

in the pan, none the worse for their excursion above the snow-line and across the Divide into another province.

Our journey was at an end. Favoured by fortunate breaks in the weather, we had attained our objectives without loss of time. The Lyell icefield and its peaks had exceeded our expectations. The feasibility of Mt. Forbes from the N. was proven. So when the morning came again, with the peaks standing out against a sky of clearest blue, it is scarcely to be wondered that we looked at them with some complacency, in the happy memory of our northern wandering.

WANDERINGS IN THE KUMAUN HIMALAYA, 1925-1926.

BY H. RUTTLEDGE.

THE good fortune which ultimately rewards the faithful gave me charge of the Almora district of the Kumaun Division in April 1925. The northern portion of this area lies in the heart of the Himalaya, and is a glittering paradise of ice and snow, dominated by the great peaks East Trisul, East Nanda Devi, Nanda Kot, and Panch Chulha. One-third of the district is to the N. of these giants, and abuts against the great barrier beyond which is Western Tibet.

Orders were received in May to inspect the Indian section of the trade route which runs up the Milam or Johar valley and over the Untadhura pass into Tibet; and a study of the map showed that the shortest way from Almora to Milam would be up the valleys of the Sarju and Pindar rivers, over the Pindari glacier and Traill's pass, between Nanda Devi and Nanda Kot, and down the Lwanl Gadh, explored by Dr. Longstaff in 1905,¹ to Martoli, nine miles S. of Milam. This route would, further, afford an excellent opportunity of cultivating friendly relations with the Danpurias of the Sarju and Pindar valleys and with the Bhotias of Johar, who carry the trade between the United Provinces and Tibet.

By great good fortune, Colonel R. C. Wilson, D.S.O., M.C., of the General Staff, an experienced member of the Swiss Alpine Club, was able to join us from Ranikhet; and he brought Major T. C. Carfrae, M.C., R.F.A., of the Alpine Club. My wife and I completed the party.

¹ *A.J.* 23, 208; map facing 207, which should be consulted with reference to this paper.—EDITOR.

Leaving Almora on May 26, we proceeded by the above-mentioned route to the Pindari glacier, and made an unsuccessful attempt on Traill's pass. Our adventures on that occasion, and again this year, have been described by Colonel Wilson in another article, so I can pass on to the time when we found ourselves, after a very wet journey round by Tejam and Mansiari, at Martoli, where we arrived on June 12. Here we had a magnificent view of Nanda Devi, at the end of the Lwan Gadh; and spent a pleasant afternoon in the neighbourhood of the Salung glacier, returning to camp through the only forest in that region. It lies above Martoli, at a height of about 12,000 ft., and consists of birch trees, sacred to the goddess Devi.

Next day we reached Milam, where the Bhotias were beginning to assemble for their annual trek to Tibet. Carfrae, unfortunately, was far from well, and was unable therefore to join in an exploration of the Milam glacier. Being, however, a man of resource, he ministered to our comfort by shooting a couple of burhel, most succulent of sheep.

On June 15 the rest of us took a light camp about ten miles up the left bank of the glacier, in magnificent weather. From local information we gathered that the ice is steadily retreating; the snout of the glacier is now between two and three miles above Milam. For about seven miles there is no clear ice, the surface being a tumbled confusion of stone débris fallen from the rocks above. This débris is banded in different colours, grey, light and dark brown, and red, for a distance of two miles; each band about a hundred yards in width, and at right angles to the course of the glacier.

Five side glaciers, falling from one of the great northern ridges of Nanda Devi, meet the Milam glacier from the W. Two only of these are named in the survey map—the Shakram and the Mangrau. They are bounded by high peaks, one of which, apparently that marked 21,700 ft. in the map, is a stupendous aiguille, guarded by hanging glaciers whose capacity to cling to its precipitous sides roused our astonishment.

There is only one glacier of any importance on the E. side, near the ice-fall at the head; but we had to cross some old moraines.

At a height of 12,800 ft. we came to the Shangas Kund, a charming little lake about 200 yards long, its banks gay with flowers and grass. Thence a wearisome scramble over old moraine matter took us to the highest grazing ground, at about 14,000 ft. Here we took to the left lateral moraine, crossed a

narrow strip of dry glacier, and went up the big medial moraine which leads to the ice-fall, some twelve miles from Milam. It was now getting late, so we prospected two alternative ways of advance for the morrow, and returned to the grazing ground, where we spent a very fair night, protected in a convenient hollow from the rising wind, the 'Rani ka pankha' or 'Queen's fan' of Johar.

Next morning broke fine. The left lateral moraine, close under the left bank, afforded good going along a narrow crest. Crossing at a spot where the E. glacier debouches, and where we found the tracks of what must have been an insane bear, we got into a trough of snow-covered ice, which led without difficulty of any kind to the foot of the ice-fall. The glacier at this point is about half a mile in width. We now roped up, with Wilson in the lead. With us were a Bhotia named Shama, in a pair of borrowed boots, and my orderly Khushal Singh. Some two hours of interesting work brought us to the top of the fall, there being no major incidents except the necessary suppression of Shama, who disapproved of conventional mountaineering methods and proffered much unwelcome advice. Luckily there were no snow bridges of any size to cross, for the terrible sun made everything very soft, and we all put a leg through here and there. The séracs were of small size, and stable. We now reached névé, in the main catchment area of the great peaks at the head of this valley. Above, to the N., towered peak 23,220 ft. of the survey map. To the W. was a very steep glacier falling from a col which must overlook the Bagini. From the N.E. the Milam glacier was joined by another, the ascent of which should enable one to reach the Girthi valley. Such an expedition would, however, have entailed at least another day's work, for which we were unprepared; and there was no convenient spot on which to camp.

We got off the ice on to the left bank, and painfully clambered up a very steep shale slope to a corner of rock, at about 16,500 ft., whence there was an excellent view of the N.E. glacier. This would be very well worth exploration, but its ice-fall looks both long and difficult. Still more difficult is the W. glacier; could one but reach the col at its head, one would see the Bagini² and join hands in spirit with the Longstaff-Bruce-Mumm expedition of twenty-one years ago.

As we turned to descend, a tremendous avalanche roared

² *A.J.* 24, 110.

down the slopes of peak 23,220 ft., shortly followed by one down the fall of the W. glacier. Generally speaking, however, the absence of avalanches was a remarkable feature of this region, considering the time of year.

The return to Milam was effected the same day, or rather night, and was replete with all the miseries incidental to glacier travel. Its earlier stages were enlivened by Khushal Singh, who took advantage of our having unroped to fall into an obvious crevasse. Happily he was rescued without difficulty; and the experience was beneficial. The average hillman, a capital performer on rock, thinks he has nothing to learn from a sahib on ice and snow. Mere words are powerless to correct this impression.

Milam is a capital place for a base camp. It is only ten days' march from Almora by the ordinary route; supplies can be brought up with fair facility and at moderate expense; and there are many peaks and glaciers to be explored. The Bhotias are uniformly friendly and helpful.

The monsoon now showed unmistakable signs of breaking; we had just time to go up to the end of the Lwanl Gadh and prospect a way for a renewed attack on Traill's pass in 1926; and were back in Almora by June 27. Though our achievements were few, we had learnt much which should be useful for the future; some experience had been gained of ice and snow and rock conditions; and friendly relations had been established with the local people, an important matter when one is dependent on them for transport. One thing is clear: the local hillman, Danpuria or Bhotia, though on the whole willing and good material, must be properly clothed and shod and trained before he is fit to go high. Gurkhas are better, but apt to chance everything. During June the snow, in spite of the hot sun, appears to be pretty stable. Much of the rock in these regions is very rotten; when sound, it is a hard and slippery limestone.

The year 1926 dawned brightly for us, with prospects of an expedition to Tibet, to inquire into the conditions of Bhotia trade. This would not be possible before the second half of July, when the Bhotias cross the passes; but June and the first half of July could be well spent in the three main valleys which lead from the Almora district to Tibet, namely those of Johar, Darma, and Chaudans-Byans. One would get to know the Bhotia traders, to understand their relations with the Tibetans, and to realise their transport difficulties; and, should any peaks or glaciers present themselves *en route*, it

would savour of ingratitude to Providence not to visit them and thereby absorb what all cultured people consider so important, namely 'atmosphere.'

Fortunately, Colonel Wilson, now commanding a brigade at Manzai, was able to join us again; and, my luck continuing, I was able to persuade Mr. T. Howard Somervell, with his wife, to leave their labours at Travancore and spend their short holiday with us. Last year's experience had shown the advisability of having something better than the local talent for high portage; Somervell imported from Darjeeling two of the Everest Sherpa porters, Chettan ('Satan') and Mingma ('Alice'); and Colonel A. H. R. Dodd, commanding the 1/3rd Queen Alexandra's Own Gurkha Rifles at Almora, very kindly lent the services of Havildar Nain Singh and Rifleman Birta Singh, commonly called 'Form Fours' on account of his propensity when a recruit for drilling himself when off duty. These men were of the greatest value.

The weather during May was most unpropitious, and we did not get away till the 19th, when reports of deep snow in the Pindar valley decided us to postpone an intended renewal of the attack on Traill's pass, and to make straight for Milam, where we arrived on the 30th. Plans discussed *en route* had crystallised into a resolve to explore an unnamed glacier, called Timphu by the Milamwals, which runs parallel to and between the Panchu and Shakram glaciers, W. of Milam. We hoped that by this route it might be possible to reach a point on the rim of the great 'saucer' in which Nanda Devi stands, and to see down into the glacier which abuts against the N. face.

On the 31st, taking the Sherpas and Gurkhas and a few coolies, we started up the left bank of the Milam valley, crossed the snout of the Milam glacier, and doubled back along the right bank to the gorge up which we had to go. A scramble up a steep grass slope to a height of 13,000 ft. led to a convenient camping ground, and as snow and sleet now began to fall we sent back the coolies and settled down for the night.

Next morning, in better weather, but all heavily laden, we walked up the narrow snow-filled gorge for a distance of about two miles, after which we got on to moraine and spent several hours on its interminable and exceedingly narrow crest, till a height of 15,300 ft. had been reached and the only possible site for a camp had been found. The hot sun and our heavy packs produced a highly decorous rate of progress, to say nothing of severe headaches all round, and I was glad that my wife had remained at Milam with Mrs. Somervell.

The glacier is shown with very fair accuracy on the map. It has two ice-falls, one just short of the steep glacier coming in from the N., the other about a mile farther up, after which the glacier abuts against the precipices falling from the great ridge which descends from E. Nanda Devi. The ridge itself looks unclimbable till it turns to the N., to continue the rim of the 'saucer'; here a way might be found. Our plan was to turn the first ice-fall and attempt a peak about 21,000 ft. high above the true right bank of the N. glacier, from which a view of the N. face of Nanda Devi might be obtained.

Next morning we took the Gurkhas and walked up the easily inclined and uncrevassed glacier to the foot of the first ice-fall. At first we thought of crossing here to the left bank and climbing some fairly steep rocks which would have landed us on the left bank of the N. glacier, and apparently within easy reach of our peak. But the rocks looked very rotten, and 'Form Fours' in climbing boots is a danger not to be despised, so we preferred an easy slope of snow which appeared to turn the ice-fall on the right bank of the main glacier. The snow was in good condition and we mounted rapidly; but our optimism was premature, and before the ice-fall was finally turned we had spent the best part of three hours entangled among crevasses, merrily bombarded the while by stones from the wall of rock on our left. We then found that the upper glacier was much crevassed, and that it would take the rest of the day to reach even the foot of our peak; and our tents and supplies were on the moraine below. The order was therefore given for retreat, and we were back in camp by sundown, the descent being complicated by 'Form Fours's' preference for the seat of his trousers to his boots as a means of support in steps. We had only reached a height of 17,100 ft.; but it was clear that further exploration here would be well worth while, and that the rim of the 'saucer' is attainable. At least two camps would be necessary.

Somervell's short leave was now drawing to a close; but there was still time for one more effort. There is an attractive looking peak, locally called the 'Qualganga ka pahar.' It lies $5\frac{1}{2}$ miles from Milam, bearing 50 degrees N.E. It is triangulated, but the height is not marked on the map. The mean of several observations from Milam with an Abney level gave a height of 20,200 ft. Two purposes might be served by its ascent: firstly, we might get a good view of the N. face of Nanda Devi; and, secondly, we might be able to see over into Tibet and trace out an improvement on the Untadhura pass, which is a great trial to the Johar Bhotias and their sheep in bad weather.

We all left Milam on June 5, and camped just beyond Sam-gong, at 12,100 ft., under the W. face of our mountain. Next morning, in beautiful weather, we crossed the river by a snow bridge, after which a convenient snow-filled gully afforded an easy ascent for several hundred feet. Our objective was a ridge falling to the S.W.; but to reach this we had to struggle for hours up very steep scree, and it was 2 P.M. before we succeeded. The ridge consists mostly of loose rock and rotten gendarmes, not difficult but excessively laborious. At 15,600 ft. we found a spot which could be made to accommodate a Whymper tent, two Meades, and a light bivouac. The coolies were sent back on their way rejoicing, the Sherpas and Gurkhas being retained for next day's work. Nanda Devi, some fourteen miles away, was a magnificent sight; and though clouds made accurate observation difficult we could see the two great N. ridges, running respectively from the main and E. peaks. Neither looks at all climbable.

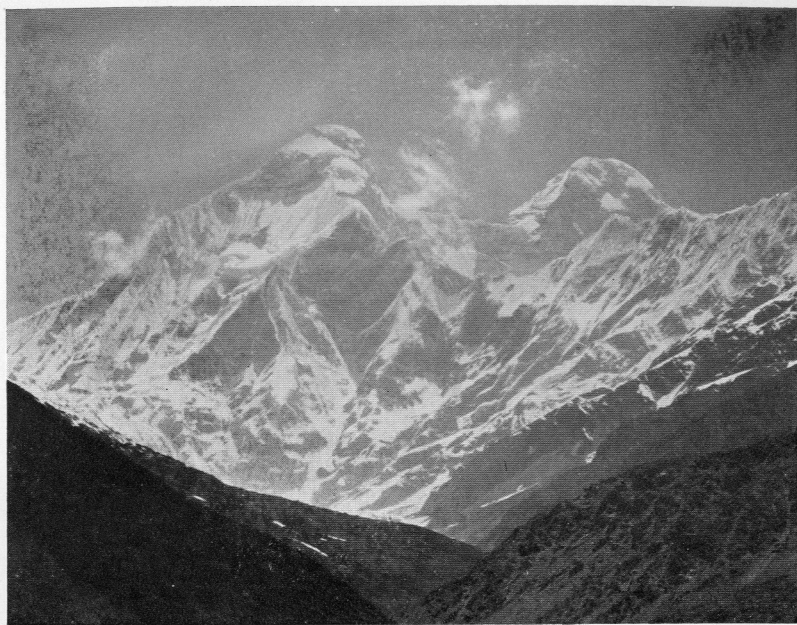
The next day's work began with some hard slogging up a very steep snow slope, of a curious ridged formation but beautifully stable. After this the ridge was regained, and we toiled up its loose crest and round or over its detestable gendarmes till evening found us at 17,600 ft. The ridge then steepened considerably, and a reconnaissance showed that apparently there was no suitable place farther on for a camp. So we had to be content with a little platform just sufficient to hold two Meade tents. The Sherpas and Gurkhas were sent down on the rope to Camp I, with orders to return next day; and after making all snug and setting the Meta to work, we had leisure to enjoy the really magnificent scenery.³ From this height Nanda

³ 'It was a glorious situation, finer than the similar platform Norton and I had built in 1924 nearly 10,000 ft. higher, because the mountains around, although smaller than Everest's satellites, were so much more fantastic and of such terrific slope; moreover, our old and ever more beautiful friend Nanda Devi was beginning to reveal herself and her N.E. face—the sight we had come to see and one which had never before been revealed to man. And a magnificent sight it was—8000 ft. of the steepest precipice two miles long, with a northerly spur of the mountain, of which we had only suspected the existence, carved into the most beautiful flutings by countless avalanches aided by the fierce Himalayan sun. . . . We had come, we had seen, even if we had not conquered—but above all we had seen, and the sight of that N.E. face of Nanda Devi was one I shall never forget; perhaps it is the finest mountain view in the world. But oh, for a "close-up" of it.' [Extracts from Mr. Somervell's notes.—EDITOR.]

Devi could be seen in her true proportions, and there could be no question of her sovereignty, even in that Court of giants. I doubt if an ascent is possible on this side ; both the N. ridges appear to spring from faces of the most appalling steepness, up which even the eye of faith, with due allowance for foreshortening, could trace no way. The W. ridge, which leads to the main peak, was somewhat veiled in mist and cloud, but it held out no hopes. There must be few great peaks in the world guarded by such terrific defences. To the S.W. Nanda Kot⁴ lifted her glittering axe-edge to the sky ; S. were the peaks of the Bambadhura and Panch Chulha ranges, overlooking a vast cirque of fluted design ; and our N. horizon was the massif which forms the left flank of the Milam glacier, curving round towards the Untadhura pass, beyond which we could see certain black striated summits, standing guard over the Tibetan frontier. Close by, where the moraines point the way to the Untadhura, rose a peak of highly futuristic aspect. Opinions differed as to its claims to beauty, but we agreed to call it the 'dream mountain.'

The night was cold, and boots *will* freeze at these altitudes, even when kept inside a tent ; so next morning's start was a joyless affair. We roped at once, for there was a good deal of ice on the steep rocks immediately above us. These surmounted, the sun came to our aid and we were able to tackle with fair enthusiasm the long series of gendarmes which now rose in front. We had to keep more or less to the ridge, as the mountain here falls away on both sides with some abruptness. The rock was deplorably infirm ; this made an admirable excuse for slow motion ; but all things come to an end, and eventually at 2 P.M. our buttress merged in the final summit ridge, and we were on snow. The aneroid showed 19,600 ft., and the experts estimated that we were not more than 600 ft. below the top. Beyond, to the right, rose a blunt snow ridge, of easy gradient, but heavily corniced on the N. side. Half-way up some step-cutting would probably be required ; yet it was clear that most of our difficulties were behind us. However, the condition of

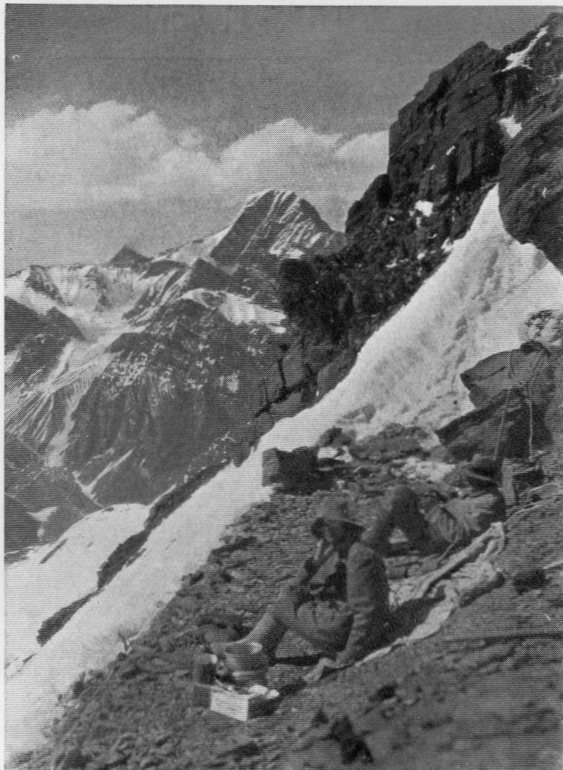
⁴ 'A wonderful view of the splendid snowy N. face of Nanda Kot filled us with admiration for Longstaff's attempt on it in 1905 ; Longstaff turned back 1000 ft. from the top [*A.J.* 23, 211] owing to the danger of avalanches, and it certainly seemed to us that the whole mountain was in danger of slipping down in snowy crashes at a much lower level than the place where Longstaff turned. But perhaps my experiences on Everest in 1922 have left me rather suspicious of snow in the Himalayas. . . .' [Mr. Somervell's notes.]



NANDA DEVI
from N.E., looking up Panchu Valley
(left 24,378 ft., right 25,660 ft.)



QUALGANGA KA PAHAR, 20,200ft.
from Milam.



Camp at 17,600 ft. on
QUALGANGA KA PAHAR.
"Dream Mountain" in background.
(Mrs. Rutledge and Somervell.)



ON QUALGANGA KA PAHAR.
View North from 17,600 ft.

the party was not too good, and we had to be back at Camp I before night; the order was wisely given for retreat. All went well on the descent; the ice above the high camp was treated with due respect, and, rejoining our faithful porters there, we got down to Camp I at sunset, and to Base Camp next day, where Somervell just got over the snow-bridge before it fell in. 'Qualganga ka pahar' was undefeated; but it had treated us well, had dropped nothing hard and heavy of its abundant store on our heads, and had given us some glorious views.

The first stage of our journey was now completed; the time had come to move towards Tibet. We travelled down to Martoli again, and there regretfully bid good-bye to the Somervells,⁵ whose holiday was over. Though suffering from an attack of jaundice, he refused to give in, and declared his ability to get back to Almora under his own steam. It must have been a trying journey. The rest of us crossed over to Ralam, and had an interesting climb over the pass of that name into the Darma valley. This has been fully described by Colonel Wilson.⁶

CLIMBING THE KASHMIR MATTERHORN.

By C. R. COOKE.

FROM the valley of Kashmir the nearest and the most prominent peaks of the great Himalayan range are those of the Kolahoi group, and seen from Gulmarg they present a fine spectacle of two sharp rocky pinnacles rising 3000 ft. above the Great Icefield between them; they are surrounded on all sides by glaciers coming down from the bases of the two peaks, fed from avalanches descending from steep snow slopes and corniches above.

The northernmost peak is that of Kolahoi itself, and rises to a height of 17,799 ft. above the level of the sea; to the S. soar what have been termed the Twin Peaks, a height of 16,764 ft., their native name is Bur Dalau. The Twin Peaks

⁵ 'We did but little climbing, we attained no summit, but we had and shall always have as a memory, a real friendship with one of the most glorious parts of this best of all possible worlds.' [Mr. Somervell's notes.]

⁶ In a very interesting report which it is hoped to publish later.—
EDITOR.