Dast, is used as a grazing ground in the early spring, when the river has practically no water in it and the passage of the valley presents no difficulty for either man or beast.

One would expect to find, in a valley like the Spe Syngo, traces of glaciation, but there has been so much erosion and the shale slopes are now so huge that any traces have long ago disappeared. For the same reasons it is not now possible to say with certainty whether the valley is U- or V-shaped, but I imagine that this, and in fact all the valleys in this part of the world, must at one time have been filled with ice. So far as we were able to judge, much the greater part of the enormous mass of snow accumulating on the mountains evaporates and does not, as might be expected, melt into the rivers.

We examined the eastern branch of the Spe Syngo first. The glacier is fairly level, uncrevassed, and shows signs of rapid advance. The principal peak at its head, Point 20147, is remarkable chiefly for the enormous number of hanging glaciers on its south-west face. Huge masses of ice thousands of tons in weight, they look as though the least puff of wind would bring them crashing down on to the glacier below. We retraced our steps and prepared to examine the western, and greater, branch of the valley. Just above the junction the valley takes a sharp turn to the west, and consequently Karun Koh, which is situated at its head, is not visible until one has turned the corner. I was prepared to find a view of some grandeur, but not for that which met our eyes. In the foreground an open grassy plain, studded here and there with clumps of *Gentiana carinata*, *Primula Stuartii*, and a brilliant white star-like flower with a splash of red in the centre. Beyond this was the glacier,

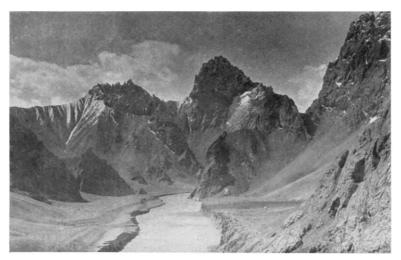
sparsely covered with rocks and débris, and again, towering behind all, the magnificent north-eastern face of Karun Koh. From where I stood some 8000 feet of the face of the mountain were visible, and so still was the day, so clear the atmosphere, that every ice-cliff on the mountain side, every glacier and pinnacle of ice, scintillated in the hard clear sunlight as though sculptured in crystal, and from the centre of the glacier below a roaring torrent issued. Slowly a small cloud came up from the west, its shadow travelling gently over the face of the mountain. It rested on one of the pinnacles of the mountain, rose slightly and dissolved in the faint breeze which was now just perceptible. The hoarse cry of a chough, soaring overhead, disturbed my reverie, and I realized that we must return. It is a day such as this that makes all the difficulties of travel, no matter how hard, worth while, and impresses the beauties of nature upon one's mind in such a way that nothing can destroy the memory of them.

The next few marches down the Ghujerab were uneventful and do not merit detailed description here. We came at last to a camping place with the name of Weir Wunak. Immediately below this place the river enters an impassable gorge, the rocks on both sides coming sheer down to the water. It looked at first as though we might be defeated after all, as, even if we ourselves were able to traverse the cliffs, I did not think it would be possible for laden porters. In this matter I sadly misjudged the powers of the men of Hunza, who this day proved themselves to be mountaineers of the very first order. At first we mounted a huge shale slope; then, crossing an easy rock face, found ourselves about 1000 feet above the river. From here we got our first view of the confluence of the Ghujerab and Khunjerab, and were surprised, and pleased, to note that a very small amount of water was flowing down the latter. We could see our camping place for the night, a small stony plateau about a mile below the junction, but how to get to it was the question; for separating us was a series of steep earth cliffs which looked impassable and horribly dangerous. Taking the ice-axes, our two Shingshali guides started to hack a way across the cliffs, in which they cut steps in the same way as one does in an ice-slope. For hour after hour we continued thus, and at the worst part of all we halted in order to help the porters across. They disdained our proferred assistance, however, and came over climbing like cats, and with never a murmur at the hardships of this day's work. After nearly twelve hours of incessant exertion we glissaded down the last shale slope, glad on arrival to refresh ourselves with the muddy river Montagnier, who has done a great deal of mountaineering, described this as the most extraordinary day's climbing in the whole of his experience.

We had now to cross the river, and in spite of the fact that the last few days had again been cloudy, there was far too much water to make it possible to ford. We had brought with us several hundred feet of rope



Shekhdalga valley and Boesam Pass



Looking down the Upper Zardigarban



Looking back from Unmusar spur towards the Shingshal gorge



Chillinji Pass



Spe Syngo: looking back to the Ghujerab valley



Function of the Khunjerab and Ghujerab valleys

for use in just such an emergency as this, and finding some drift timber on the bank, proceeded to erect a bridge of the Shingshal pattern. Our cross rope sagged horribly, and we thereupon decided to strengthen it with the guy ropes of all the tents. This did not seem to make very much difference, but in the course of a few hours we got the whole party safely across, and a few days later reached Misgar, in the Hunza valley, without further incident.

On arrival at Misgar we learned that soon after our leaving Shingshal one of the glacier lakes above that place burst and caused heavy floods in the valley. It is interesting to note that such a happening was prophesied by the Vissers when they examined these lakes, though the consequences were not so dire as they predicted.

We spent some days in Misgar, where I developed the whole of the photographs taken up to date. Our intention was to fill in the next week or so by visiting the Kilik and Mintaka passes, and in the meantime I telegraphed to the Survey of India to inquire if there was any further topographical work to be done in the district. We set off for Murkushi on July 17, but on arrival at that place Montagnier was feeling the effects of the climate somewhat and decided to go no farther. Leaving him to return to Misgar I decided to carry out, by means of double stages, a rapid trip to the Pamirs, but the details of this do not come within the scope of this paper, and I accordingly make no mention of them here. I returned to Misgar on July 29 and found a letter from the Survey of India asking us to map the Chapursan valley and explore the Yashkuk and Beskiyenj glaciers. Montagnier was still feeling unwell, and it was therefore decided that he should return to Baltit and await in comparative comfort my return from the Chapursan.

Speaking generally, the scenery of the Chapursan does not differ from that of other parts of Hunza, but the valley is very wide and its stream seems to contribute the bulk of the water flowing into the Hunza river, being much bigger than either the Kilik or Khunjerab streams. There are serviceable paths on both sides of the valley, which, unlike the Ghujerab and Shingshal, is never cut off from the rest of Hunza by the rising of the river.

Some 5 miles upstream we came to what has up to date been known as the Rishipjerab valley. Rishipjerab is the name given to the small pasturage at the entrance to the valley, the valley itself being known as the Kundil. Here are the remains of an old fort and some stone emplacements, built at the time of the Hunza war to withstand a possible advance down the Chapursan valley. The Kundil valley is used as a grazing ground, is easy of access, and presents no features of particular interest. A mile or so farther on we came to the village of Raminji, at the entrance to the Lupghar, another small valley used as an occasional grazing ground.

The Chapursan produces the best crops in the whole of Hunza. There

is still a great deal of good ground not under cultivation, but the present Mir, with his usual forethought, is taking steps to establish new villages at various points in the valley and thus bring this valuable land gradually under the plough. The people of the Chapursan are, for the most part, Wakhis. Most of them came into Hunza territory many generations ago, but of late years there seems to have been a small but steady flow of settlers from Wakhan.

A few miles below Yashkuk I was surprised to notice that the whole valley was filled with earth mounds, some of them 15 to 20 feet high, with rocks and débris embedded in them, the whole covered with a thick layer of light grey mud. This formation extended nearly as far down the valley as Reshit, a distance of several miles. It is accounted for by the local people in the following legend, and on my return to Baltit the Mir also gave me the same story:

About a hundred years ago Yashkuk, of which no trace now remains, was the largest and most important village in Hunza. The people, though prosperous, were very much under the influence of a malignant demon, who had his abode in the mountains at the head of the Yashkuk glacier, This demon could be appeased only by the daily offering of a human sacrifice, and accordingly some member of the village was daily selected to offer himself as sustenance for the monster. At this time the people of Yashkuk were much given to evil living, but the demon took no notice of this provided he obtained his daily sacrifice.

One day an elderly saint, Baba Ghundi by name, appeared on the scene. He remonstrated with the people and offered to protect them against the demon if they would reform their ways. He soon went on his way, telling the people that he would reappear if called upon by name. For a time all went well, until the people, tired of living an orderly life, gradually resumed their old way, and the Demon of Yashkuk again reappeared. Baba Ghundi was called upon to help, and shortly reappeared. He put matters right once more, but solemnly warned the villagers that if they again returned to their evil ways he would destroy their village and all its inhabitants. He again went on his way, and for a time peace reigned in the village. A few years later, however, the teaching of Baba Ghundi was forgotten and his prophecy of destruction duly came about, for without any warning a huge wave swept down the Yashkuk and completely destroyed the village. Every one was drowned with the exception of one woman, who had refused to participate in the horrible orgies of the villagers, and she is considered to be the original ancestor of the present inhabitants of the Chapursan valley.

There is now no village of Yashkuk, but the place of this name is a large grassy plateau at the junction of the two rivers. It affords perhaps the best grazing in the whole of Hunza and is reserved by the Mir for the use of his own flocks. I was interested to find the cause of the "wave"

which destroyed Yashkuk about a hundred years ago, and accordingly set out to explore the glacier.

About 3 miles above the junction the Yashkuk valley divides into two, and I explored the eastern branch first. This valley, the Kuk-ki Jerab, contains a large glacier which descends from Point 22751, a mountain which is partly responsible for the Batura glacier, that does not flow into the Yashkuk, and is now quite separate from it, although the two glaciers have at some former time been united. As soon as we entered the Kuk-ki Jerab the reason for the débris and mud in the Chapursan was at once apparent, for it was quite obvious that at one time a very large glacier lake existed there. I imagine that the Yashkuk was once much longer than it is at present, and extended past the entrance to the Kuk-ki Jerab, forming an effective outer barrier for the lake. At the same time a large amount of water must have been flowing out of the Kuk-ki, for the glacier is of no mean proportions, and being unable to escape by reason of the dam formed by the Yashkuk, made a lake, until the pressure finally became too great and the barrier gave way. An enormous volume of water and débris swept down the valley into the Chapursan, destroying the village in its course, and leaving a covering of mud which is still visible.

Towards the head of the Kuk-ki Jerab an easy pass leads into the Lupghar valley, and below this pass, on the Kuk-ki Jerab side, is excellent grazing ground which is in regular use during the summer months. A shepherd accompanied us part of the way, and it was a novel sight to see a flock of goats being driven up a glacier, a proceeding which they did not appear to mind in the least.

We retraced our steps, crossed below the snout of the glacier, and reentered the Yashkuk, keeping to the hillside as it afforded better going than the very tumbled moraine. The Yashkuk is covered in débris and huge boulders, mostly of grey granite, nearly to its source, the peaks at the head being unimportant and of no particular height or beauty. The glacier is crossable anywhere, but it was an arduous performance to pick one's way over the heaps of loose débris and boulders which tended to move as soon as any weight was placed upon them. Although not more than  $1\frac{1}{2}$  miles wide it was over three hours before we landed safely on the far side. Here there was a little scrub-covered valley between the moraine and the hillside, and this too was in use as a grazing ground. From here a little track ran down to the main Chapursan valley, and we were enabled to regain our path and reach camp at Ziarat with comparative ease.

Ziarat—at one time called Baba Ghundi—is considered one of the most holy places in the whole of Hunza, for here is the shrine of Baba Ghundi, of whom we have already heard. Ghundi is the name of a place in Bokhara from whence Baba—"the venerable one"—is said originally to have come. There is a similar shrine at Ghundi which is also believed to contain the remains of the saint. This has led to a certain amount of

trouble between the people of the two places in the past, but the Hunzakuts themselves have no doubt in their own minds that theirs is the real shrine, as the following legend, told me by the Mir, goes to prove:

Baba Ghundi died and was buried at Ziarat, in the Chapursan valley, where a shrine was erected over his grave by an ancestor of the present Mir of Hunza. The people of Ghundi, as he was a native of that place, wished to remove the remains of the saint and bury them in his birth-place, but this was not allowed by the people of Hunza. The Ghundi people therefore sent a party over to Hunza with instructions to steal at least some part of the saint's remains. Arrived at Ziarat, they removed the head from the tomb and were preparing to return with it when they found they had all become lame. This lameness enabled the people of Ziarat to catch up with them, which they quickly did, and on the head being returned to the tomb the lameness disappeared.

The tomb is now credited with miraculous powers, and I noticed that it was covered with votive offerings to which my porters added their share.

A few miles above Ziarat the big Besk-i-yenj glacier completely fills the valley, a tumbled mass of snow and ice. It rises on the slopes of Point 21907, on the south of which is the at present unexplored Toltar glacier. The Besk-i-yenj glacier is some 9 miles long and appears to be advancing rapidly. It is joined by a number of small glaciers which come down from the surrounding side valleys. The small Buattar stream, over the pass at the head of which runs a track into Afghan territory, has forced itself between the hillside and the northern edge of the glacier, thus providing the curious spectacle of a river and a glacier running side by side. Towards the end of the glacier the ice becomes too thick for the river to dislodge, and here it disappears beneath the ice to reissue from the snout below. One further valley needs to be mentioned, the Irshad. This also joins the Chapursan at Besk-i-yenj, and at its head is a pass, the one in most general use, leading into Afghanistan.

The Bask-i-yenj is the true source of the Chapursan, and the valley above, that is to the west of, this place, through which runs the insignificant Buattar stream, should rightly be known as the Buattar valley, which is the name by which it is known by the local people. Before entering the main valley the Besk-i-yenj glacier turns sharply to the east, thus forming a barrier right across the Buattar valley. I saw in this place a number of unattended ponies and cows, for whom their owners apparently felt no anxiety. With the big glacier to their east, and the small but steep Buattar glacier to their west, and precipitous hillsides north and south of them, escape was impossible, and they were able to graze in perfect safety until such time as their owners saw fit to fetch them away.

Buattar was a delightful little place, covered with rich grass and bright with a mass of purple geraniums. Sitting outside my tent I saw a diminutive mouse-hare, but it was impossible to see if it differed from the Tibetan variety. Above Buattar a track runs up to the Chillinji pass,

which is 17,000 feet above the sea, and leads into the Karambar valley, but is seldom used, as although perfectly practicable it is rather difficult and arduous. We did not go up the glacier, but ascended a small rock peak from which we could see the summit of the pass, but owing to the approach of bad weather it was impossible to see any great distance.

While I was examining the various glaciers Torabaz was working steadily at the map. As rations were now running short, and there was still a certain amount of local detail to be filled in, we decided that he should remain and finish this work while I returned to arrange the forwarding of further supplies. I got back to Baltit within a week, and found Montagnier awaiting me. He had had rather an uncomfortable time owing to the heat, which at this time of the year, August, is intense during the daytime, in spite of the height of the Hunza valley. We stayed only long enough to settle our affairs and to pay our farewell respects to the Mir, but for whose excellent arrangements and personal kindness and hospitality the traveller in Hunza would indeed fare badly.

I cannot close this brief account without a word of praise for our most excellent porters. These men were with us for just over two months. During this time they were almost continuously on the move and over what is probably some of the worst country in the world for laden men. Always ready to turn their hand to anything, they were, I think, the most cheerful and willing set of men with whom I have ever travelled. One has heard many tales of the trouble given by Himalayan porters in the past to travellers previously unacquainted with the country, and Hunza has been particularly unfortunate in this respect. In order to avoid further happenings of the sort might I too suggest, as General Bruce, Sir Francis Younghusband, Col. Norton and many others have, that future travellers should take the trouble to learn at least the elements of some language intelligible to their men? This is by no means an insuperable difficulty, for a working knowledge of most Himalayan languages can be acquired in a very few weeks (but excluding Burushuski, the mother-tongue of the Hunza people, who mostly understood enough Hindustani for all practical purposes), and I can promise that the result of so doing will repay the traveller many times over, for the people of the Himalaya, like most others for that matter, work best for the man who takes a personal interest in their welfare, and this, no matter what trouble the traveller may take, is hardly apparent to them when their employer does not speak their tongue.

Some Geographical Conclusions, Notes on the Possibility of reaching the Shaksgam from Hunza, and a List of Place Names

Any one contemplating exploration in Hunza during the summer months should remember that the snowfall during the winter of 1926 was exceptionally heavy. This made it possible to work in the valleys during 1927 up to a much later date than would normally be possible.

Major Mason (G.J. 69, 4, April 1927) considers that for an attempt to reach

the Shaksgam viâ Hunza, the best plan would be to winter in Gilgit and set off from that place in the very early spring, returning before the snow started to melt, that is, by early June in a normal year. I am in entire agreement with this idea, and the Mir informed me that there would be no difficulty in finding porters at this season, as the fields have all been sown and the men are free.

The Shingshal route is passable for yaks during the winter, and I think the Mir, by previous arrangement, would arrange to send forward, I would suggest to Shingshal Aghzi, the bulk of the party's stores and porters' rations before the arrival of the main party. Shingshal Aghzi is a particularly suitable place in which to establish a base, as it is a convenient spot from which to work in either direction, *i.e.* either towards the Shaksgam or towards Central Asia.

No supplies of any kind whatsoever are obtainable beyond Shingshal, but mutton and milk can be procured from the grazing grounds in the vicinity of the Shingshal Pass during the summer months at such times as the flocks are there for grazing.

If the party is prepared to sacrifice a certain amount of kit it should be possible to work in this region during the summer, but they should take a light steel rope and tackle with which to make a "bridge" if necessary.

Judging by our experience in the Ghujerab, and allowing for the fact that 1927 was an exceptional year, I do not think an active party need ever fear being completely cut off by the rising of the rivers, always provided that they have plenty of time, rations, and a good supply of ropes, and are prepared for hard work; but the late winter and early spring are undoubtedly the best times.

A future party should bring plenty of empty sacks for porters' rations. The local bags of goatskin are expensive and do not last, and the people do not like parting with them.

With regard to the Ghujerab, I think the passage of this valley in a normal year would be impossible after mid-June, and it should be remembered that even in midwinter, when the water is at its lowest, it is not possible to get along the gorge just above the Khunjerab junction, and this part of the journey can only be accomplished by the somewhat hazardous traverse of the cliffs above the river. It seems that this gorge would account for the fact that the Ghujerab is used as a grazing ground by the Shingshalis and not, as would otherwise be the case, by the people of Misgar and Gircha, who as it is graze their flocks in the Khunjerab, the passage of which, at suitable seasons, does not present any difficulty.

The upper Ghujerab is wide and open and a number of flowers and small shrubs are found there. Lower down, the valley gradually narrows and the hillsides are steep and covered with slopes of shale. It is obvious that there are frequent avalanches of rock and shale on a big scale, and these, I think, would account for the absence of vegetation in the lower part of the valley, for even when a few stunted bushes or plants do manage to exist, the chances are that after a few months they are swept away in the train of some avalanche.

All the glaciers in the Ghujerab are on the south side of the valley, *i.e.* they flow from the northern faces of the mountains, and, as far as we could see, there do not appear to have ever been any glaciers flowing down the lateral valleys on the north side of the Ghujerab.

The area round about Mandi Kushlak, i.e. at the junction of the Drui and the Ghujerab, appears to have been at one time a large lake, of which traces still remain in the valley floor. A little below this place an old moraine nearly blocks the valley, and at one time probably did so completely. This may have caused the lake.

The area was mapped by Torabaz with the planetable, adjusted to the fixed points of the Survey of India Triangulation of 1913, and in continuation of the topographical work carried out by the Visser Expedition in 1925. Mostly on a scale of 2 miles to 1 inch, it covers a total area of some 900 square miles. (See the Folding Map following page 612.)

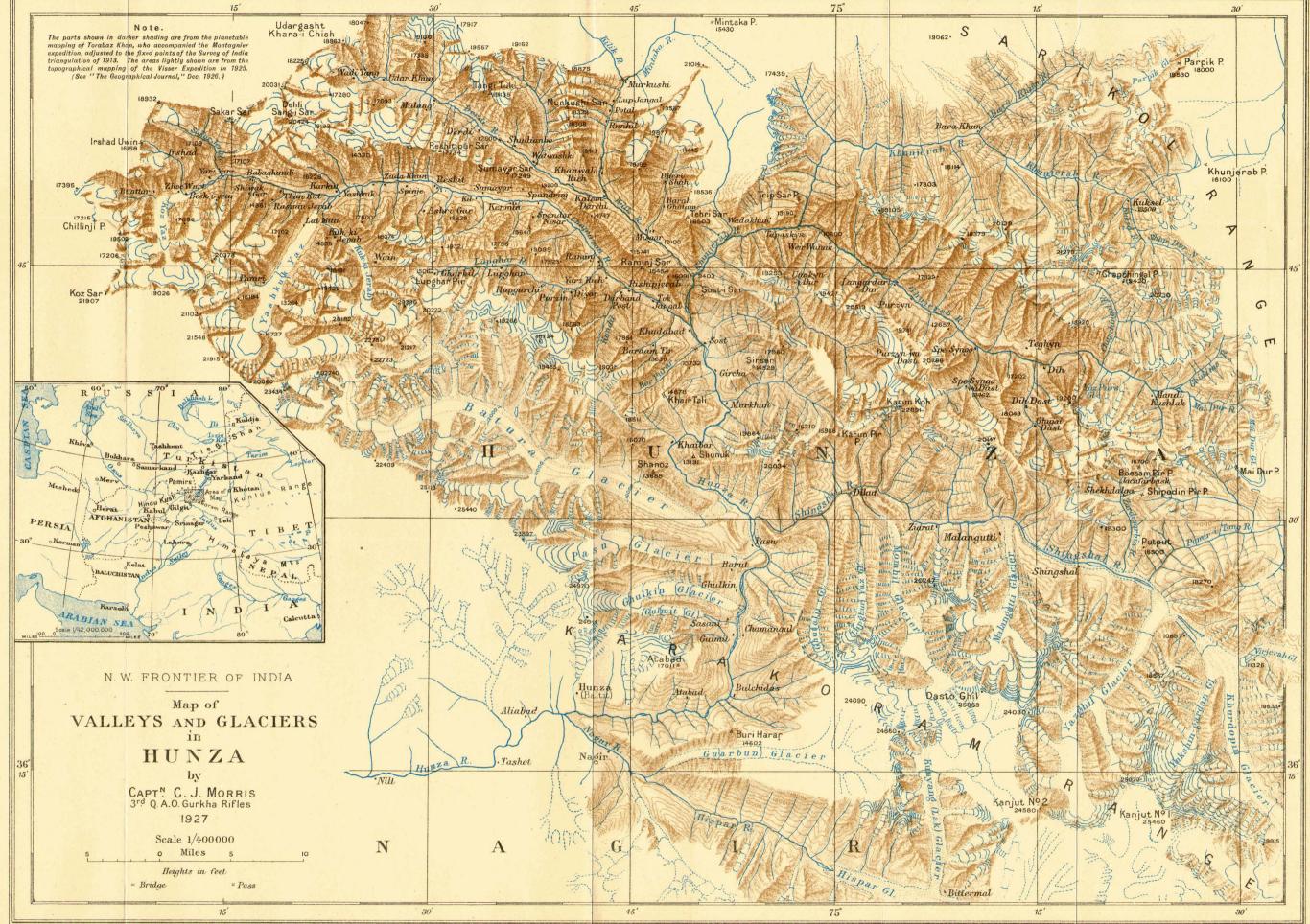
With regard to the place-names on the map I would ask future travellers especially to note that with few exceptions, such as large villages like Shingshal, for instance, the names do not denote villages but merely camping places known to the local inhabitants at the time. They are all names of natural objects, i.e. "the lonely willow tree," "the red rock," etc., etc., and in later years a future traveller, if using our map, must be prepared to find that some of the places named may be unheard of, for an avalanche may have removed "the lonely willow," and "the red rock" may have long since disappeared in the river.

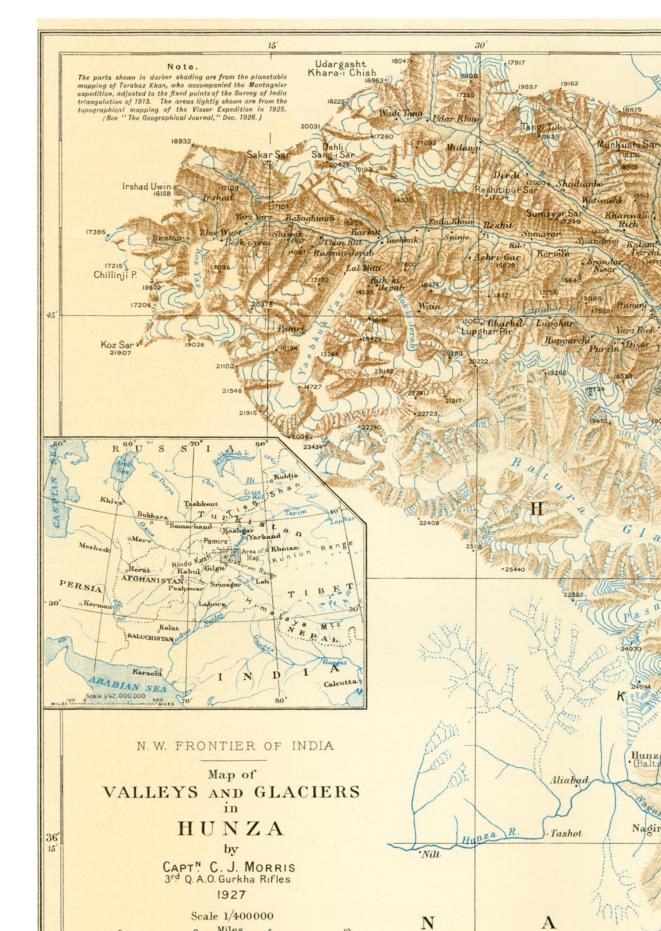
Place Names in Hunza. W: Wakhi; T: Turki

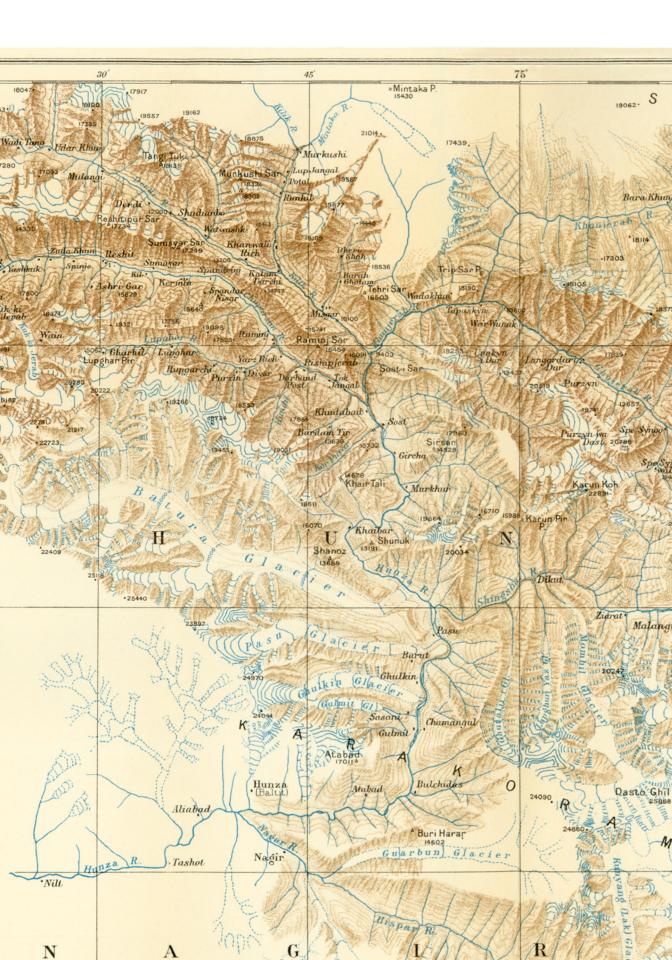
Aghzi (W.)	Junction of rivers.
Bandasar (W.)	Defile.
Boesam (W.)	Roof.
Bulak (T.)	Spring of water.
Dasto ghil (W.)	Sheep-fold.
Dewan (W.)	Pass.
Dikut (W.)	Bridge.
Duplaksh ( $W$ .)	Certain kind of grass.
Dur (W.)	Valley.
Ghujerab (W.)	Ghu, narrow; Ferab, a bad place (?).
Jachfarbask (W.)	Jachfar, the name of a man; bask, fallen; hence the place where Jachfar fell.
Jilga (W. & T.)	Valley.
Kara ( <i>T</i> .)	Black.
Khunjerab (W.)	Khun, blood; Jerab, see above, from the story that a man once fell into the river and hurt himself, and his blood flowed down the valley.
Koram (T.)	Jagged rocks (the more usual translation of this word as gravel was not known).
Malungutti (W.)	The middle glacier.
Phurzin (W.)	Phurz, a birch tree; -in, the place of.
Pir (W. & T.)	Pass.
Shakshagin (W.)	Another name for a willow.
Shalghakin (W.)	Name of a certain plant.
Shingshal	Unknown by local people, but Mir told me it was the name of the first man to settle in the valley.
Spe syngo (W.)	Spe, white; syngo, any place beside a river.
Tipeskin (W.)	Aromatic plant.
Wada khun (W.)	Wada, mint; khun, roof of a house.
Yaz ghil (W. & T.)	Yaz, snow or ice; ghil (contracted form), sheep-fold.
Ziarat (W. & T.)	A shrine.

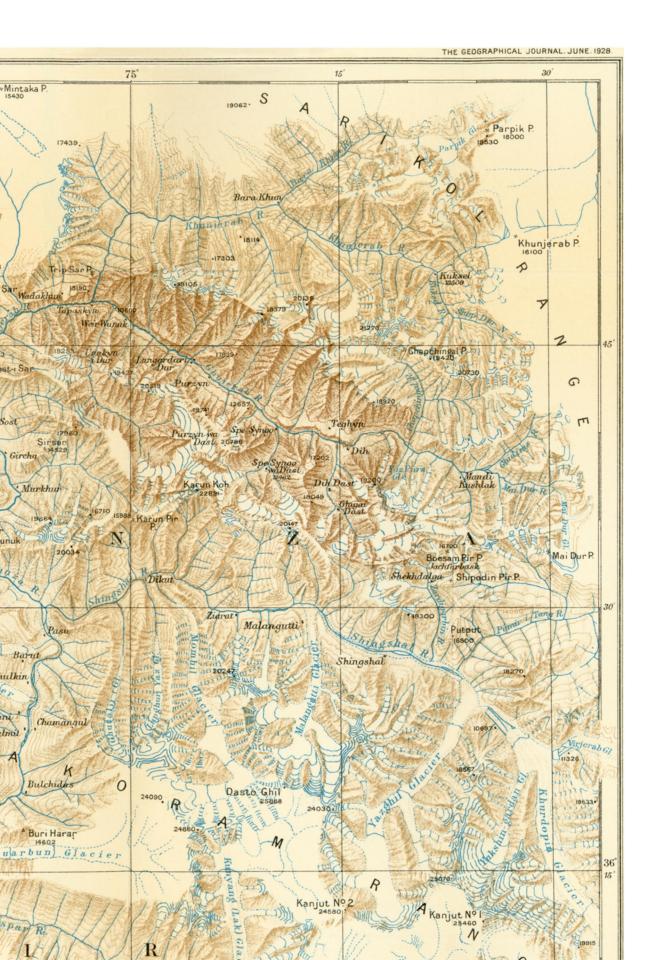
## DISCUSSION

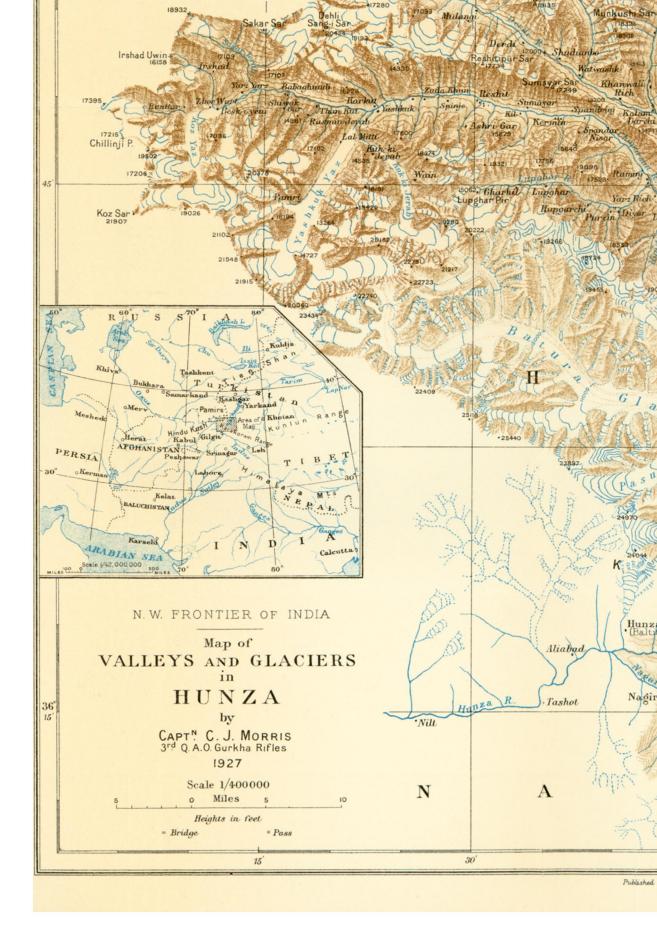
Before the paper the PRESIDENT (Col. Sir CHARLES CLOSE) said: Capt. Morris is well known to the Society as a traveller, explorer, and climber. He was a member of the Mount Everest Expedition of 1922; he is well known to those who are interested in Nepal as having done a good deal of original work

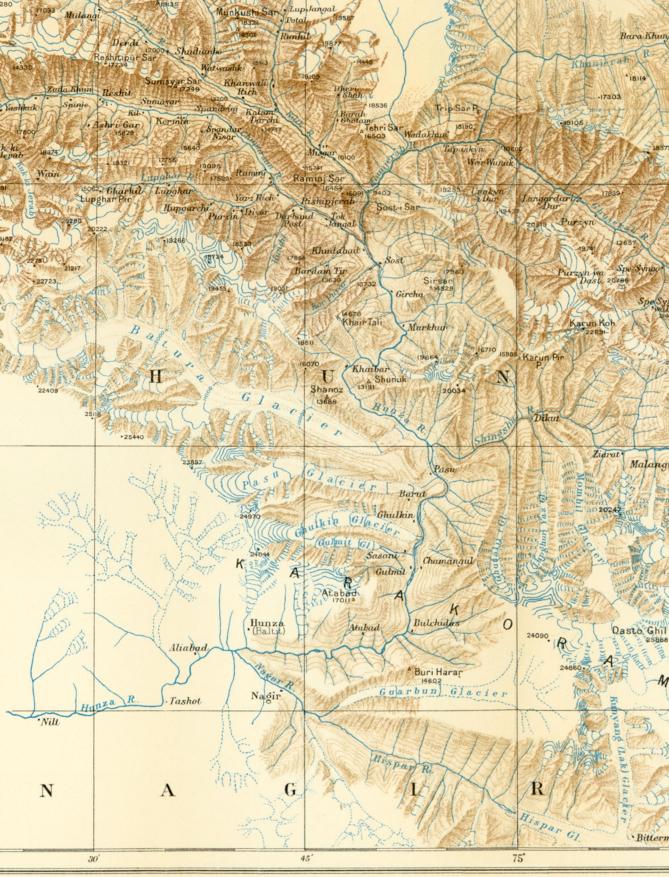






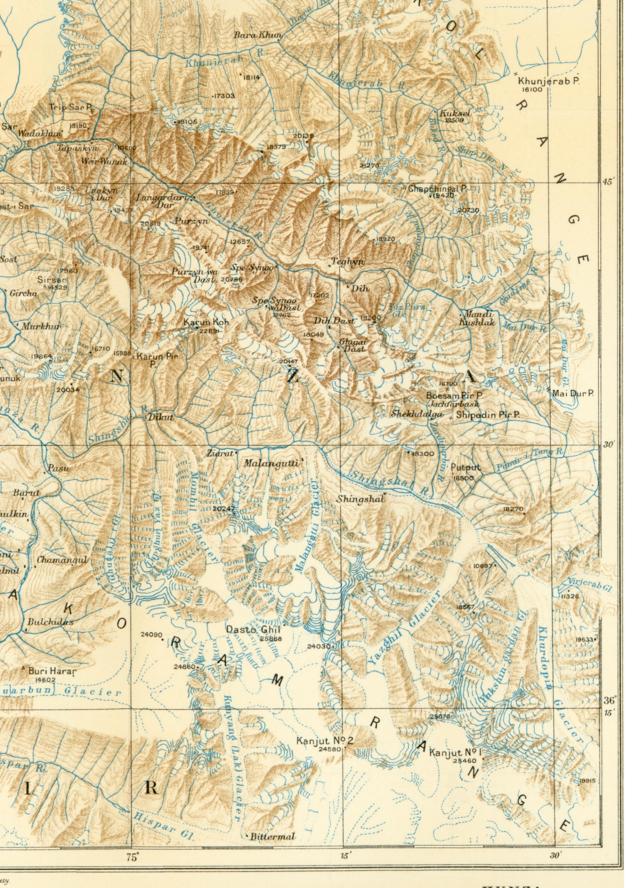






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in that country. On this last journey he went into Hunza principally to close up some gaps in our geography: one left by the Vissers' expedition, and one in the Shaksgam. Circumstances beyond his control forbade the second; but he and the surveyor Torabaz Khan between them have done a most excellent piece of work covering about 900 square miles. With those few words I will ask Capt. Morris to commence his lecture.

Capt. Morris then read the paper printed above, and a discussion followed.

Sir Francis Younghusband: I should like to say what a treat it has been to me, and I am sure to you also, to see the beautiful photographs which Capt. Morris has taken of the very remarkable country through which he has just been travelling. We are much indebted both to him for his photographs and interesting description of the country and to Mr. Montagnier for having organized the whole expedition. Listening to the lecture and seeing the slides, I had a certain feeling of regret that it was not one of the officers of the Gilgit garrison who had undertaken this expedition. We have had two lectures, the one by Mr. Visser and the other by Capt. Morris, on expeditions to the Shingshal organized from outside. But it is a matter of surprise that the officers of the Gilgit Agency have not done what General Cockerill did more than thirty years ago, and that is explore the Shingshal valley.

The Hunza region is one of the most remarkable countries in the world. We have seen from the photographs what wonderful mountains there are. And undoubtedly if Capt. Morris had had time and had been there at the right season of the year, which I do not think he was-September and October, or even November, is a better season—he might have obtained still finer photographs of Rakaposhi and other magnificent peaks. What one would hope is that some enterprising officer of the Gilgit Agency would take up this work of exploring Hunza as his special interest, and with those fine Hunza men, of whom we have heard so much from Capt. Morris, make a regular exploration of the different valleys, cross over from one into the other, find out every way by which the valleys can be reached from each other in the different seasons of the year, as Lieut. Cockerill, as he then was, did in 1891 or 1892. Little has been done since then by the officers of the Gilgit Agency. But some of them might when exploring the valleys ascend the mountain sides at different points to see where it is possible to get the best views of Rakaposhi, or right over towards the Karakoram range, possibly even to K2, so that those photographers who are not particularly good climbers might have information as to where the best views can be obtained. And perhaps later it may be our good fortune to have up there a painter, such as Col. Tanner of the Indian Survey, who could really paint those mountains.

I should like to endorse everything that Capt. Morris has said about the wonderful Hunza men, their hardihood and their enterprise. An officer in charge of the Hunza Scouts might well use those men for his explorations. He would not find it necessary to take tents, for these Hunza men in my time used to raid through the Shingshal valley and over the mountains on to the Leh route without any tents, and I had none myself in 1887. An officer going with these men and calling upon the people of the country as little as possible for transport could do work of great value to this Society.

I would also express my great satisfaction at hearing of the help and support given to Capt. Morris and Mr. Montagnier's expedition by the Mir of Hunza, whom I first knew in the year 1889, when I went through the country. He was half-brother to the then chief. I was present, and I think General Cockerill

was also, at his installation as Mir of Hunza in that picturesque capital of his in the year 1892. He has ever since remained a loyal supporter of the British Government, and I am sure this Society is indebted to him for the support which he has given to the present expedition. I hope it may be our good fortune that Capt. Morris himself will return in some official capacity to that country, perhaps in charge of the Hunza Scouts, and that he will again lecture to us and show us still more beautiful photographs.

General Sir George K. Cockerill: To me the photographs we have seen to-night are as though I had had the opportunity of re-visiting these valleys in company with the lecturer. I think Capt. Morris has passed rather lightly over difficulties which must have been obvious to you all. Not merely are the physical difficulties of the country great. It must have occurred to you what excellent capacity for organization Mr. Montagnier and Capt. Morris possess to have organized the expedition and carried it through in the way they did without a hitch. It is not an easy matter to get numbers of men together to carry loads in a sparsely populated country such as Hunza, and to keep them happy and contented. The new country which Capt. Morris has traversed is partly to the east and partly to the west of the main Hunza valley. In the Ghujerab valley, which he first visited, he has mapped, I should say, quite 400 or 500 square miles of country which has hitherto never been visited by a white man, and added a great deal to our knowledge of the upper Chapursan valley by his exploration of the Yashkuk and other tributary valleys. Chapursan valley has of course been visited before, not only by the Mir of Hunza in the manner the lecturer described, but by Europeans. I was there myself in 1893. I think the Mir came across the Chillinji pass either just before or just after my visit, and, a few years later, Sir Aurel Stein crossed from the Ishkuman valley and descended the Chapursan valley to its junction with the Hunza river. Those who have been through the Chapursan valley before have had other fish to fry, and passed through the valley as quickly as possible in order not to lose the opportunity of completing the task in hand. My own object when I went through it was to visit the Chillinji pass at its head, and also to visit the Irshad pass, which had never before been seen, I think, by a European. We have been told this evening how few people visit this part of the world, but by the number present here to-night one might almost think that the Hunza valley was Piccadilly. I went to the Shingshal valley with the very definite object of completing a link with Sir Francis Younghusband's work. He had come down from the north-east and reached the Shingshal pass. With the object of obtaining more complete knowledge of the various passes, he had then turned back deliberately, made a circular route to the north, and come south again to visit the other passes leading from the Pamir into Hunza. It was under his ægis and on his initiative that all my work was done. My first task was to complete the link between the Hunza valley and the Shingshal pass. So well has that difficult valley since been explored by the Vissers—whose absence to-night we all regret—and by the lecturer that I believe there are only two little portions, the gorge of the Shingshal near Pasu and the gorge of the Tang river between the Shingshal valley and the Shingshal pass which still remain to me as my own preserve. The rest of the valley which I passed through rapidly and of which I made an incomplete survey has been visited since by others who have returned with remarkable photographs and, what is perhaps better still, with very accurate and complete maps.

You saw to-night some beautiful pictures of a double-headed mountain which the lecturer called Dasto Ghil. It was discovered by me in 1892. I

could not measure its height, but I wrote of it at the time that "for grandeur of form and prominence of position there is no feature in the whole Shingshal valley more striking than this magnificent mountain." Subsequently it was measured by the triangulators of the Indo-Russian Link, and it proved to be, not as it has been shown in some of the Society's maps, 25,668 feet in height, but, as is shown in the records of the Survey of India, 200 feet higher, namely 25,868 feet. It is the highest peak of the Karakoram west of K2. The name that I gave to it and that by which the men with me spoke of it was Malungutti Yaz. Malungutti is a little grazing-ground near the "snout" of the Malungutti glacier. Malungutti means "middle glacier," and "Yaz" is the ordinary word for glacier ice or névé. The name given to me obviously meant "the ice or ice-peak of Malungutti." A little higher up the glacier there is another grazing-ground with a sheep-fold. This is marked on the Vissers' map and is called Dasto Ghil. It may well be that I was misinformed and that the mountain takes its name from the higher grazing-ground. In any case, you will agree with me that Dasto Ghil is a more convenient and more beautiful name than Malungutti Yaz. I hope therefore that it may be accepted in future, if only out of compliment to the Vissers, who brought back the first photographs of this mountain and were the first to explore the glacier.

May I, in conclusion, thank the lecturer for his most interesting lecture and congratulate him on the results of his organization and initiative, hoping, with Sir Francis Younghusband, that others, including some from the Gilgit garrison itself, will be tempted to follow in Capt. Morris' tracks.

Col. LORIMER: I am that unfortunate thing, an ex-officer of the Gilgit garrison! After that, although I did intend to say something, I do not think you will expect very much from me. Nevertheless, I must first express my personal thanks to the lecturer for the most interesting account of his travels and observations in a country which I have partially seen and in which, at any rate, I am very much interested now, at a distance. Secondly, I wish to dispel any hope you may be entertaining that I am going to add to your geographical enlightenment. I am no geographer, but modern geography, as I understand it, regards nothing as alien, much less as common or unclean, which has any concern with the Earth or with life on the Earth, so I may be permitted to follow the lecturer and enlarge upon one or two of the less directly geographical, perhaps more humanistic, points on which he touched.

He introduced you to the great Baba Ghundi, much the most important person who has ever visited, travelled, or lived in the Chapursan valley. The story is told in different forms, and I happen to have another version. According to this story at Ishkuk there was a large population which was much harassed by a dragon that did not live in the distant mountain but occupied a pond in the midst of the people, who had to provide the dragon every day with one male vak, 40 to 60 lbs. of ghee, and one human being. One day a husband informed his wife that his turn had come. The wife very dutifully offered to go instead, but they had a perfect treasure of a daughter, who at once said, "No, I will go, and then you will be able to raise up other children in my place." So she took a male yak and a lump of ghee, and went off weeping. On the way she met a stately figure riding on a horse, clad in green, and carrying a lance. She salaamed to him, and he asked her where she was going. She wept again and explained about the dragon. He said, "I am going to lie down and have a little sleep; just you sit by me and look through my beard." The girl sat by him and searched accordingly, and later heard the dragon beginning to stir. She once more gave way to female weakness and shed a tear which alighted on

the old man's face. He woke up with a start and said, "What's the matter now?" "The dragon is getting busy, sir." "Oh, don't you worry," said the old gentleman, and drew his sword, cut the dragon into pieces and strewed the ground with them. The girl went home to her people, and when they saw her coming safely back, perhaps with a natural revulsion of feeling, they were fearfully angry and said, "If you could not command the courage to go through with it you ought never to have gone." She explained that she had not come back through want of courage, but they would not believe her when she told the story of what had happened. So she showed them the pieces of the dragon, and they went and passed on the good news to the rest of the people. They also had to be shown the pieces before they would believe that the dragon had really been disposed of. That night all the inhabitants had a dream, in which Baba Ghundi appeared to them and said, "I am the person who slew the dragon. If any difficulty comes upon you, just let me know. My name is Baba Ghundi." When they woke up the people said, "We had better see if there is anything in this," and they started lamenting and howling. Presently Baba Ghundi came riding down the whole length of the Chapursan, but finding that there was nothing really the matter, he said, "There is some mistake," and disappeared again. This rather amused the people, and they thought they would try again, so they went through the same performance with the same result. Then they tried a third time, and this time Baba Ghundi appeared as a rather disreputable old man. Apparently they knew him, but they stoned him and threw mud at him. He cursed them and went off to the hut of an old woman who was rather different from the others. All she possessed in the world was one sheep giving milk; she rushed out, milked the sheep, and presented Baba Ghundi with the milk. He blessed her and said, "To-morrow something is going to happen. Don't leave your house; get up on to the roof, and if you have lent anything to your neighbours get it back." The old lady followed his instructions. Right enough next morning down came an immense mud flood with old Baba Ghundi riding on the top of it, and it wiped out the whole population with the exception of the little lady sitting on her roof. It spared her, her house, and her land. But she had neglected one sieve which she saw floating down on the top of the flood. She whistled to Baba Ghundi, and he fished the sieve out with his spear and handed it back—a very courteous knight. I understand that the house of the old lady still remains, as a proof of which there is the name Kampire Dior, "Kampir" meaning "old woman" and "dior" "house."

The lecturer stressed the importance to the explorer of a knowledge of the local language, and I think every one who has travelled will endorse his remarks. But when he went on to say that it was possible to get a good working knowledge of a Himalayan language in a few weeks, the duller of us may be allowed to indulge in a little envy. I think perhaps he did not mean to include the Burushaski language of Hunza, which has about twenty or thirty separate forms for the plural, four genders, which affect the verbs as well as nouns, pronouns and adjectives, and many other interesting but rather deterrent phenomena. They have sufficed to occupy my leisure for the last three or four years.

General BRUCE: I do not want to talk about geography, but about the Hunza people. When I first went up there I had a smattering of Hindustani and Punjabi, and a still smaller smattering of Kohwar, i.e. Chitrali, which I was able to employ in talking to the Prime Minister. Then I learnt a few, and only a few, words of Burushaski, which is very difficult and in which, apart

from the difficulties mentioned by Col. Lorimer, there is a Welsh "ll," which I personally had no difficulty in using. I think I was the second commandant of what was then the Hunza Rifles, and I found the Hunza people most charming and perfectly companionable. They are as active as any people could possibly be, and as I can see one or two members of the Alpine Club present, I may tell them that as slab climbers nobody in the world can beat the Hunza men. For very hard work in the mountains, if we had a trained body, they would not prove inferior to our best Sherpa porters. They were called out twice during the time I was in the Gilgit Agency. Once I was responsible for collecting them. Many of them came down from away up in the mountains from where their flocks were and were collected in Hunza by the evening, and from there they went to Gilgit in one march of 65 miles of very bad country indeed. In my time beyond Baltit, after you left the fort, there was no main road up; a great deal of rock climbing had to be done before you arrived at the Kilik pass. It was quite different from the main road, of which Capt. Morris showed you views. The Hunza man is very far removed from the savage. I will give you an instance of his sense of humour. In the old days he was attacked by the Nagyris. He was first threatened by the Kashmiri troops who were then in Gilgit, before we arrived in there. The Hunza men dashed down to have a slap at the Kashmiri troops as they came up the valley, beat them at Chalt, some 30 miles from Baltit, and drove them back to Gilgit. Then they heard that the Nagyris were attacking Baltit, so they went for the Nagyris, beat them, rounded them up, took every stitch of clothing off them and sent them back to Nagyr just as they were born. That had a first-class effect. The Hunza always prides himself on being more full of life and go than the Nagyr men, and the reason he gives is an excellent one because it confirms modern ideas as to the beneficial effects of sunlight. The Nagyris are cut off from sun for about four months in the year; Hunza gets the sun the whole winter. There is another fact which may bring comfort to the heart of many, and that is that quite half the Hunza people belong to the Malai sect, and in my days they grew grapes and made wine. They used it, too, and perhaps the cheerful little help they got from the wine, in spite of the fact that they live in that terrible country, has given them a better outlook on life. Who can tell? I cannot say more except this: that if there is trouble anywhere in that district it will be found that those splendid men who are absolutely devoted to our own particular rule will be of the very greatest help to us.

Dr. T. G. Longstaff: I hardly dare speak, as I was also once a member of the Gilgit garrison! But there is one point I would like to make with regard to the lecture. You will remember that just as the party were about to go over the Shingshal pass with a view to begin the real work they had come for, hey were stopped by a telegram. I should not, however, dare to criticize anybody. I might want to go there myself. But I will say that it is not the military authorities that make trouble. There is always this danger of being suddenly stopped when you think everything is all clear. I will not criticize it; I won't attempt to explain it, and I would not dream of speaking the truth to you concerning it. But it is a thing which British officers even in the garrison around Gilgit are up against.

Though it is late I would beg to tell you one true story, and then I will stop. In 1907 Harold Whitaker, an officer in the Rifle Brigade, was at Ranikhet. We met over a man who had eighteen holes in him, made by a bear. We made friends while getting that man well. Whitaker wanted to go to Chinese Turkestan, to the Tien Shan, as he had a year's leave due to him. He applied

for twelve months' leave to go over the Karakoram, to Yarkand and Kashgar to shoot ibex in the Tien Shan, and spend a year up there learning something of the Turki language. He was told that he could do nothing of the sort, but that he was to go home and enjoy himself. He consulted me. He got a year's leave ex-India: eventually he went to St. Petersburg with the proper introductions. From there he was passed on to the anti-British Governor-General of Russian Turkestan, who passed him on to Kuldja, where he was passed through to the Tien Shan. There he spent a happy time, learning some Turki and other things useful to a soldier besides, and came back across the Karakoram pass three weeks before his leave was up. But the moment he reached Leh he was arrested by order of the Indian Government. That was not the work of the military department. He was held prisoner under the hospitable roof of my old friend the British Joint Commissioner in Leh, where he had a delightful time. But his regiment was very upset at having to hold a court of inquiry over the case of a Rifleman overstaving his leave. I could give you several other such cases from my own knowledge, but not another so positively comic.

I had told my friend Montagnier that as he was not a British subject he was pretty safe from interference (having already obtained official sanction for his route). I sympathize with his disappointment, and that of Capt. Morris, most sincerely.

The CHAIRMAN: The hour is too late to continue the discussion. I have asked Capt. Morris about the name "Dasto Ghil," and he says that is the name which was given to him. I am sure you will agree with me that the thanks of the Society are due to Mr. Montagnier for having rendered this expedition possible. We are grateful to him, and to the Mir of Hunza for the help that he gave Capt. Morris. As to Capt. Morris himself, we are delighted with the account he has given us and also with the really admirable slides which he has shown. In your name and in the name of the Society I beg to thank him.