

The figure 5709 in the Admiralty chart, which seems to refer to Sari Kiz, can hardly be right if it is meant for the highest point in the plateau. Speaking from a good many years' experience as a mountaineer, I feel confident that there is not so much difference between Baba and Sari Kiz as 71 feet. Schliemann's readings made it only 250 m. My own were taken from the second point of Sari Kiz and made it 30 feet. The highest point was certainly 20 feet above me and I am not sure that it may not be higher than Baba. The question is one which could hardly be decided without careful levelling. I have adopted on the map the respective heights of 5800 and 5790 provisionally.

The names of Sari Kiz and Baba (Gargara) are interchanged in Philippon. Whence comes the height of 1670 m. assigned to the former I do not know. It is in any case quite wrong.

I wish to express my thanks to Mr. Reeves for the trouble he has taken in working out and verifying these results.

A SUMMER EXPLORATION IN THE PANJKORA KOHISTAN.

By Lieut.-Colonel S. H. GODFREY, C.I.E.

It is a curious coincidence that the only two unexplored portions of India should be situated at the southerly bends of two great rivers, both of which rise in contiguous highlands in Tibet, commence by taking diametrically opposite courses, and then break through the main chain of mountains dividing India from Central Asia, to discharge into Indian waters in the Arabian sea and the Bay of Bengal respectively.

The mountains and valleys on the right bank of the Indus as it turns south near the Taragir valley, and passes the southern watershed of the great range separating Gilgit and Chitral territory from the sources of the Panjkora and Swat rivers, are as unknown as the Abor country and the southern bend of the Tsanpo.

The expedition against the Abor tribes will probably yield geographical information of value and interest about their as yet unexplored country. It was a military expedition, that of 1908 against the Mohmands of the Peshawar district, which made it possible for an Englishman to penetrate to the Kamrat in the highlands of the Panjkora, a country hitherto unseen by even the Pathan conquerors of the Swat and Dir valleys. Both the Khan of Dir and the Dir levies and clans were exceedingly pleased with themselves at having successfully held their own borders without the aid of Government troops, and especially at the notice taken of them by Government.

The whole opportunity, therefore, seemed exceptionally favourable for a visit to that unexplored parallelogram within 72° to $73^{\circ} 50'$ E. long. and 35° to 36° N. lat., which includes the unknown watershed of the Panjkora and upper Swat rivers. Our maps of these tracts are still blank, although the celebrated Chinese traveller Fa Hian almost certainly followed the latter river in his visit to India.

On our arrival in Dir, delegates from the Kohistan brought down

word that they would be pleased to welcome me into their country, as their chief mulla, who at first had strongly urged them to resist my visit, had reconsidered his objections. Perhaps beyond the Indian frontier the magic word "inam" is as easily understood as "Bakshish" is in the valley of the Nile.

The road up from India to the Malakand pass and thence *viâ* Chakdara to Dir is fairly well known to many travellers, for it is followed every year by the troops which form the Chitral garrison.

The evening before our start for the Kohistan from Dir, there was a scene of wild rejoicings in the Palace of the Nawab. I had to present him personally with the "Sanad" or patent of his new rank conferred on him by Government.

At 6 a.m. next morning July 13, 1908, the camp was on the move. From Dir two roads lead to the Kohistan or highlands. One *viâ* the Chutiatan bridge and Dodbar village. The second, not yet visited by any European, *viâ* the Rekhun and Ayagai passes. The escort consisted of a body of well-armed retainers of the Nawab, and a strong guard of the Dir levies, a useful local force paid and superintended by a native assistant of the political agent. All were clearly given to understand by the Nawab and the native assistant that this visit was a friendly one, and that "looting" would be dealt with under tribal, not Government law, the former a far more primitive and much less mild code.

From Dir, a steep watercourse which drops into the Lowarai stream just above Dir is followed to the Rekhun pass. After the villages of Patti Basta and Raza Banda, Rekhun is reached. It consists of thirty-seven houses surrounded by extensive maize and wheat fields enclosed by walnut, mulberry, apple, and apricot trees. The hillsides are clothed with deodar and chir, the cedar and common pine trees, and water is plentiful.

From Rekhun the pass, probably about 10,000 feet elevation, is reached by a steep road, difficult in parts for mounted men to climb. From the summit the track descends steeply to Marachpatti village of some half-dozen houses belonging to Dasuis from Kohistan. The ascent to the Ayagai pass can be made by two routes, the lower, passable to footmen only and following the stream, the upper, used by mounted men and animals, winding up the spurs of the hill through very extensive forests until the Ayagai crest is reached in about an hour and a half from the Rekhun pass. The Ayagai pass is probably higher than the Rekhun. From the Ayagai pass a magnificent view is obtained of the mighty range of the Swat Kohistan mountains, the gleaming snowfields of which feed the Panjkora river on the west and the upper Swat on the east. The Panjkora itself is not visible from the Ayagai pass, but the Panjkora valley is seen turning northwards among a maze of mountains into which dips a ravine known as the Gwaldai. This is covered with the deodar forests (*Cedrus deodara*) which supply northern India with its building timber, cut in the southern portion of the Kohistan and sent down to India

PANJKORA KOHISTAN

SKETCH MAP

TO ILLUSTRATE THE ROUTE OF

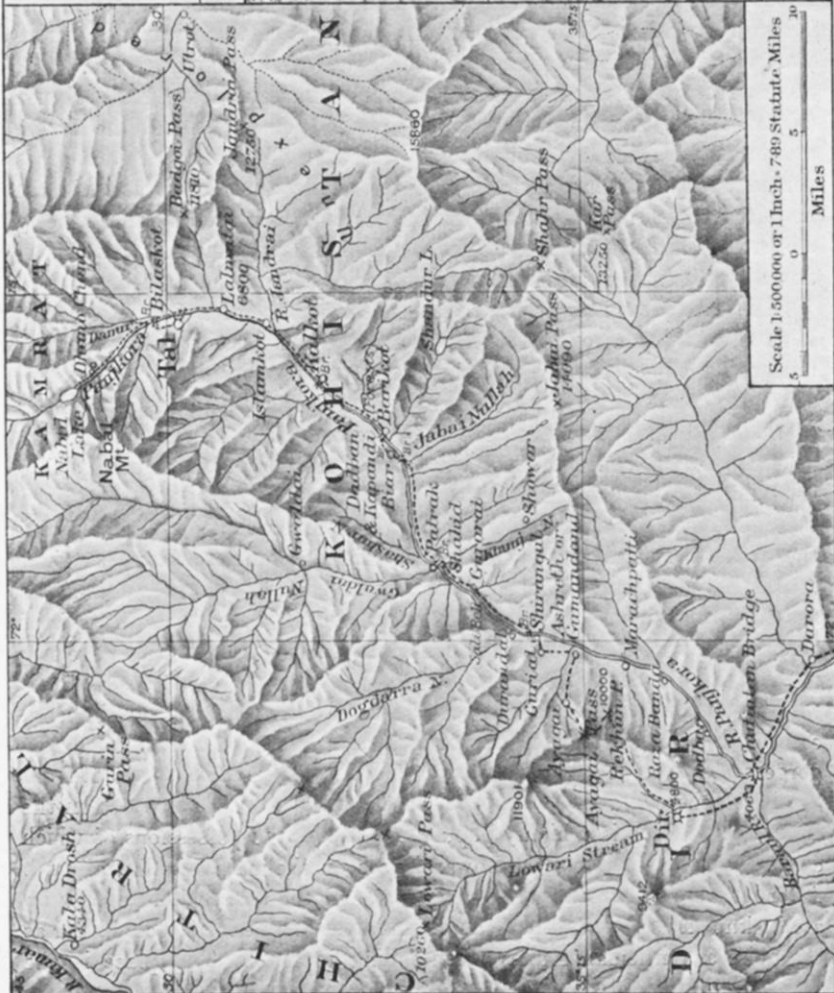
LIEUT. COLONEL S. H. GODFREY C. I. E.

1903.

Route -----
 Heights in feet

Scale 1:1,000,000 or 1 Inch = 47.54 Statute Miles

0 10 20 30 40 50 Miles



viñ the Panjkora river. A steep descent from the Ayagai pass leads to the village of that name about a mile beyond and below it. This village is situated at the junction of three streams coming from the range we had just crossed.

From Ayagai a steep rough track runs east to the junction of the Ayagai and Bar Ayagai nullahs at a great cliff on the right-hand side of the road. This cliff forms the boundary of Ayagai and Ashreth, a village entered at three-quarters of an hour's travelling from Ayagai. Ashreth, also known as Gumadand, lies in the northern side of the valley, and consists of a dozen houses only. From this place the road ascends to a neck, behind which lies Gurial, high above the stream, and reached at one and a quarter hours from Ayagai. From this hamlet the track ran over a rideable road to the last spur overlooking the main Panjkora valley, and from it could be seen the valleys of Shiringul on the right bank, and the Khunj Nala and Showar village on the left bank of that river. Shiringul was reached late in the afternoon, four hours after leaving Ayagai. Our modest camp was located near the ricefields, shaded by great chenar (plane) trees. Small Kabul tents were pitched for myself and the native assistant, while the levies bivouacked on beds of boughs with great-coats spread over them and their rifles piled beside them. All around, the mountains retain traces of the extensive deodar forests which formerly clothed the hillsides on both banks of the river, and which have been cut down by the timber dealers and sent for sale to India.

The village is interesting as the headquarters of a few families of Hindus, who pay a royalty for the monopoly of collecting ghi or clarified butter, for export from the Kohistan to India. Despite the fanatical character of the transborder, these merchants of an alien religion are safer in this wild land than the chiefs themselves. The Khans of Dir, like other Pathan and Afghan chieftains, would probably own cheerfully that the virtues of peace "have never been ours in a kingdom all stained with the blood of its kin, where the brothers embrace in the warfield and the reddest sword must win." Yet kindly commerce can certainly establish the claim for her humble Hindu votaries here, *Emollit mores nec sinit esse feros*. These traders are absolutely safe under the ægis of the tribal law and popular opinion, factors the strength of which are not perhaps fully understood.

The road leaving Shiringul for the north crosses a heavily timbered cantilever bridge to the ricefields of Shaur, and thence, entering a narrow gorge, follows the left bank of the upper Panjkora. At 1 mile distant from Shiringul, the Durandal village of the Dogdarra nullah is passed on the right bank. This is a highly populous location, the possessions of which extend to the hills above the Lowarai pass on the main Dir-Chitral road. After an hour's going, the gorge narrows, and the track winds steeply up a cliff known as "Gurgarina," an onomatopæic name locally explained as the noise a gentleman makes when falling down it. This place is one

of those natural positions, called in Gilgit and Chitral "darband," literally door closer, where "a thousand might well be stopped by three." This cliff forms the boundary of Dir territory in Shiringul with the Kohistan. The descent from the "Kharkharuppa" or cliff slide leads to Bar (upper) Gurarai. Here the two sides of the ravine are so shut in, that a dozen determined men might make the passage of the river difficult for any force. From Gurarai the road is slightly easier to Shahid (the martyr's tomb). Beyond Shahid the valley is still very narrow, and the torrent of broken green-grey waves is fringed with chenar trees, above which grow the Chilgoza (or edible pine) and such few deodars as the timber cutters have left. The hillsides are covered with brushwood and holm oak. From Shahid a stony path leads to Patrak, and down this a long line of white-clad figures, the elders of the Kohistan Jirgas, were seen descending to meet us.

Patrak, a large village of some five hundred houses, is approached by a good cantilever bridge spanning the Panjkora. It stands on a low fan with extensive cultivation on each side, at the junction of the Gwaldai stream and Panjkora river, and is the centre of the timber trade, and the headquarters of the agents of the Peshawar merchants who conduct it. The Gwaldai nullah bifurcates, connecting with the Dogdarra nullah and Lowarai pass by one branch, and by the other (*viâ* Gurin and the Samat Shahi pass), with Drosh, on the far side of the range here separating us from Chitral. It is in this nullah that the deodar timber-fellers are now busy. The Gwaldai route to Drosh in Chitral territory is not fit for pack traffic. The population of Patrak is Kohistani, governed by four head Maliks.

From Patrak the upward journey can be made by either the right or left banks, both being passable for laden mules with a little assistance in the steeper and narrower portions. The left is generally followed by the ghi and salt traders. It passes the Shashur nullah about 2 miles from Patrak through two formerly extensive forests named Dadban and Kapandi. Half an hour later the Jabai nullah is crossed by two strong wooden bridges, one of which spans the Jabai stream and the other the Panjkora river to Biar, a village of one hundred and twenty houses, surrounded with rice and other indigenous crops, all most carefully planted and tended. The clean condition of the Kohistani fields forms a marked contrast with the careless Pathan cultivation.

Biar is inhabited by Dashuis, who say they are representatives of six clans. The form of the village is now different, and quite unlike Pathan settlements. It is built, like all Kohistani villages, in long lines of houses terraced up one above another, the roof of the lower row of houses forming the verandah and courtyards of the row above. On these roofs the men, women, horses, and cattle of the Kohistan spend the greater part of their spare time. Our seats of honour on the roof of the highest row of houses were almost free from the ubiquitous fowls and

children, the former of which are perhaps the less active of the two. From Biar the better track passes along the left bank, although both banks are passable for mules.

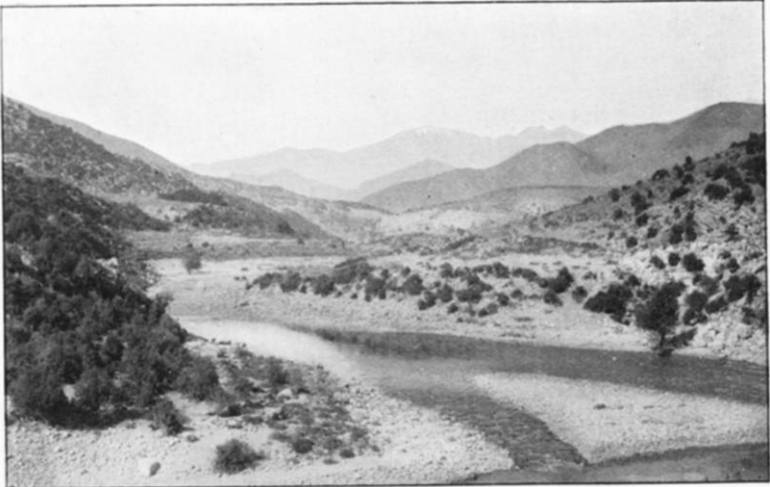
Barikot is reached in an hour from Biar. It is situated on a high cliff on the left bank of the river, spanned by the usual strong cantilever bridge. These bridges caused some surprise to many of us. The cantilever principle was applied in the East long before it was adopted in the construction of the Forth bridge. But few of us thought the far north in India could show specimens of work which would compare so favourably with those of the Pathan. The Kohistanis's skill seems to show they are superior mechanics to the men whose ancestors deprived them of the lands they claim in the south. Above the terrace-built village a steep path leads up a cliff to the remains of an old fort. This, the villagers state, was held by their ancestor, Baria, a Kafir or unbeliever in Islam, who came from upper Swat when his village, Barikot, there was destroyed by the invading army of the Mohammedans eight generations ago. This story is confirmed by the traditions of the Yusufzais who now hold Barikot, in upper Swat, and who gave me a similar account when I visited them. The site of this old fort, of which the trace is plainly visible, occupies an exactly similar position to that of the now deserted houses and forts on the Malakand and Digar passes which connect lower Swat and Peshawar territory. Those houses and forts the Yusufzais of Swat can only now account for by saying that they were built by "Kafirs," and they closely resemble the many similar ruins in the Talash and Dushkhel valleys of Dir. There can be little doubt that the Kohistanis are the lineal descendants of the earlier inhabitants of the lower valleys in Swat and Dir, and it is noticeable that the Dashui Kohistanis still claim the Dushkhel country of Dir, now in possession of the Yusufzais, as part of their ancestral property.

Leaving Barikot *en route* to Kalkot, the valley again widens, and there is extensive cultivation on both banks. Kalkot is a terraced village of about four hundred houses, and is about five hours from Patrak. By some of the other villages the Kalkotis are said to be of the Kalash tribe from Kafiristan, and their general physiognomy and particular uncleanness of person seems to lend some verisimilitude to the story. But it is denied by the Kalkotis themselves.

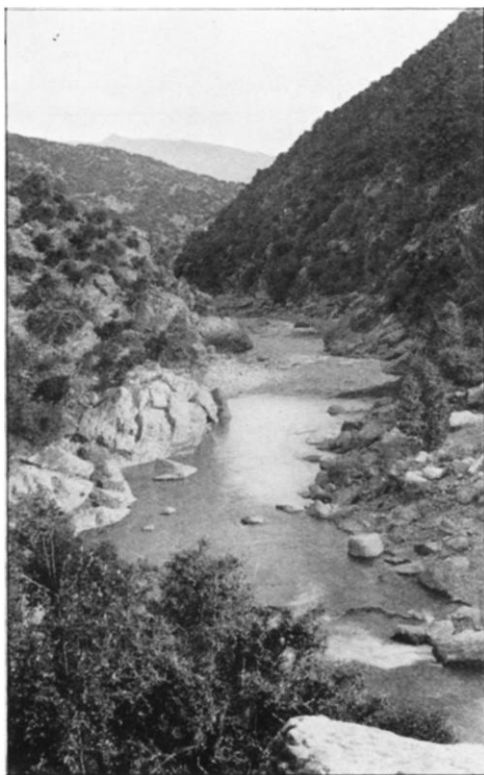
From Kalkot to Tal, the capital of the Kohistan, a stony track crosses a precipitous rock-face in a narrow gap, where the Panjkora is again closed in by vertical cliffs, and rages down a series of steep rapids. A strong bridge spans the river near Kalkot. The hills rise abruptly for many thousand feet, with sparse jungle on the ledges and a few deodar trees. Half a mile further the track drops to a wide plain, bearing much cultivation and containing a few houses. The path now becomes obliterated, and the mules and ponies have to pick their way along the banks of watercourses and through the standing crops to Islamkot,



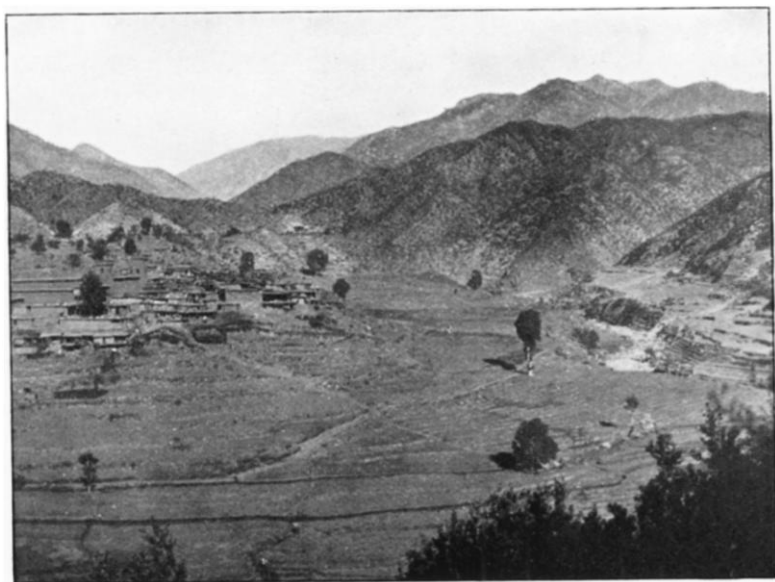
FORT OF THE KHAN OF ROBAT.



WARAI LEVY POST. THE PANJKORA RIVER IN FOREGROUND.



DEFILE BETWEEN DABORA AND CHUTIATAN.



DIR, SHOWING APPROACH TO THE LOWARAI PASS TO CHITRAL.

4 miles from Kalkot. Here a few houses occupy some high ground above land given by the Kalkotis as "Seri," or religious freehold, to the Palam Baba mulla, their spiritual guide. The way thence turns sharply to the left, and traverses some thick wood. Opposite this, on the left bank, the Jandrai stream joins the Panjkora.

Another half-mile brought us to the eastern debouchure of this Badgoi pass at Lalmutai, a large village of four hundred houses, built on high ground on the left bank of the Panjkora, near the Lalmutai ravine. Opposite Lalmutai the Tal plain is at length reached. At this point the character of the river changes almost as suddenly as that of the Jhelum above Baramulla in Kashmir. The ravine flood quiets down to a placid river, edged with willow and dotted with islands. The stream comes through a wide alluvial plain, enclosed by forest-clad hills which rise up to bare rocky peaks on either side. The beautifully kept fields are dotted with walnut trees, and the footpath is lined with wild indigo, jasmine, and half the flowers of Kashmir. The water-mills passed *en route* were all in full work.

The path winds on through the fields to a large cluster of chenar trees at the river's edge. Above it there is a mosque, having enormous deodar rafters of surprising length and thickness, black with the smoke of ages. Beyond this are tiers of houses running east and west, sheltering on the southern side only of a long spur which traverses the centre of the valley from the mountains to the river. This is Tal, the capital of the Panjkora Kohistan. It is by far the largest of the Kohistan villages, and contains above 1500 houses. Its cultivation extends as far north as can be seen on the right bank of the river. The fields and terraces on the left bank belong to Lalmutai. Popular rumour had said that the Talujis or people of Tal were of Arab descent. This tale was not confirmed by their own elders, who state that their ancestors came from upper Swat at the same time as Baria of Barikot. They also say their ancestors were named Lal, Sul, and Baratior, and they came to Tal about ten generations ago from Kanju and Damghar, places in the Nikpikhel country of Dir, and settled at Bilaskot just above Tal. The ruins of that settlement are still visible. The sons of these three men retained their original religion, but their grandsons were converted to Mohammedanism by Akhund Salik, whose descendants for many years took religious tithes from Tal. The descendants of these three are known respectively as the Marur, descended from Lal, the Silur from Sul, and the Baratior. The whole are still called the three families (*drikhele*). There are twenty shares in the villages of Tal, divided off among the descendants of the three families shown above. The language of the people is far more like Hindustani than Pashtu, the Pathan language, but has borrowed many words from the latter. The basis of their language appears to be Sanskrit.

The law followed is mostly determined by Shariat or Mohammedan

tradition. The marriage customs mainly follow those of the Pathans. The price paid to the parents for a wife is Rs.300 to Rs.400, and that to the heirs for a widow Rs.30. If a woman is taken in marriage without the previous consent of her parents or heirs, then the full price is demanded as "sharmana," or shame money. There is obviously no advantage in the latter course, except the saving in expense on a marriage feast and ceremonies. If the sharmana is not paid, then the party marrying the lady is held liable for dishonour, the penalty for which is death.

In cases of dispute between two Kohistani tribes, those two meet in conclave to decide the matter. If a Malik or headman dies, and his eldest son is fitted to succeed, that son inherits. If unfit, then the tribe appoints a substitute. The land divisions are well known. The rules of subordinate land tenure are simple. If a tenant supplies seed and plough and labour, he is called a *nimkarayar* (half-worker), and pays the landlord half the produce. If the landlord supplies everything needed for the cultivation of the land to the tenant, he is then called a "dihkan" (villager), and receives only one-quarter of the produce, three-quarters going to the landlord. The Kohistani tenant farmer is less well off in this respect than his distant Indian brother.

The elders of Lalmutai were kind enough to come across and visit me at Tal. They are Dashuis and related to the people of Barikot, Biar, and Patrak. Their ancestor, they state, was one Kain, and it is evident from the names given of his descendants that down to the third generation from him the people were not Mohammedans. Their forefathers, they say, came from Dushkhel and Swat, and were converted like other communities by Akhund Salak about nine generations ago. The ruins of the old "unbelievers," deserted houses in Dushkhel built of dressed and fitted stone without mortar, seem to confirm the tale, and also point to the probability of their ancestors being in a far higher state of civilization than the Pathans who displaced them. The Lalmutai boundaries with Shiu and Kalam in the Swat highlands are the watersheds of the Badgoi and Jandrai passes.

The camp at Tal was pitched on the roofs of the highest houses in the village, commanding a good view all round the valley. Here a great Darbar was held. The elders were at first very adverse to our visiting the Kamrat country beyond Tal, and produced many excellent reasons why we should not go there, and at last stated that their fear was the Pathans would harry their cattle.

As before, the native assistant, Khan Bahadur Abdul Rauf Khan, an hereditary Arbab of Taikal in the Peshawar district, was invaluable. His cheery laugh reassured the most doubtful, and his statement that the fame of their land would be increased flattered the vanity of the elders, while a present of sheep to them made a good dinner certain.

By collecting all the greybeards together so that they could check

each other's statements—which they frequently did—I discovered the local etymology of the present name of the river. Panjkor was, they say, their common ancestor. He had five sons. The descendants of the first three held Ayagai, while the other two came to Patrak and the upper Kohistan. The river was thus called Panjkora because its banks were claimed by the five sons of Panjkor, which means five houses. Their people had formerly occupied the Dushkhel and Talash countries in Dir, and the old houses still visible on the hill summits there were, they say, the houses of their ancestors. They also state that their ancestors were of one descent with the Bashgalis of Kafirstan. If there is any truth in this it tends to show that these highlanders were the descendants of the Buddhists of Swat, whose ancestry in Dir and Swat may go back to times far anterior to that of Fa Hian's pilgrimage to India. Local tradition evidently goes back to very distant ages. The Kohistani elders state that their ancestors used as weapons sticks hardened in fire. Subsequently they employed bows and arrows, and finally, when iron was discovered, axes and guns. Iron is even now worked in the Kohistan from the manganese-feriferous sand washed down by the rivers. This is collected by the women, and smelted out with hand bellows made from goatskins.

By the time they were through with these accounts the local chiefs were so pleased with themselves that the start was fixed for the dawn without any further difficulties.

THE KAMRAT

From Tal northwards the path leads along the banks of irrigation channels and past carefully weeded fields to a cantilever bridge, known as Kalan, which spans the Panjkora at about 1 mile from the main town of Tal. Hamlets and mills are passed on either hand as well as large water-courses which feed the lower fields. Crossing the Kalan bridge the track continues through wheat, which was still uncut although mid-July was past, and leads to a second bridge, known as the Kamrat bridge, over which the way continues by the right bank. The Danur stream halfway between these two bridges is the boundary of Tal and Jalmutai. North of this the whole land belongs to Tal on both banks. It is known as the Kamrat, and is owned by the Talujis up to the watershed of the ranges separating this valley from those of Chitral, Laspur, and upper Swat. The forests on both sides of the river in the Kamrat become very thick, and reach down in places almost to the banks of the river, some of the deodars standing in the fields by the water's edge. Here the traces of the timber cutters have been left behind. After an hour's ride from Tal the hamlets of Dhano Chand are met on the left bank of the river. There is extensive wheat cultivation all round, and some twenty huts are scattered among the fields. Near the northern end of this village the right bank track is shut in by precipitous deodar-clad cliffs on one hand and the river on the other. The people have here constructed a stone wall and a

"gate." The object is twofold. It prevents cattle sent to the grazing fields from finding their way back to the cultivation, and enables a guard to dispose of thieves and travellers. At this point "hostis," the enemy or the stranger, are both turned back. The pasture lands and neighbouring forests have been kept sacred from Pathan and timber merchant alike. Englishman and Pathan, "we were the first who ever burst" into that unknown land.

Passing through the magic portal of Kamrat, we rode on over extensive grass plains and through magnificent deodar forests to the Purdin bridge, by which the road recrosses again to the left bank at $2\frac{1}{4}$ hours or about 6 miles from Tal. The plain at this point is very wide and flat, the extent of its level spaces being concealed by the masses of dense deodar fir and poplar jungle through which the path winds to "Dab," a verdant meadow with herdsmen's huts located at its edge. These shelters are occupied by those members of the families of Tal who go out in charge of the extensive flocks and herds which form the chief pride and wealth of Tal. This doubtless accounts for the absence of youth and beauty noticeable at Tal on our arrival.

After another stretch of deodar forest, the Loi Dab or great plain is reached about 9 miles from Tal. This is an extensive "Marg," or runnymede, from which cattle are prevented from straying by a second gate. Cattle were grazing freely everywhere, tended by boys and young men, who seemed to live like Krishna amid pastoral surroundings and in a perfect climate. Word having been passed by the elders that they need not fear a raid they turned out and gave the interested audience a theatrical representation of an old theme, the mistake of May marrying December, and a country dance.

Three boys were dressed up, one as a pretty young girl in bright-coloured clothes, one as an old man in a rough homespun cloak and sandals, the husband of the former, and the third as a young man in very gay-coloured garments. The old husband, sword in hand, endeavoured to prevent the young man from paying too marked attention to his youthful wife. The *dénouement* was not that of vice vanquished and virtue triumphant, for the young man finally possessed himself of sword and bride alike, to the immense delight of the Pathan spectators, who applauded the performance enthusiastically.

The Kohistan Maliks who accompanied me explained they had only four summer months, and therefore divided the whole of their grazing lands into two parts, allotting two months to each, so that the grass was never wasted or spoiled.

After leaving this meadow the road dips into another great deodar forest, but now instead of being level it commences to ascend. The forest becomes quite primæval. Enormous trees lie exactly as they have fallen, swept down by wind or avalanche.

Young growth is noticed wherever there is sufficient space. Tributary



BUDDHIST TOWER IN SWAT.



THE PANJKORA RIVER LEAVING DIR TERRITORY.

waterfalls are visible on both banks of the main river, and the level of the road is very little below that of the lower glacial snow in the lateral valleys running down from the Nabal mountain on the right bank. Beyond this point for the first time the track is almost impassable for animals. A vast cliff rises up on the right hand, bare as a wall on its face, but crowned with groups of deodar. The river, instead of meandering along in a placid stream, becomes a cataract, and then as the foot of the Nabal mountain is reached a strange transformation suddenly occurs. The deafening torrent appears to be pouring down among the broken stems of huge trees interspersed with enormous boulders and other *débris* of a great landslide, as it indeed is. After a long ascent there is no longer any river visible, only a silent lake. A fragment of the Nabal mountain, it appears, slipped some years ago, blocked the exit of the valley, and has formed a vast dam athwart the Panjkora. At the upper end of the lake the topmost branches of submerged trees peep out from under the surface of the placid blue waters. The former track has, of course, been buried, and a path has to be picked among the boulders of which the hillside consists. North of this lake there is no permanent habitation, nothing but swamp and marsh, glacier and mountain, until the Tal pass is crossed leading down into Laspur, which lies at the foot of the Shandur pass, connecting or rather separating Gilgit from Chitral. The Tal pass is never crossed in winter, and during summer its passage is always made at early dawn from fear of the falling stones which are loosened by the sun directly a thaw sets in.

Sitting at the quiet margin of this sheet of water taking a modest lunch of sandwiches and wild strawberries while the elders of the people and the escort were at their afternoon prayers, it was impossible not to reflect on the potentiality of the vast power scheme which nature has created here with a single careless touch of her finger. All around are forests, half as old as time, valueless at present to the Talojis. But their real wealth may be shown in a sentence. The timber merchants working in the districts below Patrak pay five rupees per tree—some six shillings and fourpence each. These trees are cut into logs about four to the tree, and each of these logs, carried down the Panjkora in flood time at little or no cost, are sold in Nowshera on the North-Western Railway for some thirty rupees or two pounds a piece. There is a fortune in the rough timber alone, yet the great dam we had just passed seemed to murmur in the distance of the power that it could transmit to turbines and saw-mills, and of the return it could make to the Government for all the life and treasure that have been spent in bringing peace to the war-tormented valleys of Dir and Chitral.

No European or Pathan had ever looked on this quiet scene. Even the great Umra Khan of Jandul, who was the cause of the war of 1895, and the siege of Chitral, and whom it took the might of the Indian Empire to drive out, an exile to Kabul, only penetrated as far as Tal,

which he captured and burnt, sparing the mosque. Intensely superstitious, he was afraid of the great marshes said to exist in the Kamrat, where he feared to lose his beloved horses, through the hostile agency of the "fairies" which dwell in the secluded valleys of this mountain land. The story of Umra Khan and his adventures as far as Tal as told by the Kohistanis was confirmed subsequently by an old warrior of the Mamund tribe from Bajaur, who had accompanied Umra Khan to Tal, and who recounted the whole tale to me at the Malakand.

The elders of the people now offered to conduct me by the Badgoi pass to Utrot and Kalam, at the head of the Swat Kohistan. They said they had heard from Kalam that three years ago I had received the son of their head Malik courteously at Malakand, and were therefore willing to undertake the responsibility. This was perhaps really the most flattering reward of six years' service "across the border" that could have been hoped for, but it was getting time to return.

The visit had at least demonstrated the existence of a road, however bad, other than the Chitral route, by which Gilgit could be reached from Dir and Swat *viâ* the unknown hinterland at the head of the Panjkora and upper Swat valleys.

If I read aright, the real object of the Kohistanis in permitting a British officer access to a valley, hitherto so secluded that even Gujars or herdsmen from Laspur were blindfolded when taken through it, then their motive was one of self-protection, against a dimly perceived end, and a hope that a power greater than that of Umra Khan may preserve their grazing-grounds and their autonomy.

The return journey was accomplished without any incident beyond an accident that ended happily. The treasure mule, escorted by its armed escort, fell from the cliffs into the river, and five of the Dir levies sprang into the torrent after it fully accoutred. When asked afterwards if they could swim, their reply was characteristic. No, they said, but if the mule had been swept away, who would have believed that the treasure had been really lost.

After leaving Tal on the return journey, a party of horsemen were seen ascending the river. This was headed by the Khan of Robot, a place shown on the map many marches to the south. He said a report had reached his country that our party was besieged by the Kohistanis in Lalmutai, and he had ridden night and day to our relief, and his men were following. It was a kindly action, based on long personal friendship, and his services to Government dating from the troubled times of 1897.

From Patrak the Panjkora route was followed back throughout, and about a fortnight afterwards the party broke up at Chakdarra *en route* for the Malakand.

It only remains to add that the behaviour of the escort of Dir levies and the Nawab's retainers was perfect.

My sole regret was the impossibility of using instruments or taking photographs in the Kohistan itself, which might have made my paper of scientific interest to the Royal Geographical Society. Now that confidence has been established and the veil at least partially lifted, it may perhaps remain for a more fortunate successor to provide data concerning the Kohistan which shall be of really scientific value without incurring the risk of involving the Government in the expense and trouble of a "little war" over some trifle such as a deceased political agent.

For the photographs taken in Dir and Swat I am indebted to Major Rich, R.E., Captain E. S. C. Willis, D.S.O., 58th Rifles, Frontier Force, and Lieut. Preston Thomas, R.N., the latter of whom wrote for the Admiralty a naval lecture about the southern portions of Swat and Dir.

NOTE.—The map which accompanies this paper can only be considered a rough sketch. It has been drawn from a tracing supplied by Lieut.-Colonel Godfrey, supplemented by sheet No. 27 N.E. of the North-West Transfrontier Series of the Survey of India, on the scale of 1 inch to 4 miles. The tracing is taken from the same series of Indian survey maps, with the route of the expedition and new topographical information added.

CLIMATIC AND ECONOMIC CONDITIONS OF NORTHERN MANCHURIA.

By ROBERT T. TURLEY.

THE question arises in the minds of many as to the future of the Chinese race if the new *régime* will open a brighter era for that people. It is hoped that, as in India, the population will quickly increase, and not remain, as it has been for centuries, apparently stationary, owing to unchecked epidemics, terrible famines, and frequent rebellions, all causing a tremendous loss of life.

It is now known that there are large areas of land in China itself that could be made to support many millions more people, but China must look to the vast regions of eastern Mongolia, with its present very sparse population of nomads, and its magnificent heritage in Manchuria.

Profs. Parker and Tomhave, who were lent to the Chinese Government by the Bureau of Agriculture of Washington, U.S.A., made some careful reports, and I have myself, for many years, studied the general condition of the north-eastern dependencies of China outside the Great Wall. There is no doubt that these regions can easily support one hundred million people, exporting much food-stuff as well, instead of less than twenty millions as at present. The Chinese are particularly good as cultivators of the soil, but they need a few new methods and seed corn suitable to special conditions.

Already large tracts of eastern Mongolia, which were not long since