

**A FOUR WEEKS' TRAMP**

**THROUGH** 

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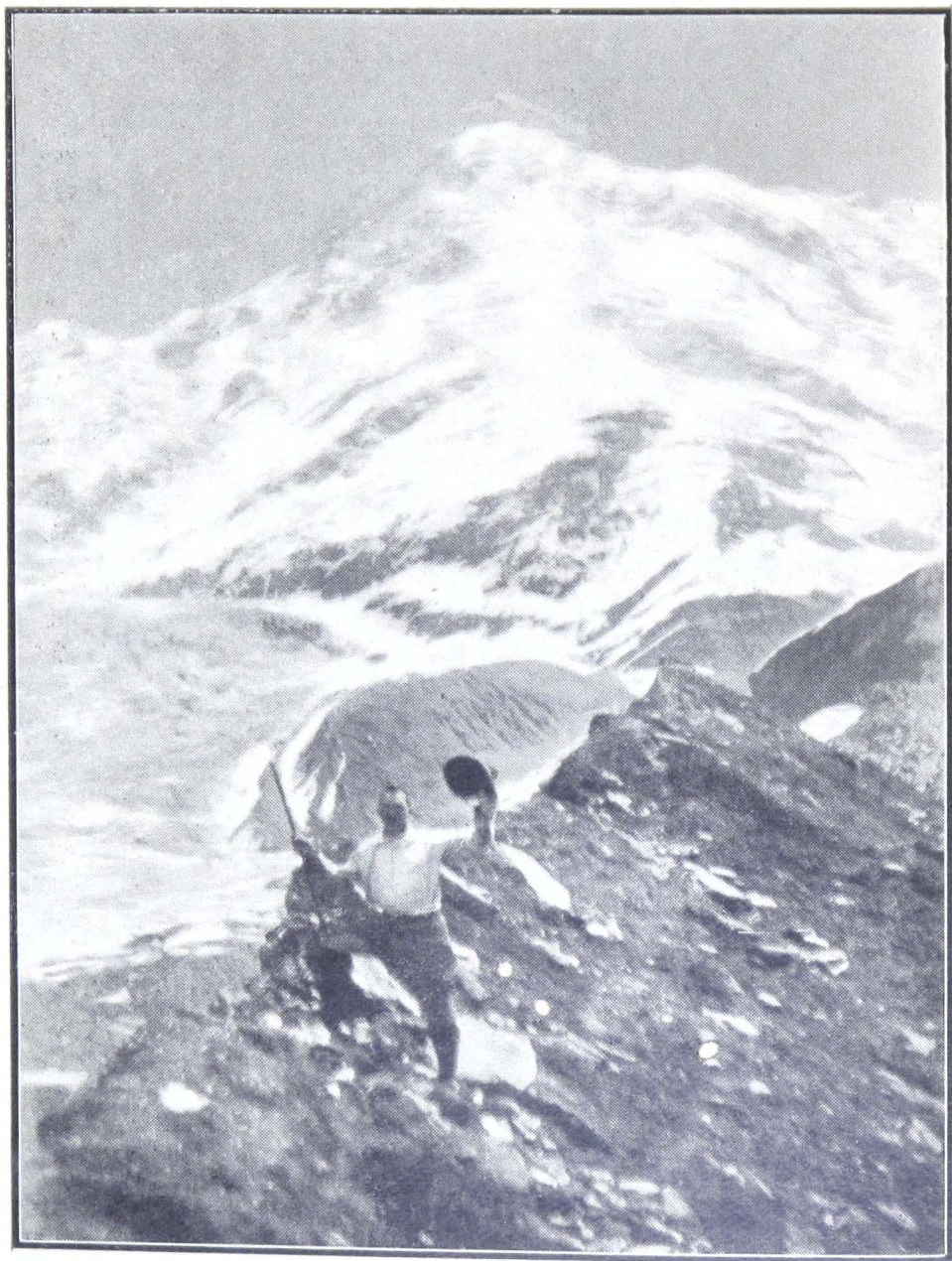
**THE HIMALAYAS** 

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**A  
GUIDE  
TO THE  
PINDARI  
GLACIER**

J. CAMPBELL FORRESTER



THE PINDARI GLACIER.

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FOUR WEEKS' TRAMP

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THE HIMALAYAS

*A GUIDE TO THE PINDARI GLACIER*

BY

J. CAMPBELL FORRESTER

CALCUTTA

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## TO MY DEAR FATHER.

When I wrote to say you would probably not hear from me for a few weeks, I said it was with regret I should break the continuity of a weekly correspondence that had lasted about thirty-two years, the period of your residence in India. I also said I would endeavour to make up for that breach by giving you details of my journey through the Himalayas.

I have now endeavoured to redeem my promise by dedicating to you the details of a most interesting and health-giving trip, trusting you will pardon my somewhat imperfect style due to inexperience in literature.

CALCUTTA,  
*June 1911.*

Your loving son,  
J. C. F.



PINDARI GLACIER SHOWING THE SNOUT.

## A FOUR WEEKS' TRAMP THROUGH THE HIMALAYAS.

IN England if you have a month's holiday your selection of suitable places to spend it in are almost unlimited. Your choice of places being so numerous you have difficulty in fixing on a particular place. But here in Calcutta matters are reversed, your choice is limited, and it wants a little originality to strike out in new lines. My friend and I concluded that a walking tour through the Himalayas would perhaps be the most interesting and health-giving. Our minds made up on this point, the next thing was what place in the Himalayas to make for that we could reach and return in the short time at our disposal. The Pindari Glacier fascinated us most, so to the Pindari Glacier we departed on May 3rd, 1910, leaving Howrah station at 9-35 P.M. We passed through Lucknow the next day at 4 P.M., arriving at Bareilly at 7-30 p.m., where we dined, and waited for our connection for Kathgodam until 1-30 A.M. We reached **Kathgodam** at 7-30 a.m. on May 5th. It is a village on the Bhābar tract of Naini Tal district, United Provinces, situated 29°, 16' N. 79' E., at the terminus of the Rohilkhand and Kumaon Railway, population (1901) 375. The place has only become of importance since the railway was extended from Haldwanī, the former terminus. It is now the starting point for the ascent to the hill stations of Naini Tal, Bhim Tal, Ranikhet and Almorā.

Having cast off Calcutta's heat and dust, we left the station and gazed around at the long peaceful line of the Himalayas, flushed in morning gold. Very soon we felt that there is nothing so soothing to the mind as the loveliness of creation, combined with vastness and tranquility, as it lay before us. The cool rarefied air was exhilarating,—we examined the tongas, the hill ponies, and hill coolies, and fixed on those we required for the first stage of our journey. We then mounted our ponies for an eight miles ride to Bhim Tal, which we reached about eleven o'clock, and put up at Kilmora House. On account of the long delay caused by the coolies not turning up at the time they were expected we were unable to proceed further that day.

**Bhim Tal.**—As you approach Bhim Tal you observe a beautiful sheet of water surrounded by high wooded hills over a mile in length and a quarter of a mile broad, its waters are of bluish green and very clear, and history tells us that the great Rohilla Leader, Ali Mahammad, sent a force into the Chand territory, and they penetrated through Bhim Tal and on to Almora.

About 400 yards distant from Kilmora House, there is a Post and Telegraph Office. Just below this house excellent fishing can be had, also boating, where boats can be hired for Re. 1 per day. It is conveniently situated for other lakes where excellent picnics could be held, as the following list will show :

8	miles from	Kathgodam.
11	„	Naini Tal.
3	„	Sath Tal.
3	„	Naukuchia Tal.
9	„	Malwa Tal.



You also look down into the valley where the Boer prisoners were kept. I learned from some of the inhabitants, that they were a most peaceful people who made friends all round, were much liked, and passed much of their time carving sticks and pipes.

There were also a few young boys, that used to gambol about the camp. There may be many now repatriated to South Africa who retain a vivid remembrance of the Himalayan lake and its dark forest-clad mountains.

Although the coolies delayed us longer than we expected, still we put in a good day's amusement. We hired a boat and pulled round the Loch, we then went on to the island for some fishing, but the method of fishing here did not appeal to me. You took some rough sort of meal and made it into a paste, pressed it all round the hook, cast your line with care so that the paste would not be immediately loosened from the hook when it touched the water, then fixed your fishing-rod between two big stones, and sat about three or four yards away, awaiting results, not very exciting. However, we caught *one* fish, so you can readily understand this is no fisherman's story. •

We again pulled round the Loch with our "prize," then walked round it, and here we had an example of the great work Britain is doing in irrigation. Massive heavy solid blocks of masonry dam up the surplus water, and large heavy sluices conduct it to the level below and in its course it waters and makes fertile the Bhabar which, to a considerable extent, has been cleared and cultivated. We then had a fairly

long walk over the hills to Sath Tal until it became dark, but fortunately for us we did not lose our way. We had a keen appetite and thoroughly enjoyed a good dinner, retiring to bed at 9-30 P.M.

*6th May.* Up at 5-30 A.M., taking with us only what luggage we considered absolutely necessary, thus reducing our coolies and allowing us to travel more quickly and more cheaply. We hope to do twenty miles to-day, but I doubt, if we will succeed on account of the late hour in starting, caused by the delay in getting coolies. A few miles after leaving Bhim Tal, we came across a sharp curve in the mountain jutting out, as if Nature had placed there a platform so that its beauties could be advantageously seen. I was entranced with this scene of unsurpassed beauty as viewed from this point of vantage. The painter or poet alone could do justice to this view, but it could never pass from one's mind who has once beheld it. There you see stretching out, far, deep down, the great hazy plain. Its greenery intersected by the white lines of wide river channels, and as the eye follows the zigzag road, it sees the deep gorges, filled with subtropical growth; again far up above you are among the fir-clad peaks.

Soon after passing **Ramgarh**, we came across what was apparently a disused smelting furnace. It seemed to us a strange thing why it should have been given up, as to our untrained eyes it seemed that there was no lack of iron ore. On enquiries we ascertained that it was given up for want of fuel, that the country around had been denuded of trees for use in the furnace. If this was the

case, surely there must have been some mismanagement here. As the trees were cut down, it appears to me to have been the duty of the management to have replanted others. I made an effort to get some information on this point, and was fortunate to secure a book with a lot of interesting reading, entitled *TRAMROADS IN NORTHERN INDIA*, in connection with Iron mines in Kumaon and Gurhwal, by W. P. Andrew, Esq., F.R.G.S. I take the liberty of quoting the following :—

“The local Government in India have repeatedly brought forward the fact of the existence of iron ore of great richness and inexhaustible quantity which scientific investigation has confirmed . . . . . This would afford among other advantages a cheap and expeditious mode of completing the connection between Delhi and Lahore and would facilitate the construction of the proposed Punjab Railway as it would probably reduce the price of rails for that line to about *the cost of their freight from London to Lahore.*”

The article closes as follows :—“We do not believe that it will be necessary in the future years to repeat the practical joke which was perpetrated some years ago in these very Kumaon Hills to send to England for the materials of an iron bridge, one end of which was actually built into an iron mine. We have these conditions given, mines of inexhaustible quantity containing iron of first-rate quality situated at a moderate distance from the great arteries of traffic, water power not indeed inexhaustible but amply sufficient, fuel, cheap labour and labourers capable of attaining skill. Under these circumstances,

we find it hard to believe that ten years hence we shall be importing iron rails from England.”

To my humble belief the individual who made this prophecy about half a century ago, did so with every reason to expect that his prophecy would be fulfilled, and why it has not I leave for some abler mind than mine to explain.

We pushed on up hill and down dale, dropping a few hundred feet. As it was impossible to ride down some of the hills we had to walk. We arrived at Peora at 3-30 P.M., four and a half hours before our coolies. We did the twenty miles easily, but bearers and coolies were knocked up.

**Peora**, about 20 miles from Bhim Tal—6,000 feet elevation. The Dâk Bungalow here is beautifully situated in a gracefully curved hill side, with young pine trees everywhere, and from here you see Almora with the naked eye. It gives you the impression that it is a big camp, with white tents dotted all over the projecting part of a hill.

We sat outside the bungalow the remainder of the day, looking over the most peaceful and beautiful scene one could wish on this earth. The tedium of a dull business season, the petty nagging of colleagues, and all the other small worries attendant on a business man's life—forgotten. A land of freedom, where the priceless gift of health is to be found. I thought of those who needed change and those who wished to escape from heavier burdens, and wished they might have this facility. I thought of the many weary white faces of Europeans, men, women and children, and how they would be brightened with renewed life and hope by leaving behind them the burning plains of India with its shimmering pall

of summer heat, and resting for a time in these great mountains. How delightfully cool, how delightfully refreshing, and what a contrast between this and the foul-smelling bazaars of Calcutta! To bed 9-30 P.M.

We were awakened at 4 A.M. the next day (May 7th) by the report of a gun, which was enough for B., who is a keen shikari. He smelt sport, and with one bound was out of bed and off. I saw him disappear over the hill, being absent for a quarter of an hour, when he returned with—nothing! We left Peora at 5 A.M., and reached Almora four hours later, the scenery along this route still retaining its enchanting beauty.

**Almora.**—Town population including Cantonment (1901) 8,596; became the Capital of the Chand Rājās in the sixteenth century. Elevation about 5,600 feet; it was constituted a Municipality in 1864. An excellent water supply has recently been perfected.

The Cantonment is usually garrisoned by Gurkhas, and the Cantonment Fund had an income and expenditure of Rs. 3,000 (1903-4). Almora has a considerable trade, being a distributing centre for the products of the plains and imported goods. The municipality maintains four schools attended by 266 pupils, and there are two other schools with more than 300 pupils.

Almorā District—North-Eastern District in the Kumaon Division, United Provinces, lying between 28° 55' and 30° 49' N., and 79° 2' and 81° 31' E. with an area of 5,419 square miles. It is bounded on the north by Tibet, on the east by the Katir river, which divides it from Nepal, on the

south by Naini Tal District, and on the north by Garhwal District. The flora of the district presents a striking variety, ranging from the sub-montane tropical growths of the Bhābar through the temperate zone where cedars, oaks, pines, and rhododendrons are found, and the higher ranges where thickets of willow and birch appear, to the lofty hill sides forming open pasture land, which is richly adorned in the summer with brilliantly coloured species of alpine flowers. The district is rich in animal life, elephants, tigers, the sloth bear, black and brown bears, leopards, wild dogs, wild hog, various species of deer, wild goats and the yak being found in different parts. The rivers abound in fish, including the mahseer, and numerous species of birds are found. In the Bhābar and lower hills, immense pythons are sometimes seen. The Bhābar is sub-tropical in climate, but the southern portion of the Hill tract is more temperate, though the heat in the valleys is occasionally intense.

We spent all the day making arrangements for our trip to the Pindari Glacier. We had to interview the Deputy Commissioner to re-engage coolies, and here we bought all our provisions for the journey. There is a good store, and the person in charge of the same will be of considerable assistance to you in selecting your requirements. He also engaged a khansama for us, who accompanied us all the way. We could not exactly say he was a first class cook, but with the keen appetites we had, we were not inclined to be critical.

I think the following information might be useful for those who purpose visiting the Pindari Glacier:—

1st.—Apply to the Deputy Commissioner or the Tehsildar for the number of coolies required. Two days' notice should be given.

2nd.—Engage 2 chaprasies whom you can get from the Tehsildar; one will go ahead to collect the number of coolies, etc., etc., required, the other will follow with the luggage.

3rd.—You should get all your provisions for consumption from Almorā. No butter or ghee can be had on the road.

The prices are as follows:—

- 1 Pony Rs. 2-8 per day.
- 1 Dandy eight annas per day.
- 8 Coolies for dandy four annas each.
- 2 Coolies to carry food, eight annas.
- Dák Bungalow Re. 1 per night.

No cheques can be cashed beyond Almorā. No currency notes are cashed beyond Bageswar. Travellers must take a large amount of small hard cash. The Government rule for weights to be carried by coolies is 25 seers or 50 lbs.

By our experience, we would advise that a Dandy should be taken, for in this, you can place your guns, cameras, and any other things you wish to be constantly at hand. Even if you are walking it is very useful in the case of accidents. And further, if you are doing any shooting, the coolies could act as beaters. Most people, no doubt, know what a Dandy is,—a boat-shaped seat tapering at both ends, the extreme end being a bamboo pole. Another bamboo is attached transversely with a rope to the pole that the Dandy is fixed to, this allowing four coolies to carry it abreast where the road permits. When

the road is narrow they can march Indian file. The rope acting as a swivel permits them to do this. We discarded some more of our luggage here and left Almorā with the intention of doing two marches. Shortly afterwards, we came across a gang of convicts. We lined them up and photographed them. They were a well set up gang of men with a physique above the average. They had rings fastened round each ankle and each wrist, one chain joins the four rings together, and as they amble along the jingling sound of the chains give one a creepy and melancholy feeling.

The artillery of heaven had been roaring forth all day in a most ominous manner, but we escaped rain until we were about five miles off Takula. Then a deluge came, and we got drenched to the skin. It seemed as if we had mounted right into the clouds, and then they burst with all their fury upon us. We arrived chilled and wet, at **Takula** 5 P.M., where there is a comfortable bungalow, pleasantly situated; there was no fire in the Dāk Bungalow. We went straight into the khansama's quarters, (khansama's quarters, as a rule, are not inviting.) but, as there were logs of wood burning and cheerful blazes of flame leaping forth in our tired, wet, and drenched condition it appeared a perfect haven of rest. However, they were not long in preparing a fire at the bungalow, whereupon we vacated the khansama's premises.

We are hopeful of getting some sport; a good head or two would be a nice trophy of our trip. The carrying power of our coolies are a great surprise to us. They carry their load, be it box, bag or anything else on their backs support-



ed by a rope passing round the forehead. The strength and endurance of these men is simply marvellous.

*May 9th* up at 4-30 A.M. and agreeably surprised to find for once our coolies waiting for orders. Our chaprasi who goes in advance and makes these arrangements had on this occasion fulfilled his duties up to time. Profiting by our yesterday's experience, we immediately loaded them up and sent them on in advance, so that should we get wet we will have clothes to change on our arrival. This morning we have changed into "shorts."

We have only twelve miles to do to-day, we are as hard as nails and fit for anything. To feel the cool breezes from the snows is like drinking champagne. We took things leisurely and did not leave Takula until 9-30 A.M.

We had some very steep descents to-day, and unfortunately my knee has given way. I could not understand this at all as I had not twisted it in any way. Then I suddenly remembered that I had rather a nasty accident in Newcastle, being thrown from my trap, and suffered three months from synovitis. I put my knee under the mountain stream, bound it up with a large handkerchief, and at every stream kept it damp. The cure was simply marvellous, and I arrived at Bageswar at 12-45, fresh and fit for further travel. We did not wait for tiffin, but stripped immediately and had a swim in the river; it was glorious wallowing in the mountain water.

**Bageswar.**—“Plenty of fishing in the Sargu river, village in the district and tahsil of Almorā, United Province, situated 29° 51' N. and 79°

48 E., at the confluence of the Sargu and Gomati, which forms a tributary of the Kali or Sārdā; population fluctuates considerably, and is about 800 in the autumn. The village was formerly a great trade centre for the exchange of the produce of Tibet with that of the plains, and also imported goods, but the Bhutia merchants now travel to the submontane marts. These sons of Nature, the Bhotias, come from the snowy regions in the north of the province bringing down their loads of wool, etc., etc., to the depôts at the foot of the hills, and a constant trade is kept up between Tibet and the lower hill plains. They cross the lofty passes of the Johar and Darma Valleys.

Bageswar is also a place of pilgrimage and contains a temple built about 1450, but an older inscription records a grant to a temple here by Katyārī Rājā. There are some curious tombs made of tiles which are assigned by tradition to Mughal colonies planted by Timūr; a dispensary is maintained, and there is a small school with 24 pupils."

It seemed to me to have been at one time a prosperous village, its quaint narrow lanes, its roughly paved but clear streets, its artistically carved shop fronts mostly now standing empty; deserted no doubt because of the more modern Almorā.

We returned from our swim, had tiffin, went to bed for an hour, and then got fishing rods from the bungalow and went away fishing. We had not fished long when a terrible thunder-storm came on, and we returned to the bungalow empty handed. After an early dinner, 7 P.M., a chat,





SNOW PEAK TAKEN FROM DEWALDHAR TEA AND FRUIT GARDENS.

and a smoke we retired to bed. There were four other European visitors staying in the bungalow—the first Europeans we have met at any of the bungalows.

On our way here we came across hundreds of monkeys—the little brown variety. We threw a stone at them, when they broke away in droves, some with their young clinging to their backs and their sides, others fixed round the stomach. They returned presently, and followed us part of the way making grimaces at us.

The country we passed through is prosperous in appearance. Cattle, buffaloes, cows, etc., etc., having a well cared for and well-fed appearance. They seem to have a plentiful supply of fodder. I admire the method of cultivating this steep hilly district. They terrace up the hill, then throw down leaves, straw, etc., etc. I should think this is essential as there is so little soil on the hills; they then divert one of the streams, so as to water it well.

At one of the highest peaks, we touched to-day, we came upon Dewaldhar tea and fruit garden. We were at once attracted by the pucca stone built English type of arch that denoted the entrance. The proprietor, Lalla Cheringhi Sah, I believe, is a very courteous individual, and I understand, that a request for the temporary use of his guest house would be readily granted to suitable European tourists, and a walk round the garden is certainly not without interest. We got a splendid view of the snow peaks from a short distance beyond this place.

*May 10th.* Up at 5 A.M., and the usual trouble in arranging about coolies, and getting them

started, but these small difficulties are soon overcome, and we leave Bageswar at 7 A.M. We followed the river Sargu all the way along moderately steep ascents, but the valleys are almost as hot as Calcutta in June. The Sargu valley is certainly the hottest we have tramped through. We arrived at **Kapkot** at 12-45 P.M. There is a Dâk Bungalow, but no khansama or sweeper—fishing in the Sargu river.

We had a hurried tiffin and a rest for an hour. We were anxious to do another march of nine miles, but the coolie lōg are showing signs of rebellion, so we will give them another hour's rest, and will see what can be done later. It is now 4-45, and the coolies have absolutely refused to go further, so we are stuck here for to-night. No sooner was that decided upon than we got our rifles and followed a shikari away to the hills. I followed for about one and-a-half mile, scrambling upwards, and then asked the shikari how much further we had to climb to see this wonderful big game. He answered only two miles. This was enough for me. I had done a considerable journey, and I wished to conserve my energies as my journey is not yet half over. But B. is young and untirable, so he kindly asked if I had any objections to his going on, and as I certainly had none, he went. I returned to the bungalow, and while sitting on the verandah was amused, watching some natives battle with two snakes. They managed to kill one with bamboos, but the other escaped, and as I saw it quickly glide down from terrace to terrace, I judged its length to be about seven feet. I would have endeavoured to put a bullet into it, but it was too far off for my rifle.

While we were sitting on the verandah in a somewhat disreputable manner—bare legs, bare neck, bare arms, for it had been dreadfully hot travelling, and I had only on my shorts and a woollen vest, a tall, strongly built, middle-aged lady came stalking in with her Alpenstock and body guard of natives. Her dress was pinned up above her ankles with safety pins and she wore a red hand-knit blouse and stood about 5ft. 8in. She looked a regular pioneer. I apologised for our appearance. She said it was needless, as I had only to cast my eyes over her own attire to assure myself that we were not in a drawing room; she showed me some very nice sketches she had taken of the surrounding district, at which I was much interested. After a few conventional words, she retired to her room.

The following morning, May 11th, a very picturesque little boy came in front of the bungalow along with a beautiful tender hazel-eyed slender-limbed creature, a gurrul or Indian chamois. The lady seemed so much struck with its beauty that we induced her to stand alongside of it and we photographed them together.

We left Kapkot about eight o'clock, having the usual trouble to get the coolies started.

Shortly after leaving we could hear the roar of the roughly made water mill performing its task of grinding grain, the staff of life—reminding one that, however beautiful the scenery, one could not live on it alone. As we progress along a beautiful thickly-wooded winding path, we hear the sound of musical tinkling bells, at first very faint as it is carried on the still air, but gradually it comes nearer until a quick bend in the

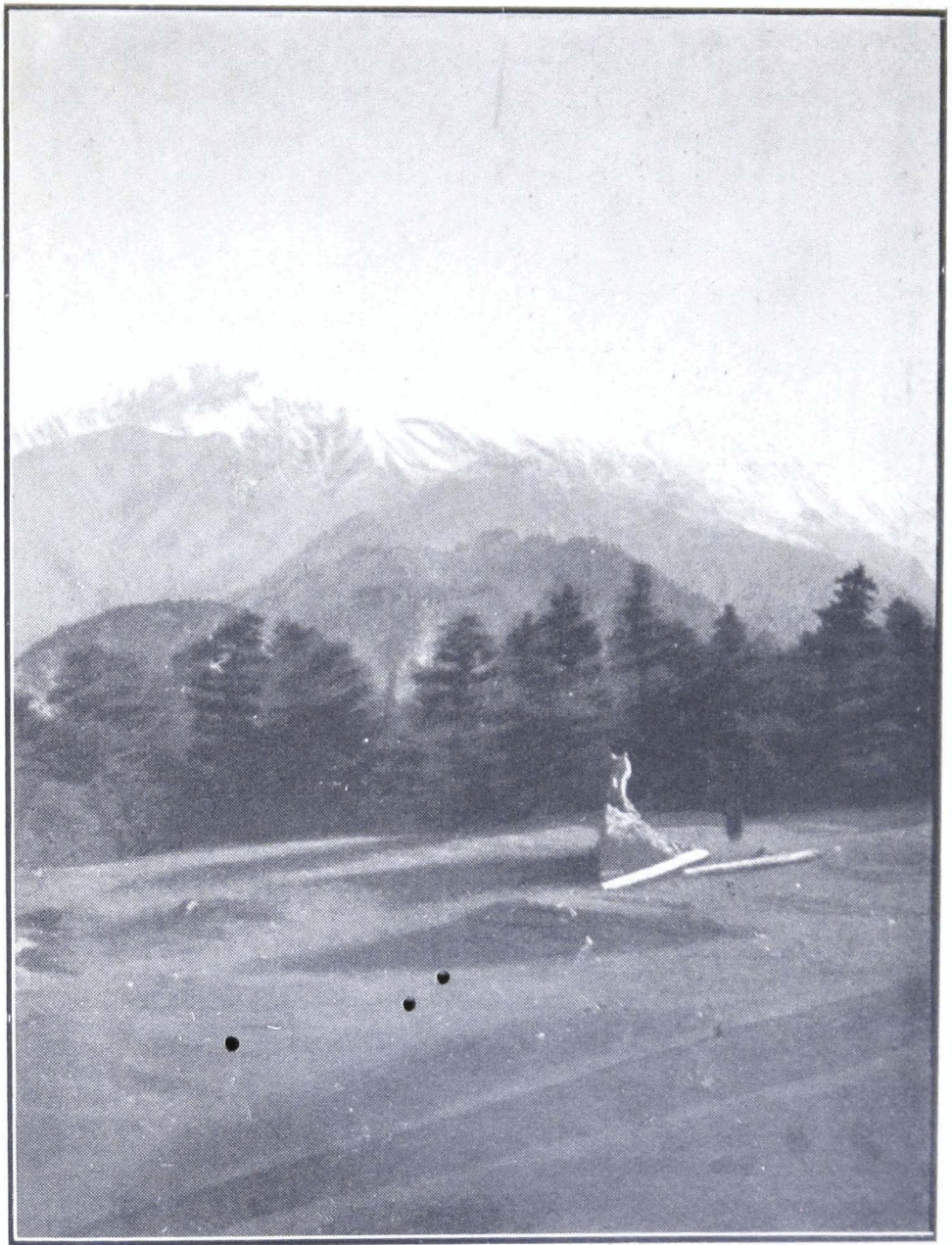
road brings us into contact with a herd of beautiful big fine strong goats, each of them with a saddle-like arrangement made out of gunnies slung across their backs, and containing about a maund of salt. We have a discussion upon the possible strength of these goats. B. seizes one by the horns and makes an effort to push it back, but the task was more than he could manage. We had a very pleasant and comparatively easy journey to Loharkhet, which we reached about eleven o'clock in the morning.

**Loharkhet** Dâk Bungalow—shooting to be got. From here engage your chowkidar, shikari and coolies to go all the way to Pindari Glacier with you. The last post office is here, and after this, all travellers have to manage their own mail, or do without.

We had the bungalow table placed under a tree, and made our breakfast off cold mutton and a cup of tea, and never was a banquet more enjoyed. Our appetites were keen and our environment soothing. We then started our second march that day, and had we been aware that it was so steep and trying a march, we would have rested the day at Loharkhet. As we mounted up over the brow of the hill, many of our coolies gave out a musical call somewhat resembling the call of the Alpine mountaineers, and we heard faintly, like an echo, the reply coming from their wives away deep down in the valley. The awful stillness of the air and aided by the hills carries sound to great distances.

We arrived at **Dhakuri** at 6-30 P.M., elevation 8,900 feet. I am pleased that I have got over the journey so far because it shows that although





VIEW FROM DHAKURI BUNGALOW.



I am getting up in years, I have still some stamina left. Poor B. is completely done up to-day. He is a strong fine built fellow of about 26 years. He retired immediately on our arrival to bed, and I am a little anxious about him, as he has been drinking a good deal of water on his way up here. I gave him a little chlorodyne and afterwards a little brandy. I took my gun and had a short turn round the forest. We are almost in a line with the snow-topped peaks, so it is pretty cold. During the night, we heard the occasional cry of wild animals.

Up at 5 A.M., next day, and what a magnificent view met our eyes! As I looked from the bungalow, I felt riveted to the spot mesmerised by the beauty of the scenery. If one can look upon such sights of Nature's grandeur unmoved or without having all the poetry in your nature, stirred up, then such an individual is devoid of soul. There in the distance stood the snow-crowned range in all its superb naked majesty, each peak vying with another in its attempt, as it were, to pierce the azure sky, and by no means the least beautiful of the sights is to see the thin gauze-like snow being blown from the peaks. We took a photograph from this bungalow.

We left Dhākuri at 8-30 A.M., and arrived at Khati at 10 o'clock. A fairly level road through a well wooded valley. We arrived at the bungalow to the great wailing and lamentation of a hill woman, one of her sheep having fallen over a cliff and been killed. I should have imagined this would not have been an uncommon incident, as the marvel to me is how they retain a foothold

at all. We only stopped at this bungalow for a short time, and did a double march on to Dwali, as from Dhakuri to Khati was only five miles and fairly easy going at that. Arrived at Dwali, May 12th, 1-30 p.m., having taken it very leisurely. Nearly all the way from Dhakuri on to Dwali, we saw large numbers of birds of beautiful plumage.

**Dwali** Dâk Bungalow, is approached by a wooden bridge, just above the junction of the two rivers, and one proceeds up a path, that somehow reminds me of a spiral staircase. The river that joins the Pindar is the Kuphini; as we saw it, it contained a larger volume of water than the Pindar itself. The Dâk Bungalow is placed on a tongue of land between the two rivers and it was fortunate for us that we had had plenty of exercise, for we certainly could not have got much on the cramped level space outside the bungalow.

The hill coolies are very honest and innocent children of Nature. I amused them much, while we were resting, by showing them my big knife, with cork screw, screw driver, saw, button hook, tin opener, gimlet, etc., etc. One of the coolies got his toe nail almost torn off with a big stone. He immediately came to me and asked for dowai (medicine). I made him wash it in a stream, tore up my handkerchief, put some salve on it and bound it up, after which he was loud in his "Salaam Huzzoors."

The hillmen we have brought with us from Loharkhet were a much better type of men than those we had engaged up to there. Their figures are more striking. Their bearing is far more free and dignified than the average Hindoo.



BEAUTIFUL WATERFALL BETWEEN KHATI AND DWALI.



Their smiling face and steadfast eye, compels you to believe, that honesty, truthfulness, and kindness have been inculcated into them. Each man carries rolled round his shoulder (in the same manner as Scotch Highland shepherds carry their plaids), a thick coarsely woven warm blanket. His tinder and steel for lighting his fire is suspended from his waist.

They have little superfluous flesh, but well developed muscles. Their knees call for special comment, their constant climbing seems to have developed them greatly. A good pair of knees is essential for any one whose daily occupation consists of climbing. This appears to me to be the class to breed fighting men from. Their environment have left them men, men without the Babu English, men who would more readily learn to give a straight sword cut than they would a scrawling caligraphy! Men who would more easily develop a strong arm for a talwar than learn the subtle corrupt ways of many of the natives, who have drifted to the industrial centres and by their subtle ways gained profits and benefits from the gigantic commercial concerns that have been built up in (many cases) by the sacrifice and hard work of the Sahibs.

After resting a little, we thought we could still do another march, but the coolies refused to go further, and as it was stated that there was good shooting to be had here, we loaded our rifles and did some difficult climbing, but we were unable to get near enough to game, and being somewhat tired, we returned to the bungalow, although about two or three miles beyond, where we had climbed, there is said to be a salt spring, where

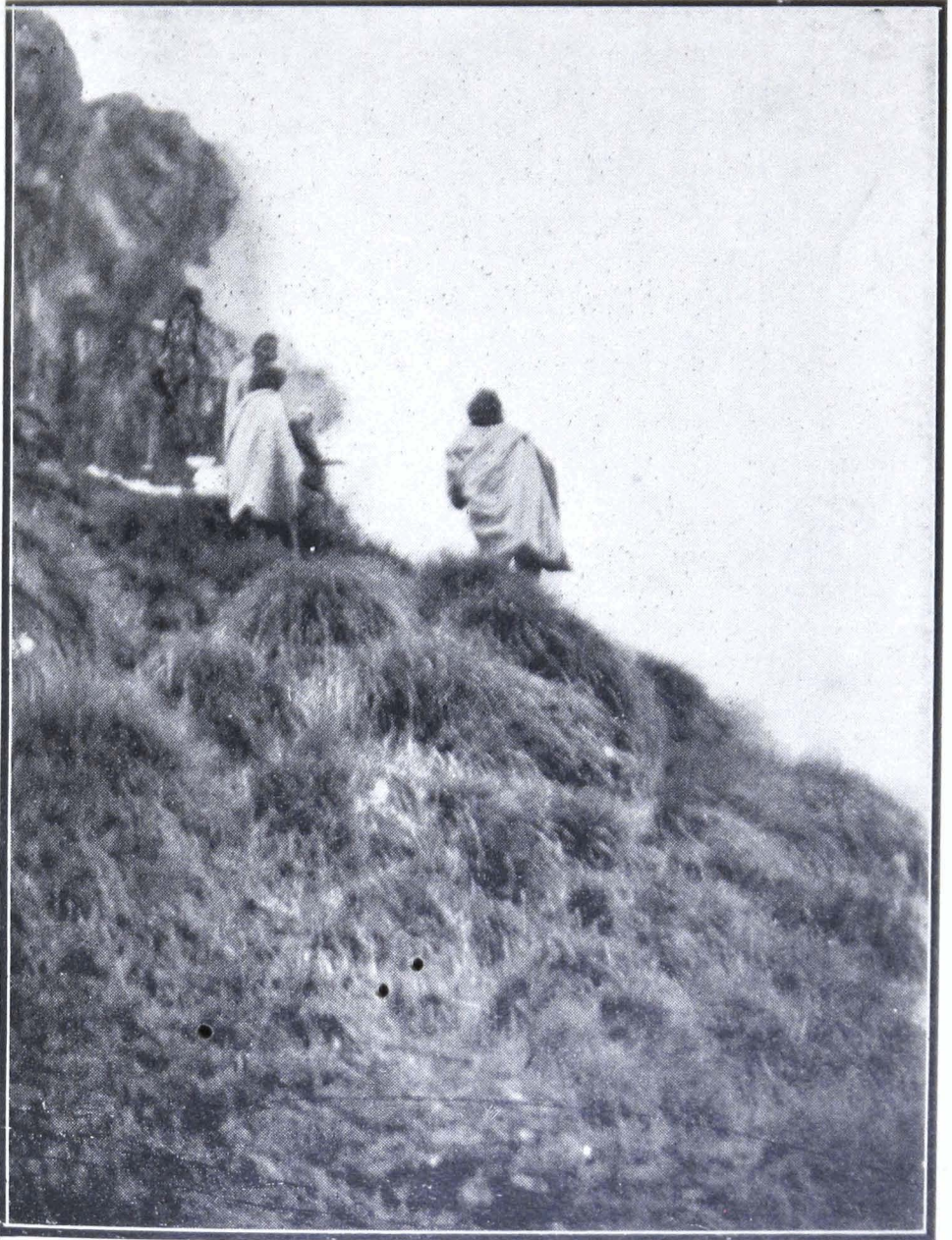
bear, leopard, deer, etc., etc., go to drink. We have marked this down for a future call.

*May 13th.* Up at 4-30 A.M., but were unable to get chota hazari, and as it was bitterly cold, we were very anxious for a warm cup of tea. "All things come to him who waits," there is no use quarrelling with your servants under such circumstances; we waited patiently and were rewarded. We are now surrounded by the snow hills, and the roar of the river is very loud. On our way here we passed one of the most beautiful waterfalls we have yet seen. It was so high that it gave me the impression that the liquid blue of the horizon was leaking down to earth, and changing its colour into long silvery streaks which were forcing their way through, the foliage with all the different shades in the background, acting as a foil, beautifying and showing up more clearly this long silvery streak. We photographed it, but no photograph could give you the faintest impression of its beauty.

It seems to me that hidden in these hills there are enormous treasures waiting, for the enterprising, brainy commercial man to come along and extract them.

Mica seems to be abundant. Looking up Sir George Watt's book, "The Commercial Products of India," I was astonished to find the uses to which this mineral can be put and the excellent market there is for it. He states, "The mica is one of the most widely distributed minerals in India. Its occurrence in plates of sufficient size to be of commercial value is limited to a few tracts. Holland (Mem. Geol. L. C.) gives a full account of the geographical distribution of the





A GRASS SLOPE NEAR TO THE GLACIER.



known mica areas of India. In 1901, 17 mines employing 6,668 persons. In 1904, 45 mines employing 6,559 persons. In 1906, 15,000 daily workers were recorded in mica mines.

The use of mica depends on its peculiar combination of qualities, *viz.*, its highly perfect cleavage, its transparency to light, its resistance to violent shocks or sudden changes of temperature. It may be substituted for glass in lanterns, doors of furnaces, windows as glazing material for pictures, for backing of mirrors, etc., etc. By far the largest quantity of sheet mica, however, is used for electrical purposes for covering portions of dynamos and other electrical machines. It is used to a considerable extent in native medicine and even more naturally and successfully as a manure. It is stated that in 1902-3 the mica exports averaged 19,173 cwt. with an annual value of £77,613, or £4.05 per cent. Turning to the annual statement of the trade and navigation of British India with foreign countries for the year ending March 1907, we learn that the following were the actual exports from India during the past six years:—

		Valued at	Rs.
1901-2	16,298 cwt.	•	10,50,511
1902-3	20,142 "	•	13,13,909
1903-4	21,548 "	•	12,94,453
1904-5	19,575 "	•	14,68,986
1905-6	31,554 "	•	23,94,413
1906-7	51,426 "	•	38,24,988

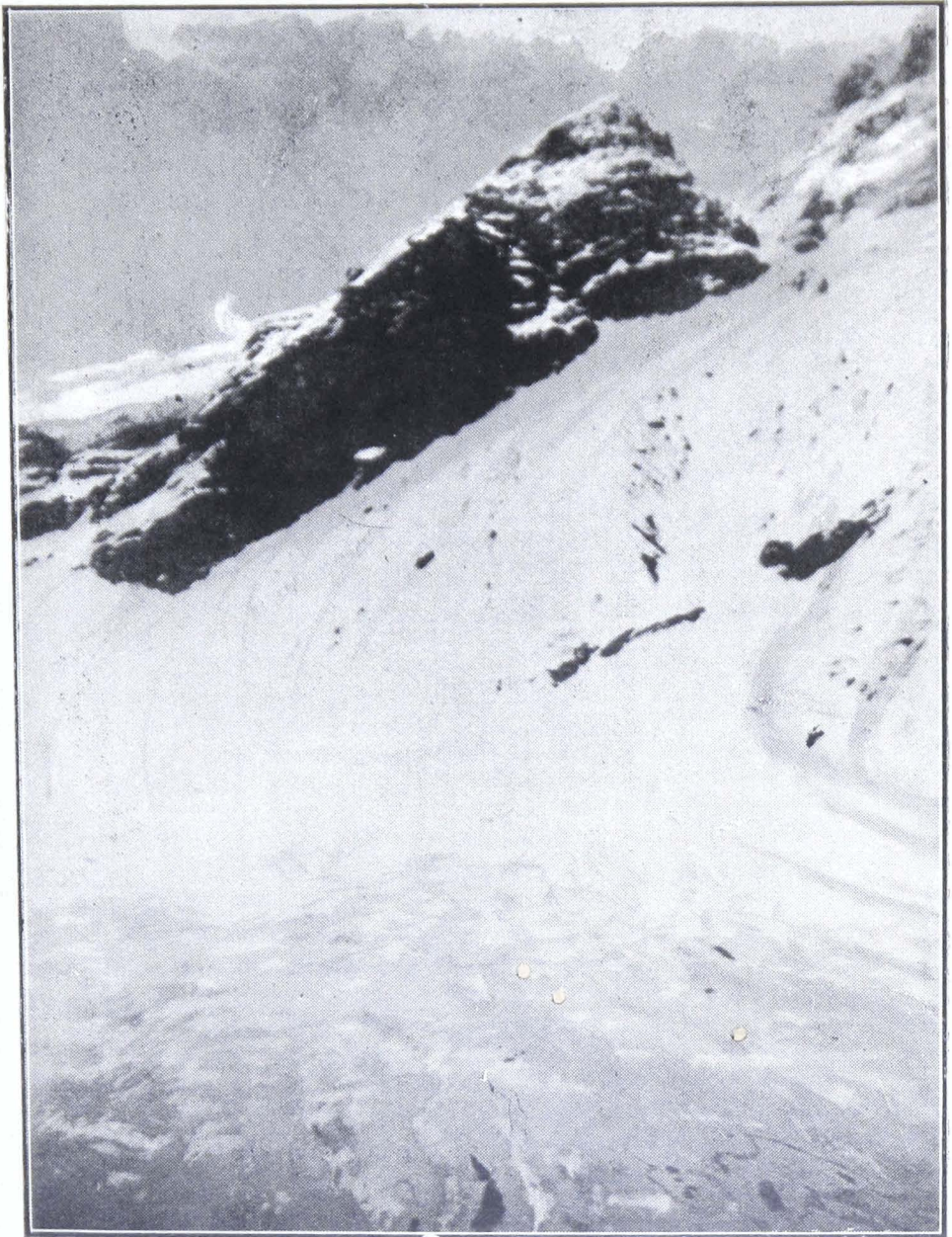
All this about mica may have bored you, and perhaps you wonder why it has been written. But if you travel over the ground which we have, you will find the solitude and the rests on the journey gives the mind time to work and ponder. And

when you come across this mica, sit down and go over my remarks again. And consider the great possibilities of wealth that awaits you, then think out a feasible scheme, set to work, and recover some of the hidden treasure.

We left Dwali at 8 A.M., on May 13th, for Phurkia. We had to pass over four deep landslips which were filled in with packed snow, and these had to be crossed over at an angle of about  $40^{\circ}$ . Great care had to be exercised in crossing, as a slip down either would have meant a sheer descent of about 300 ft. with possibly fatal consequences at the end. B. and I spent some time in snow-balling each other. Just imagine this occupation in the month of May, and in India I am sure it takes a good deal of imagination for those who are roasting in Calcutta. On we went through trees of pine, the dwarfed short sturdy oak, rhodedendron, feathery bamboos, and a variety of flower plants common to the Himalayas. We reached Phurkia after heavy climbing. We have now risen to 11,700ft. This is the last bungalow on the way to the Pindari Glacier. Phurkia bungalow is built right on the pathway. Great heavy massive boulders lie around the bungalow, but they stand out most conspicuously from immediately behind the bungalow, piled one upon another to a great height; other huge boulders have found a resting place immediately around the bungalow, and Nature with its bounteous hand has covered them over with a green verdure; altogether the place has a rugged stern and wild look.

What a glorious day we have had, shooting and climbing to giddy heights after deer and other





A SNOW SLIP ABOUT TWO MILES FROM THE PINDARI GLACIER.

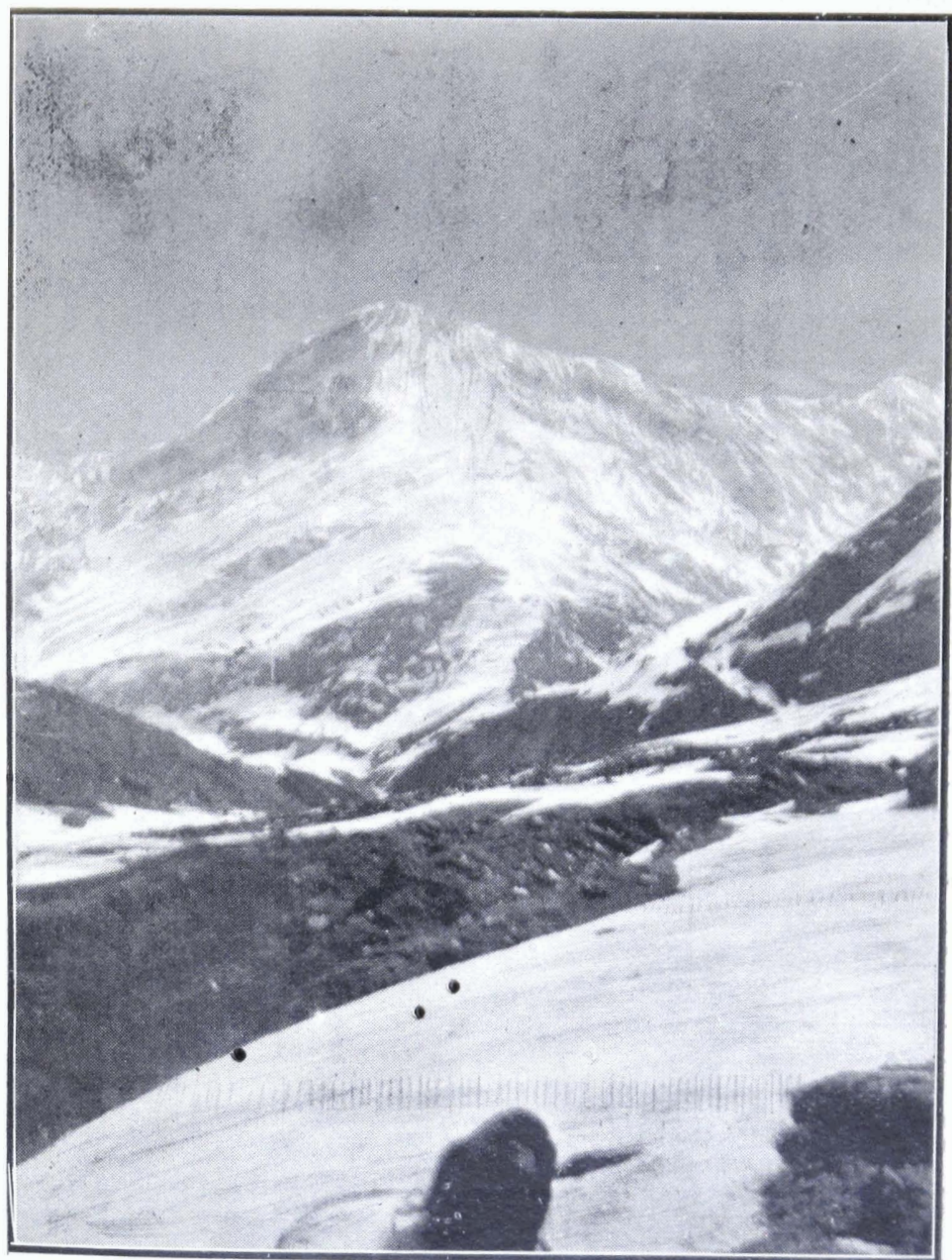
game. We had just got into the bungalow, when the shikari came rushing in shouting "janwar hia." We got our rifles and followed him on to a plateau (a short distance on the right hand side of the bungalow). On the other side of the Pindar river we saw a "thar" grazing. I managed to bowl it over, when it rolled down the cliffs. I saw it, through my glasses, drag itself into some shrubbery. The coolies saw it roll down the cliffs, and I sent them for it, but darkness came on and they were unable to find it. On the following day, as we were returning from the Glacier we were attracted by a flock of birds,—eagles, vultures, kites and crows. All hovering round one spot, not many yards from where I had shot the thar. We sent the coolies over to see what was the attraction for the birds. They brought back the "thar," but its skin was much torn and destroyed, and we left it with the natives. We retired to bed at 7-30, but got little sleep because of the cold, the fire having gone out.

*May 14th, at Phurkia.* Up at the first signs of daybreak, but oh! it was cold. Off to the Glacier. As the sun rose in the heavens, what a glorious sight met our eyes—A wonderful amber-like tint gradually melting away until it appeared glowing in all the most exquisite tints. Then a clear white light, showed up an immeasurable and stupendous wilderness of snow. On we marched—the distance by miles, we thought, was short, we had not calculated that height as well as distance, had to be taken into consideration. The effect on our breathing at this altitude began to make itself felt. It manifested itself with me by shortness of breath and panting on exertion. When

resting, the respiratory disturbance was not so noticeable, but was evident in a most pronounced manner on exertion. That was how it effected me, but my friend B. did not seem to feel it so bad. The many frequent respirations that I took seemed to tire out the respiratory muscles, and I longed to obtain a better supply of oxygen to relieve the stifling sensation.

In going and returning to Phurkia we passed over more than forty snow slips running down the mountain side at angles varying from  $30^{\circ}$  to  $40^{\circ}$ . A false step perhaps meant death. A hard frost during the night had turned the snow into solid ice and it was impossible to cross some of these snow slips, without making footholds. So we got a large stone (as we had not brought an ice axe), and we dug out notch by notch; it was tedious work, but we got through it. As we turned one of the numerous corners we came upon a full view of the Glacier. Our guide said the Sahibs went no further. He got touched up with B.'s boot and was told to "chullau," and he "chullaed." We crossed a field of ice and snow about half a mile long; the snow was somewhat soft and the gradient was not steep, so it was comparatively easy going. Then striking to the left we crossed a moraine, which is here about 150 ft. high, and descended to the **Pindari Glacier** where it commences in huge broken tiers of purest snow. The moraine is composed of gravel, mud, and blocks of stone embedded in the ice, the stones being very small. There is a very steep descent where the river issues from a cave in the face of the Glacier, about 20 ft. high by perhaps 90 ft. wide; the impending roof is riven in four or five





ABOUT ONE MILE FROM PINDARI GLACIER.



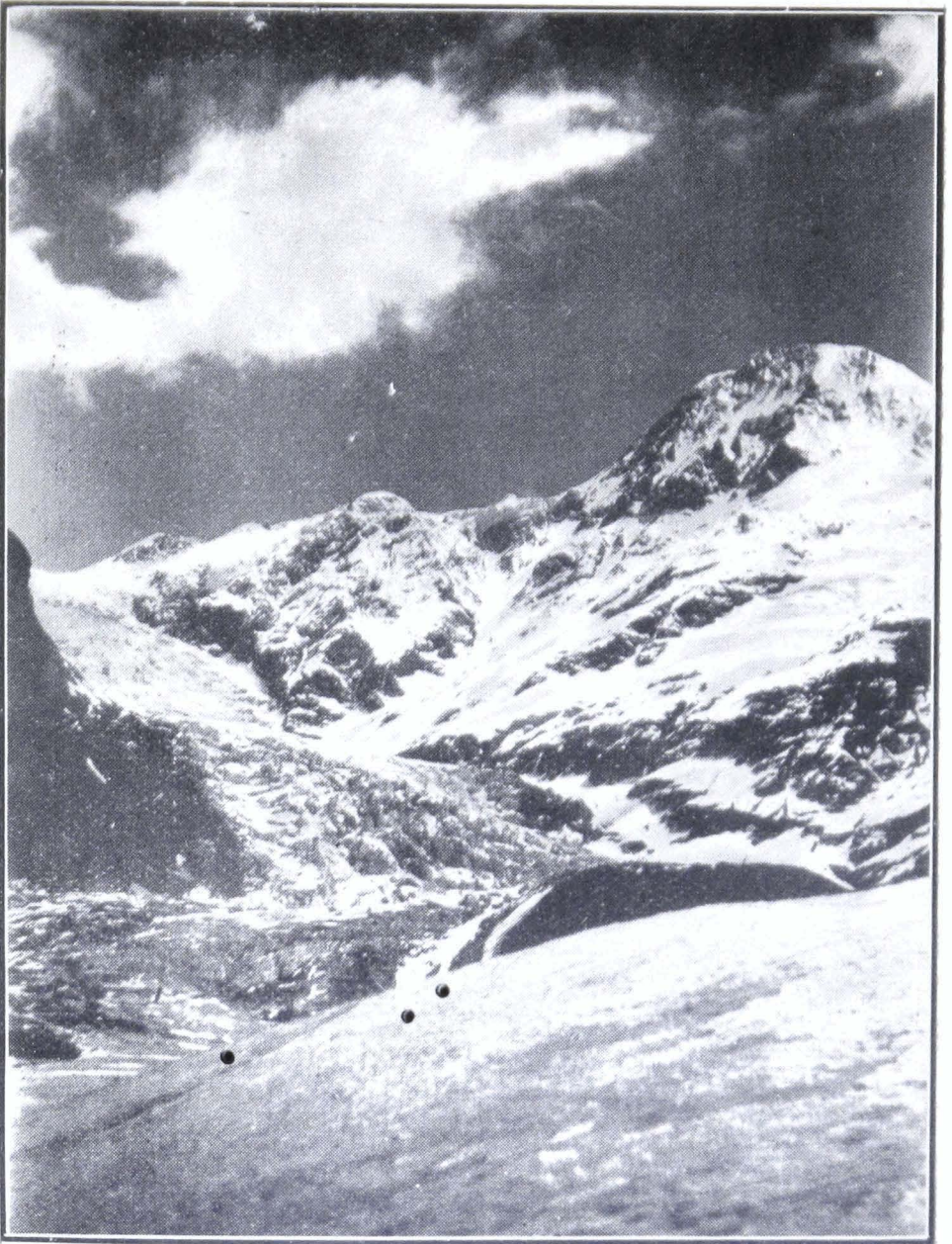
places. What a magnificent sight it was! The snow on the peaks drifting about by the wind; the Glacier—the ice cascade, the rugged looking moraines, etc. We had penetrated right to the source of the Pindar river (a tributary of the Alaknanda which flows into the Ganges) and on to the Glacier. The Glacier may be about two miles long and three to four hundred yards broad. I think it owes its existence to the vast quantities of snow precipitated from Nanda Devi and other lofty mountains above, which, melted by the noon-day sun, is frozen at night. It must be observed, too, that in spite of theory and observation elsewhere the perpetual snow line appears to descend here to the level of about 15,500 feet.

Those who have visited Pindari Glacier even if it has been done in a Dandy, have accomplished a feat of considerable discomfort; but those who have walked have accomplished a feat of considerable endurance, which requires tenacity and perseverance.

The return journey to Phurkia bungalow was much easier, the sun having melted the surface snow gave us a better foothold, but you were never sure whether you would disappear through the snow. However all went well with us until I had reached the second snowlip from the bungalow and the steepest of the lot. I had only one step to take to get on to firm ground, when I slipped. Oh horror! what a feeling it was drifting down to what seemed absolute destruction. I called for help (B. was just about four yards in front of me and the coolies a short distance behind). I dug my alpenstock desperately into the ice. It caught hold but only for a second, I again

dug it in—this time it held but broke. Away I went again. Poor B. was distracted. I heard him shout “for heaven’s sake hang on.” My foot caught a bush that swerved me round head foremost. I then gave up all as lost, but a boulder sticking out of the ice caught my shoulder, and whirled me round again. I was going again feet foremost. I went clean through a small shrubbery, breaking the chin strap of my topee and leaving it amongst the bushes. My feet then struck a fairly large boulder, and the terrible speed I was going at made me collapse like a concertina. I tumbled a clean summersault at right angles, which landed me amongst some bushes. As I fell amongst them I clung to them like grim death, got myself firmly fixed, moved first one leg then another, then each arm, and to my surprise found there was nothing broken. I heard B. still frantically shouting. I replied, “It’s all right B. I have only lost my topee.” But I was a scratched, bruised, and crushed mass. Coolies were soon on their way down to rescue me, and I was then hauled to safety. I walked to the bungalow, had a good hot bath, and although much shaken was not much hurt. B. who witnessed the whole scene said it was only a miracle that saved me. •

Still at Phurkia, May 14th. Up\* at 5 A.M. I have re-read what I wrote above, and a cold shudder runs through me. As I think of the dreadful experience I am thankful and surprised that I feel my injuries so slight. I am stiff and sore, but able to do a little shooting though no climbing. The cold is intense, but the air is invigorating and as I write I am surrounded by snow. We



PINDARI GLACIER SHOWING THE ICE CASCADE.



kept a big log fire on all last night, and were awakened twice with a low rumbling noise—evidently an avalanche. We would have gone towards the Glacier to see what had happened, but yesterday's experience did not act as an inducement.

As I sat outside the bungalow, I saw seated on the top of a stone on a low hill what I believe to be a Taber eagle. We know that this is the home he prefers, although he is to be found in the bare open country or thin and low jungle. It rose apparently unwilling, and went in quest of game (I was not able for energetic action, therefore watched its actions with my glasses). It flew slowly down the ravine but was evidently unsuccessful, as it re-seated itself, and after an interval soared to a great height circling slowly in the air, this time disappearing from my vision.

We left Phurkia bungalow about twelve o'clock and expect to get some game on the way.

Dwali Bungalow was reached at two o'clock; we are staying here just for a rest and off again to the next bungalow. I saw no game, although we went slowly in the hope of securing something good for dinner. B. may be more fortunate, as I left him sheltering behind a rock from the rain in the hope of eventually potting something. I must here mention I have done some repairs this morning—my leggings and my boots. I started off with a strong English made pair of boots with big hob-nails. The hob-nails are all but worn away, and the soles are parting from the uppers. I got my combination knife and bored holes through soles and uppers and with a strong boot

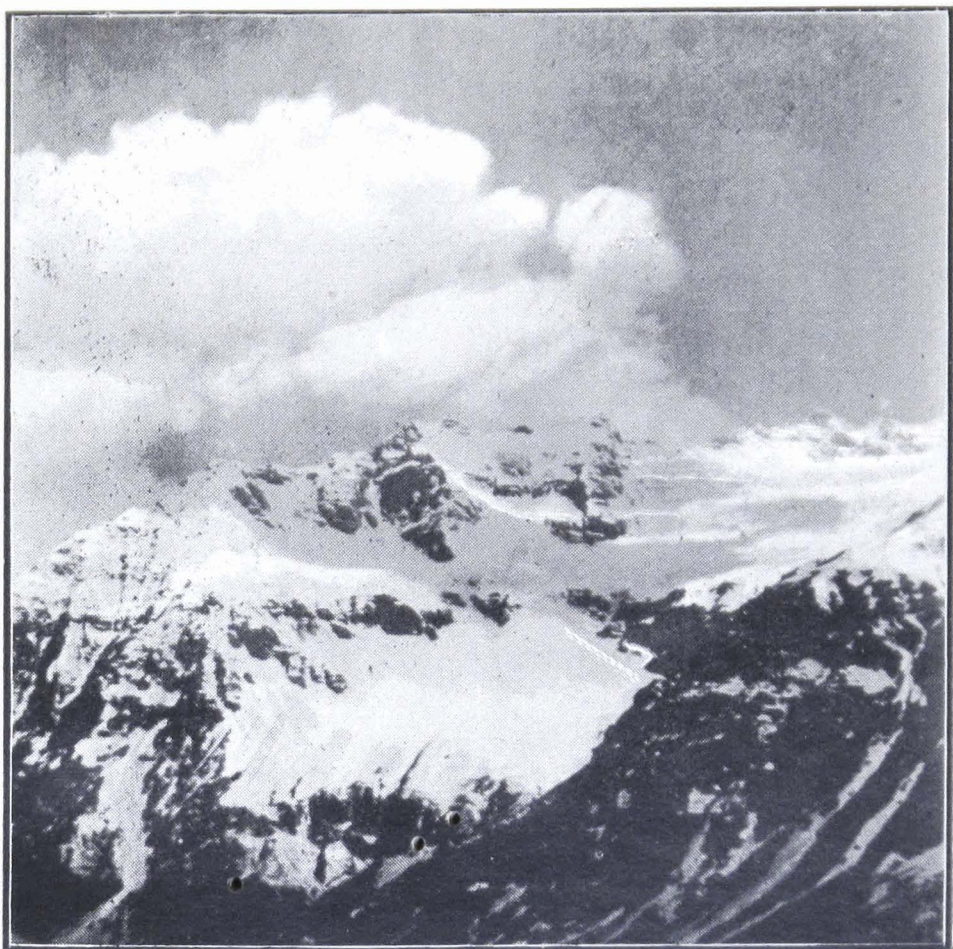
lace sewed them together, and did likewise with the straps of my leggings. B. says that in future he will make me his shoe repairer.

From Dwali bungalow to Khati we passed through a beautiful forest, thickly wooded foliage, plentiful, cool, and refreshing. You are almost beside the river the whole journey. Birds are plentiful here.

*Khati, May 15th.* We reached this bungalow about five o'clock. Most of the journey was done in a severe thunder-storm and a downpour of rain. We found the bungalow occupied, and learned from a Government official, who had pitched his tent alongside the bungalow, for the first time that King Edward the VII, the Peacemaker, was dead. It came as a great shock and surprise to us. I tried to explain to our coolies the sad news that I had just learned. I said the great white British King is dead, but this did not produce any effect on them. I then said the great white Maharaja was dead; still no effect. I said "don't you understand"? they said "no, they were 'paharias' and did not know anything." "But you know the Government"? "Ah huzoor, the Government they knew well." "Well, he was the great Burra Sahib of the Government." "Ah huzoor the Lat Sahib (the Viceroy)." "No, no, no; greater than the Viceroy." "Ah huzoor, I am Pahari, I do not know anything." Perhaps this might be a point for our socialistic friends at home, that in this out of the way portion of the King's dominions he was not known, but the Government was.

We also learned from this Government official that there is a man-eating leopard prowling





SNOW PEAK WITH CLOUD EFFECT TAKEN AT KHATI.



around in this district. It has four hundred human beings to its credit, and the Government has offered Rs. 500 for its capture dead or alive. There is also a man-eating tiger prowling between Peora and Bhim Tal, which is also responsible for a large number of deaths. We heard many interesting stories from this official of animals, their habits, and some adventures with same. After a delightful evening we retired to bed. I was awakened this morning about 5-30 with the delightful singing of the Mountain Thrush; its tones are melodious, clear, and sweet.

Dhakuria we reached about 10 o'clock. We are now in a different temperature, and it is not nearly so cold. As we were on our way here, we were attracted by a great drove of monkeys. As we were taking things easy we sat down and watched their antics. Upon consulting "The Mammals of India" by T. C. Jerdon, we learnt what species they were, namely, the Himalayan Langur, dark slate above head and lower parts pale yellowish, hands corresponding colours with body or only a little darker, tail slightly tufted, hair on the crown of the head short, and radiated, on the cheeks long, and directed backwards and covering the ears. In old individuals the general colour is grey inclining to hoary, and the head, yellowish white, grows to a larger size than Entellus, a moderately-sized one measured head and body 30", tail 36". It is found along the whole range of the Himalayas from Nepal far beyond Simla. It ascends to nearly 12,000 feet, at which elevation I saw it in Kumaon in summer, whilst Captain Hutton states he has seen them leaping and playing at an elevation of

11,000 feet, while the fir trees among which they sported, were loaded with snow wreaths.”

We met a very hospitable lady and gentleman at Dhakuria bungalow. He had a flask of very fine whisky which we sampled, the only spirits we tasted on our journey, as we drank nothing but water. We left this bungalow and walked leisurely on to Loharkhet. Shooting all the way—we went into the thick of the forest after some birds and got a few.

We arrived at Loharkhet, 1-30, hungry and ready for tiffin, which consisted of tinned meat and a few birds we had shot. Off to bed for an hour afterwards, then up and followed the Shikari over cliffs and up giddy heights after big game, always looking for the game that is not there. This was one of the disappointments of the journey, the scarcity of game; we of course know there is game, but we had not the good luck to get within range. Had dinner at 6-30. The wood pigeons were excellent eating. Then lighting cigars we got the natives to start a tamasha; we had them playing leap frog, hop skip and a jump, jumping over a bamboo, long jumping, wrestling, dancing, etc., etc. It was pleasing to see how they enjoyed it, and every one entered with enthusiasm into the spirit of it. They then made their salaams, dropped down the khud, lit their fire and sat round it. It made a pretty picture—gigantic hills all round, the flames from the fire silhouetting their forms against the thick foliage, and the low murmur of their conversation and subdued laughter, hushed so as not to disturb the Sahibs. Really their lot in comparison to the working man at home is delightful. They are children

of Nature, living a communist life. B. threw them a cheroot ; there was a scramble for it, but after the man who got it lighted it, they sat down and passed it round, each sharing the pleasure of smoking. We retired to bed early so as to save the candles.

May 16th, up at 4 o'clock this morning looking for the comet, but failed to see it. What a jolly life of freedom this is ! The temperature is much warmer here. We sat out in the open air this morning at chota hazri, in nothing but our pyjamas. Left Loharkhet 7 A.M. on our way to Kapkot, stopped at a school close to the village, and were pleased to see the schoolmaster put all the youngsters through their physical drill. Took a photograph of them as they sat down on the ground learning their lessons. Shot several birds for dinner ; we have almost been keeping the coolie lōg in food as well as ourselves. But so far we have entirely failed at big game although we have climbed hills innumerable in search of them. The heat here is very oppressive after the bracing air of Phurkia. We are now in the Sargu Valley, and the Loharkhet coolies refuse to take us further  
 ● down the Valley, as they say it is too hot for them. So we have sent off the chaprasies for another batch. We arrived at ● Kapkot about 10-30 A.M., climbed down ● the embankment in front of the bungalow, undressed, and into the river for a swim, which we thoroughly enjoyed. Climbed again afterwards to giddy heights in search of big game. We have come to the conclusion that the Shikaris here rival Barnum and Bailey in their power of imagination and persuasion. You go against your own inclination, knowing it is

their bread and butter to persuade. You seem to become reconciled to the position and follow on with the usual results, and you come back disappointed. Spent a very restless and sleepless night, the heat being very trying. The natives had set the grass on fire all round the hills, and Payne's best efforts at fireworks could not rival the grand display and wonderful effect that was produced when darkness came on. The hills all around, as far as the eye could reach, seemed to be lit up with fairy lamps, and when the fire reached a longer piece of grass, the flames would leap up serpentine-like licking the air. From my bedroom window, I could view this spectacle, and lay feeling I had lost complete touch with the material world. My imagination uncontrolled by the suggestion and distraction of ordinary sound ran riot with fancies and possibilities which was neither pleasing nor reassuring.

*May 18th.* Up at 4 A.M., and away to Bageswar at 4-30 A.M. Our experience when we passed through this valley before was the reason of this early start, as we wished to miss as much of the terrible heat as possible.

Arrived at Bageswar 9 A.M., and had breakfast—heat very trying—slept for two hours, then rose and went straight down to the river which runs immediately in front of the bungalow, had a swim, came back, dressed, and went off fishing. It was quite evident in our journey here that the trip had done us a lot of good physically, for I completed this journey of fourteen miles up hill and down dale, without sitting down once, although I was stiff and sore and still suffering from my bruises (the result of the Pindari accident),

and one of the wounds in my hand was very bad. I consider myself very lucky, that my grievances are so small as it was marvellous that the accident did not terminate fatally. B. brought a Bhutia blanket here. I could not come to terms with my man, as he wanted more from me than B. paid. I was sorry after he left that I had not paid him his price. They are excellent blankets—all natural wool, and will last a lifetime.

We learnt that the wonderful man-eating leopard had been seen between this and Someswar, so we made up our minds to tramp on to Someswar, in the hope that we might have the luck to pot it. Think of the glory of ridding the natives of such a pest and pocketing rupees five hundred from the Government! However faint the hope, it was worth an effort.

**Someswar**, 5,750 feet Elevation. May 19th. We reached here without any adventure whatever, and not a sign of the leopard. It was a beautiful moonlight night, and we had a goat tied up close to the bungalow, in the hope that Mr. Spots would be induced to come and let us have a pop at him, but Mr. Spots seems to have the wisdom of Solomon. We were much disappointed at Mr. Spots not obliging us, and retired to bed disgusted. Got up 5-30 A.M. and made tracks for Ranikhet, a military station which, after an uneventful journey, we reached. It is a large Military Hill Station. Just as we arrived, there was a full parade Commemoration Service being held for King Edward. We caused a considerable amount of attention by our extraordinary appearance, ragged and weather beaten, legs and

arms as brown as mahogany, and the skin beginning to peel off.

“ **Ranikhet**, Military Sanitarium, in the Tahsil of Almorā, United Provinces, situated in  $29^{\circ} 38' N.$  and  $79^{\circ} 26' E.$ , at the junction of cart roads leading to the foot of the hills of Kathgodam (49 miles) and Ramnagar (56 miles); population in summer (1900), 7,705 including 2,236 Europeans and in winter (1901) 3,153.

The Cantonment is situated on two ridges. Ranikhet proper, elevation, 5,983 feet, and Chaubattia, elevation 6,942 feet. It is occupied by British troops throughout the summer, and the accommodation is being enlarged; a dispensary is maintained here. It was at one time proposed to move the head-quarters of the Government of India from Simla to Ranikhet. The income and expenditure of the Cantonment fund averaged Rs. 21,000 during the ten years ending 1909. In 1903-04, the income was Rs. 29,000 and the expenditure Rs. 33,000. An excellent system of water works has recently been carried out.”

To-day, May the 20th, we are going to have a quiet day's rest here. So we thought, we would visit the village and started for it at 9-15 A.M. B.'s mania for walking seems to have become excessive, for instead of getting to the village, he struck the road leading to the bottom of the valley, although I protested that we must be beyond the village—he had got so used to strange and uncertain paths, and I so accustomed to plodding on that we went seven miles and did not see the village. However, this gave us a good appetite for breakfast, and as we are now back



in civilization, we got a good well-cooked breakfast, and being unable to do anything else, we tumbled into bed and slept soundly until 3 P.M. We then had tea, mounted ponies and away to visit **Chaubuttia**. The Seaforth Highlanders being stationed here, we witnessed a hockey match between two of the Companies. The Seaforth quarters are magnificently situated, being on the top of one of the largest hills around; it is well wooded with rhododendrons and pine trees. The roads are fairly broad and nice and sandy. You get a nice canter and an enjoyable ride through the pine woods. It reminded me much of home. The soldiers' wives were sitting outside their doors chatting, and their nice clean white healthy children playing about. We then rode about four miles to see the Royal Scots playing football, but arrived just as they were finishing. Next morning we had breakfast at eleven o'clock and lay back until about twelve o'clock, when the restless roving spirit again came over us, and in spite of the hour at which the sun was shining fiercely, we set off for Kairna, a fifteen miles tramp. We had not a bit of shelter the whole day. The black rocks threw off almost as much heat as the sun. The want of moisture in the bowels of the mountains, the gravelly nature of their surface, the dry state of the air gave a parched feature to the country, making the district bleak and desolate. Our "Thermos" had failed us on the way and we were without liquid of any kind. We had only tramped a few miles when our mouths became parched and as dry as a bit of tinder. We hailed with delight a drinking trough. I got my hot head

and bare arms stuck deep down into the cool refreshing water, and drank deeply, and restarted our journey refreshed. We swung along the road at a fair good pace and soon reached the suspension bridge that crosses the Kosi. Neither B. nor myself blessed the man who built the bungalow on the top of that short but steep hill; it was in our somewhat exhausted condition the worst part of the journey. The **Kairna** Bungalow, or I should really say bungalows for there are two, are well built, well kept, and very comfortable, and the beds have spring mattresses. The heat here was unsufferable. We had to remove our beds on to the maidan, as there were no punkhas. It was very pleasant sleeping under the canopy of heaven, counting the stars, and watching the moon winding along its luminous way, and, of course, Halley's comet came in for a share of attention; we at last fell asleep.

Up at 4 A.M. and off once more on the tramp, seventeen miles to Bhim Tal, one of the easiest and pleasant walks we have had, shaded from the sun nearly all the way. It must be a considerable expense to keep this road in repair on account of the numerous small landslips that are continually occurring. We passed a marble tablet announcing that two soldiers were buried amongst the debris there during an earthquake. The engineer commands your respect. As you gaze in open-eyed wonderment at the gigantic precipices, waterfalls, ravines and landslips that are the ordinary features of scenery here. They are on a scale of magnificence that must be an awful puzzle to the engineer. Yet the puzzle seems to be worked out satisfactorily, for good

roads have been made, and are kept (in spite of these frequent landslips) clear and in good condition for traffic.

Stopped at **Bhowalia** for breakfast ; a very pretty little hotel reminding you of a small hotel in the Highlands of Scotland—the only hotel we have seen on our journey. Had an excellent breakfast provided, rested for an hour, and then started on the last part of our journey. Before long we came in view of Bhim Tal, and very pretty and peaceful it looked. We hailed it with a certain amount of gladness, for it meant to us the end of our self-imposed task of long daily marches up steep and ragged paths under a scorching sun. The life was glorious, the absolute sense of freedom to shoot where you liked and practically do whatever you liked. No one to say you nay. The natives, as a whole, were very good and obeyed almost your every wish. If there was a weakness in our holiday of tramp, tramp, tramp over the Himalayas for about two hundred and fifty miles, it was that we did too much in a short time,—perhaps a longer delay at each place would have been more beneficial ; be that as it may, I am sure that neither of us felt more fit in our lives. Our muscles are like steel. Dyspepsia has fled, appetites are keen, digestion good, and eyes sparkling with health. We feel satisfied that the sights that we have seen are the most sublime and astonishing of all earthly spectacles. Right well I know that the spell that has been cast over me by these majestic hills will rise up phantom-like again and again, beckoning me to return, and return I will.

We remained at Bhim Tal for five days, five enjoyable days, then returned to the city of chits, pegs, temper and mildew—the Hub of Industrial India,—Calcutta.

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## APPENDIX.

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We may state to prospective travellers to the Pindari Glacier that there are more routes than one to it, but to any body with only one month at their disposal we think that the route we finally fixed upon is the best one. If a few male friends go as we did, prepared to rough it, they can dispense with sweeper, bhisti and dhobi. Kerosine oil need not be taken. Two dozen candles and one dozen night lights served us. A well equipped tent would add much to comfort, and should the Dâk Bungalow be full up, it then becomes essential; we had no tent, but were fortunate to find on every occasion sufficient accommodation in Bungalows. The cost of the journey need not be expensive—about Rs. 500, from leaving Calcutta to returning.

I must take this opportunity to thank my friend Mr. B. for his comradeship, his guidance and assistance; most of the photographs were taken by him.

I am indebted to the "Imperial Gazetteer of India," for Geographical and Historical remarks about Kathgodam, Almora District, Bag-eswar, and Ranikhet, also any author I may have quoted.

I have endeavoured to give an accurate and true description of an interesting holiday. I append a short description of routes, distances and heights.

*Copy of Article written in Book at  
Phurkia Bungalow.*

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The successive years' high water marks all along this lateral Moraine clearly prove that the Glacier is at present contracting. In accordance with the concensus of other evidence and opinion noted above the very great retreat of the Glacier in comparatively recent geological time, is clearly shown by the line of the old right lateral Moraine which stretches down along the far bank of the river to within two miles of Phurkia Bungalow, and is now being carved into by the river on the lower end of that line, and on the west side of the Valley the remains of the large terminal Moraine are prominent. This larger Glacier was doubtless also fed by those, that may be seen from the Bungalow, high up on the face of the mountain; its rate of retreat during this period was probably very rapid, as indicated by the small amount of Moraine material left in the Valley above the large terminal Moraine; below it many of the lines of stones and boulders across the Valley are very probably older terminal Moraines and may even possibly mark successive annual retreats. I am inclined to think that much of the material of still lower down to within one mile of the Bungalow is Glacial. Many of the sub-angular blocks suggest ice action. And although I was only able to notice one truly scratched block, the nature of the rocks included, is in the main ill-suited to preserving such scratches. The morning sun striking the bare side of the mountain along

the side of the Valley, warms the air in contact with them and draws a current of air (which has proved to be rich in electric ions apparently derived from Radio-Active emanations from dry soil below); up the Valley this air is expanded and consequently cooled and any moisture it contains is condensed round the ions and especially round the negative ones. The cloud thus formed and charged with electricity is carried up with the ascending current of air and so brings about the electric separation which is only neutralised again by lightning, *i.e.*, a Thunder Storm.

The height and formation of the clouds will depend largely on the number of ions present, and the amount of moisture in the air which will again jointly determine the amount of rain or snow which falls. When the sun goes down cold air from the snows blows down the Valley.

J. A. CUNNINGHAM,

PHURKIA, 25th October, 1904.

*Copy of Article entered in Phurkia  
Bungalow book.*

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We left Phurkia Bungalow this morning 5 o'clock, to visit the Pindari Glacier, on our journey towards the Glacier; we found the road to be difficult and dangerous on account of the numerous snow slips running down the mountain side. Evidently there must have been a severe

frost last night, as the surface was one sheet of ice; many of these we found impossible to cross unless footholds were carved in the ice; being without an ice axe, these we carved with a large sharp stone. On the immediate approach to the Glacier, we found a large field of snow, extending about half a mile, but quite easily traversed, the gradient being small and the snow comparatively soft. After  $3\frac{1}{2}$  hours steady progress, we reached the ridge of the left lateral Moraine; we spent three hours inspecting the snow, the Ice Cascade, and the Moraines, getting close up to the Foxes Path. The quantity of snow lying, prevented us attempting a further ascent. From our own observation, and the data recorded in this book, we agree with the opinion already expressed by the various writers,—that the snout is retreating—while there, we heard repeatedly, the rumbling of avalanches, evidently of small dimensions. The mouth of the snout of the Glacier has evidently altered much since 94 (according to Colonel Michell's sketch). On our return journey we found the going much easier, the sun had softened the surface of the snow slips, this led to over-confidence in crossing these slips, which almost brought about disastrous results. The fact of having an Alpenstock, altho' it snapped it was the means of acting as a drag, thereby enabling J. C. F. to grasp and cling to some bushes, until rescued by the coolies. This is mentioned with the intention of being of service to intending visitors to the Glacier. It shows the necessity of providing oneself with a reliable Alpenstock. We reached the bungalow after about one and a half hours steady walk. We think it would be

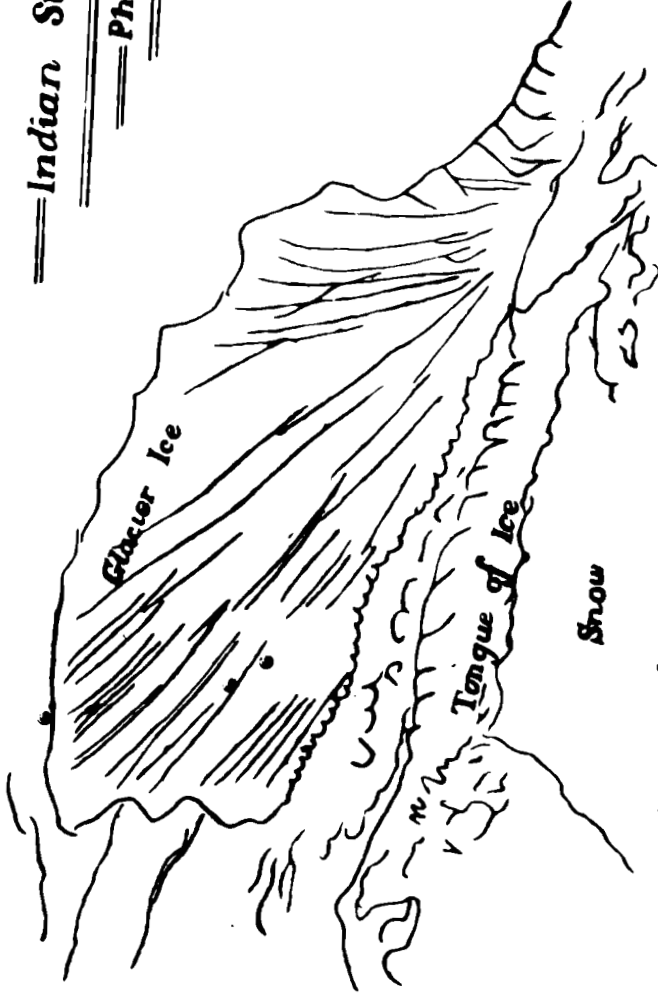


== Sketched by J. W. A. M. ==

== Michell . Col. ==

== Indian Staff Corps ==

== Phurkia . 25 May 1894 ==



Mouth of Glacier in May 1894

From Recollection

== R. PINDRI. ==



advisable for intending visitors to leave at day-break, as clouds gather round about mid-day, thereby preventing a clear view of the surrounding snow peaks. Photographers please note. We have perused the contents of this book, and consider that many of the articles herein contained, are worthy of preservation, and cannot help expressing our surprise at the Government's lack of care in not providing greater protection for articles, that must have cost the authors much thought and trouble. We were desirous of perusing an article written by Mr. Cotter, who we are led to believe from the natives' statements made marks, and took careful measurements at the Glacier, and to which reference is made in this book, but as some leaves are missing, we presume his report was amongst them. As we find considerable variety of opinion as to the possible mode of locomotion to the Glacier, we would suggest that visitors be guided by the opinions expressed by those who have visited the Glacier, on or about the date of their own intended visit, as the conditions of approach seem to vary so much. This book may have originally been intended for recording scientific observations, but information that may tend to assist prospective visitors surely cannot be entirely ignored.

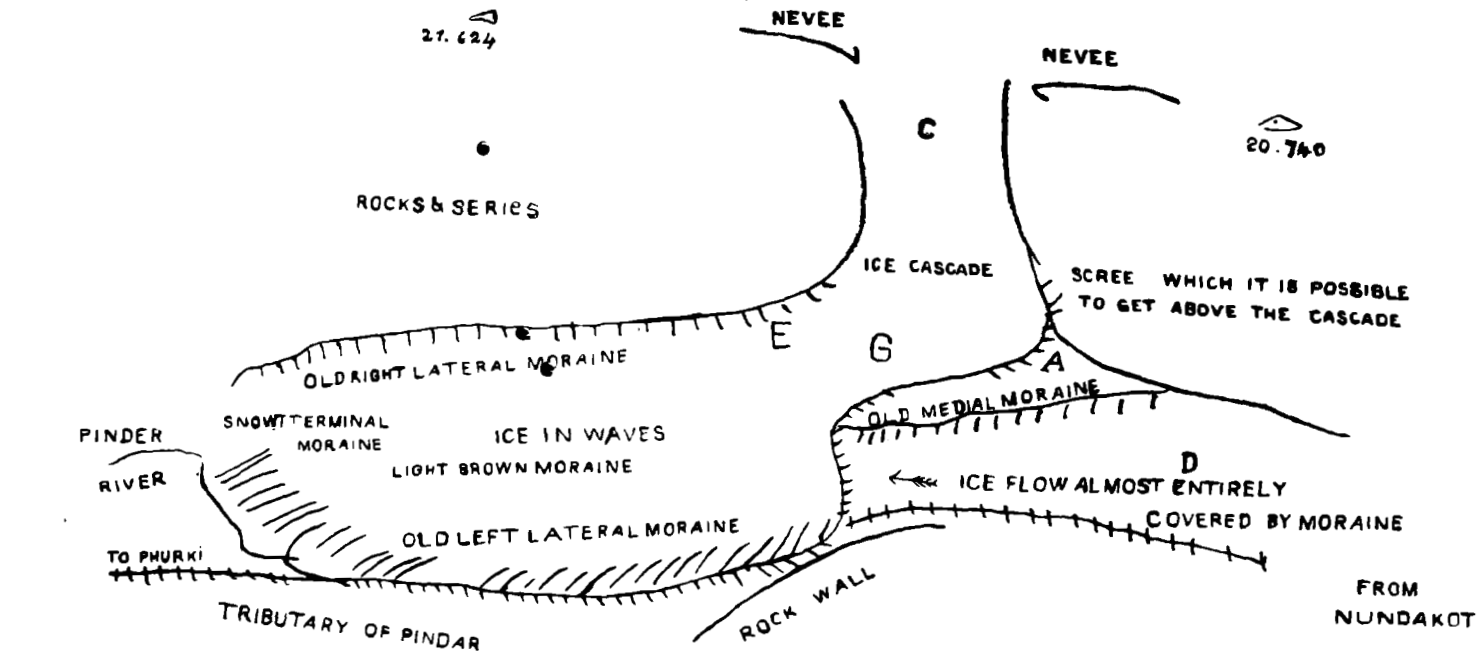
J. C. F.

R. C. B.

*Copy of article written in book of Phurkia Dâk  
Bungalow.*

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Mr. Everitt and myself spent a very pleasant two days on and around the Pindari Glacier; we found that it had been much misrepresented in Major Gore's book as ponies cannot cross the Moraines. Major Gore probably did not see much more than the Moraines at the lower end. The Glacier is formed by the union of two ice floes, the main one "C" is supplied by Nevees of the Peaks, 21,624ft., 20,740ft. down between which it comes; this forms a magnificent Ice Cascade. Broken up into pinnacles and crevasses, a little below the Cascade, this ice flow is joined by a smaller one "D;" on its left side this smaller flow is supplied from the Nevees of Nunda Kot 22,530ft., and does not at first sight look like an ice flow, as it is almost entirely covered by Moraine between the two ice floes, there is a high ridge of medial Moraine formed mainly of the old left lateral Moraine "H." Of the main ice flow up the northern side of the Moraine ridge it is possible to descend by a sort of curved gully and to skirt right round the left bank of the main ice "H." We went as far as 12,608ft. up this tract and it then became evident that it was possible to skirt round on the Glacier side of the left lateral Moraine to Scree up, which it is probably comparatively easy to climb on to the left bank of the Glacier, above the Ice Cascade, the top of which must be at an elevation of 15,000ft. or a little more. Any one who wishes to attempt



ROCK CLIFFS

ABOUT 1 1/2 HOURS STEADY GOING (EITHER PONY OR WALK )  
FROM PHURKIA D B



this climb should make an early start from Phurkia; the line thus in the accompanying sketch shows the best way to go, to get above the Ice Cascade. I have called the tract up the north side of the old medial Moraine (A) The Foxes Path owing to a similar tract up "Cader Idris" in North Wales. Some of the Lowerkhit coolies would be able to show the way if asked for the Lomri Ke Pagdandi, the high right and left lateral Moraine (E & F), or the trunk Glacier formed by the union of the two branch Glaciers at (B) are not now being added to, but are being denuded by the undermining of the Glacier, as it rubs against their inner sides in its slow motion towards the snout, and consequently the inner sides are bare and loose, while the outer sides not being subjected to this denudation are covered with grass and plants; the ice itself is very interesting at the Cascade, where the Glacier passes over rock barrier, the Glacier is broken up into pinnacles owing to the formation of crevasses to relieve the strain caused by the binding of the back of the Glacier. Below this the slope of the bed becomes less and the crevasses gradually close up again, but at about "G," so some very fine examples of traverse Crevasses are visible; these disappear lower down and the ice takes the form of large transverse waves at intervals to some 100 yards (guessed); in this part there is a lot of longitudinal crevasses probably formed on account of the broadening of the Glacier after passing the constriction at "G," this part of the Glacier is very interesting, as the various small chips of stone scattered over it so seem to sink into the ice, as owing to their darker colour they absorb more of the sun's heat

than the ice ; any white quartz pebbles do not however sink to any appreciable extent. Large slabs of rock on the other hand actually protect the underlying ice from the sun, as rock is a bad conductor of heat, and although the surface of the stone is too thick for the heat to get through to the underlying ice, consequently these blocks of stone are left standing up on top of ice pillars, the Glaciers evidently once extended some two or three miles further down the Pindari Valley and has left its traces in the form of Moraines ; on the right bank, it is a very rough scramble down the Glacier and over the terminal Moraine to get to the snout, the ice at the snout is very dirty and seems to be in beds turned up at the ends, as already stated by Mr. Cotter, Nanda-Devi is not visible from the Glacier of this valley, the peak, 21,624, has been erroneously called Nanda-Devi, which lies behind this peak.

L. L. PERMOR.

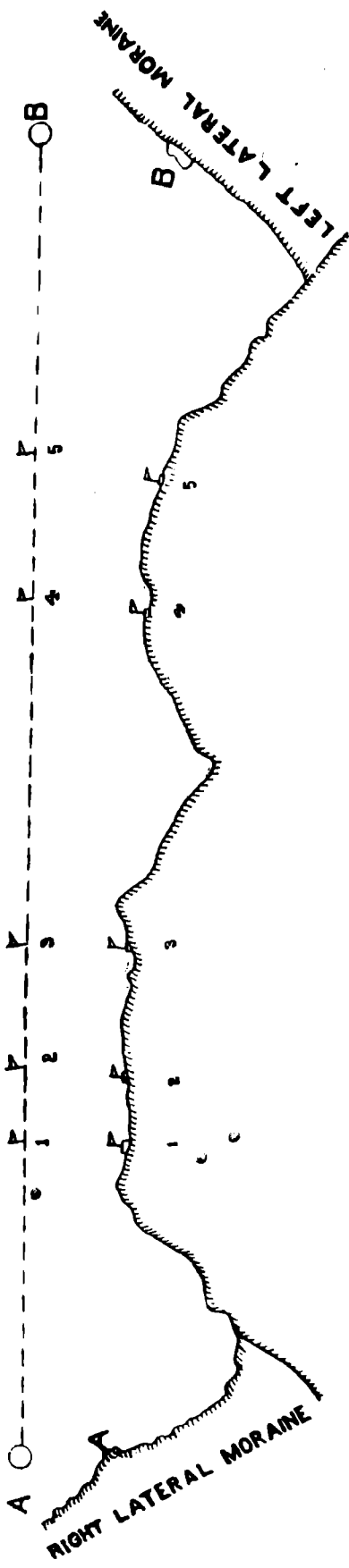
16-10-06.

*Copy of Article written by J. W. A. Michell,  
Col., Indian Staff Corps, in Phurkia  
Dâk Bungalow book.*

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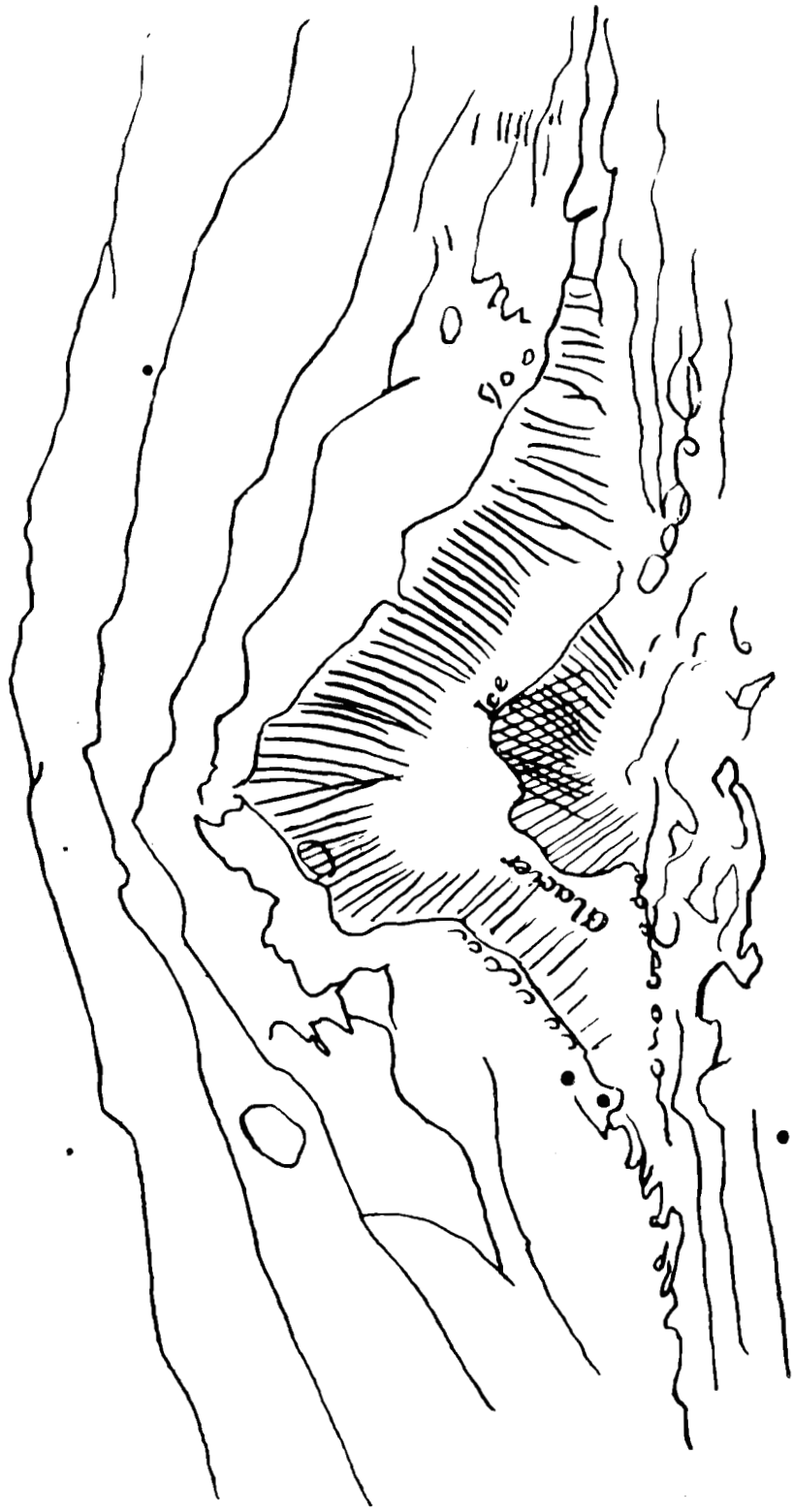
I have placed the line of 5 red flags across the Glacier ; the situation of this line is about half a mile above the snout or mouth of the Glacier and about three-quarters of a mile below the great ice





Section on A.B.

Rough approximate Scale by eye  
 Measurement A to B 1500 Yards  
 Bearing by prismatic compass from A to B 160°



== Mouth of Glacier in May 1884 ==

== From Memory ==

fall or Cascade, these flags are in a true straight line and at right angles to the direction of the Glacier, *i.e.*, its longitudinal axis at the spot each pole is embedded is solid ice of the Glacier by moving away the debris and digging a hole in the ice with an ice axe, the poles are further firmly supported by cairns of stones built around them, the line lies between two rocks which are prominent objects on the right and left lateral Moraines under marked A and B respectively, see plan on section A is of a bluish grey rock and B of a russet colour, the terms right and left are used in the same sense, as if applied to a river, the right hand bank being that which lies on the right hand side of a person whose back is towards the course of the river. If further visitors will mark the deflection of the line of flags from the points A and B, noting the date observation, the velocity of the Glacier can be determined. The flags will, in course of time probably not remain in a true straight line for the centre portion of the Glacier is apt to move faster than its sides which are retarded by friction against the lateral Moraines after recording the deflection of the flags as regards each other, they might be set up again in a true straight line. The snout of the Glacier has altered much since 1884, May, when I took a careful sketch of it, was then of the usual cavern shape, some like the usual illustration opposite. It now seems to have receded over a hundred yards within the last ten years, and has assumed a new shape throwing out a tongue of ice, from which the Pindari river apparently emerges, I could not find the exact spot where it emerges as it is embedded in the snow, see illustration opposite. I

regret I have not the time to make more accurate measurements and observation, or to ascertain the oscillation of the Pindari Glacier by fixing the actual position of the ice snout at its end, but perhaps if Capt. Anderson's suggestions are carried out and two Aspinall enamels red and blue, a couple of brushes and a hundred yards tape measure be provided and kept in the Phurkia Bungalow, future travellers who may be interested in such matters would be encouraged to make more accurate observations.

(Sd.) J. W. A. MICHELL, COL.,

INDIAN STAFF CORPS,

*Phurkia.*

## ROUTE TRAVELLED WITH DISTANCES AND HEIGHTS.

Stages.				Distance.
From		To		
Kathgodam	2,000 ft.	Bhim Tal	4,450 ft.	8 Miles.
Bhim Tal	4 450 ft.	Peora	6,000 ft.	20 „
Peora	6,000 ft.	Almora	5,600 ft.	10 „
Almora	5,600 ft.	Takula	5,335 ft.	15 „
Takula	5,335 ft.	Bageswar	3,200 ft.	11 „
Bageswar	3,200 ft.	Kapkote	3,750 ft.	13½ „
Kapkote	3,750 ft.	Loharkhit	5,355 ft.	9 „
Loharkhit	5,355 ft.	Dhakuri	8,900 ft.	6 „
		(Pass 9,400)		
Dhakuri	8,900 ft.	Khati	7,650 ft.	5½ „
Khati	7,650 ft.	Dwali	9,000 ft.	7 „
Dwali	9,000 ft.	Phurkia	11,700 ft.	3 „
Return the same route as far as Bageswar then				
from—				
Bageswar	3,200 ft.	Someswar	5,750 ft.	16 „
Someswar	5,750 ft.	Ranikhet	5,983 ft.	21 „
Ranikhet	5,983 ft.	Khairna	3,500 ft.	15 „
		(Via Cart road)		
Khairna	3,500 ft.	Bhim Tal	4,450 ft.	16 „
Bhim Tal	4,450 ft.	Kathgodam	2,000 ft.	8 „

Ranikhet—height of Dāk Bungalow ... .. 5,983 ft.  
and of the Bridge ... .. 6,200 ft.