

GARHWAL 1939: THE SWISS EXPEDITION

BY ANDRÉ ROCH

[We are greatly indebted to M. André Roch for sending us this most interesting article, and to Colonel E. L. Strutt for his kindness in translating it.—EDITOR.]

MAKING plans for an Alpine expedition is great fun, but doing the same for a trip to the Himalaya is far greater. For over there are so many unexplored valleys and passes as well as unclimbed peaks. Garhwal was selected as being easy of access, reducing consequently the costs of transport and making organisation comparatively simple.

Our original scheme envisaged three successive campaigns. The first, before the monsoon, comprised a visit to the Rhamani Glacier with the ascent of Dunagiri as main object. During the monsoon we hoped to explore the Kosa Glacier, and whenever weather and conditions allowed, climb any peaks that appeared possible. The third campaign during the fine weather in September was to include ascents in the Bagini Glacier cirque.

Except for the third part, the programme was carried out according to plan. The fleeting glimpses obtained of the Bagini cirque were so repellent that we changed our plans en route and decided on an attempt on Chaukhamba (Badrinath Peak), 23,420 ft.

At the beginning of the tour we felt certain misgivings concerning an attempt on Dunagiri, because this mountain had been the objective of several British expeditions. Shipton in particular having reached the watershed ridge, the exploration was accordingly complete, and our possible success was but a kind of crowning of our predecessors' efforts.¹

There exists an unwritten law of honour in the Himalaya causing certain mountains to be reserved for certain countries. The reasons are as follows: when a country has sent several expeditions to a certain peak, its exponents have explored the said peak, and also published

¹ Dunagiri was attempted in 1883 by W. W. Graham with Emil Boss. Graham estimates the height attained as 22,700 ft. (*A.J.* 12. 40-2). In the period 1905-7 the mountain's approaches were studied by Longstaff's parties. In 1933 Oliver and Campbell attempted an ascent from the W. (*H.J.* vi. 91 *sqq.*). In 1936 came Shipton's and Angtharkay's attempt; they estimated the return as having taken place at about 1000 ft. below the summit (*A.J.* 49. 27 *sqq.*; *H.J.* ix. 74 *sqq.*). The mountain was next tried by Smythe and Oliver in 1937 (*A.J.* 50. 60 *sqq.*). The route taken by the Swiss party of 1939 coincides with that attempted by Shipton's and Smythe's parties. See in particular the fine illustrations of the mountain in *A.J.* 49 and 50. In general see the plane-table survey, *A.J.* 24, facing p. 132. The whole of the district described by the Swiss expedition is now under publication by the Survey of India on $\frac{1}{2}$ -inch scale.—*Editor.*



Photo, Swiss Climbing Party, 1939 ; A. Roch.]

W. RIDGE OF DUNAGIRI.

[To face p. 34.



Photo, Swiss Climbing Party, 1939; Fritz Steuri.]

NANDA DEVI, FROM W. RIDGE OF DUNAGIRI.

accounts and photographs for the benefit of others of their experiences, good or bad, and also of the possibilities of the means of access. Once the mountain has been well explored and a route discovered, a strange expedition completing the ascent would benefit in undeserved fashion from the manifold experiences of others. This was the case in our attempt on Dunagiri, and I would add that British parties, who had explored completely this superb mountain and had several times attempted the ascent, placed at our disposal with the greatest kindness all possible documents and information dealing with the matter.

Our expedition consisted of Ernst Huber as topographer and the two guides, Fritz Steuri of Grindelwald and David Zogg of Arosa, with myself as leader. Huber's task was a photogrammetrical survey of the Kosa Glacier, working quite independently of the remainder of the party. Our equipment took but a fortnight. In the provision line we brought out from Switzerland Maggi soups and Ovomaltine, dried meat and bacon from Grisons. The rest—butter, jam, sugar, flour, tea, etc.—was to be purchased at Bombay and in the mountains.

In India we met with a warm reception both from the customs and from the railways. Major Osmaston of the Survey of India gave us all available documents and much wise advice. At Ranikhet, Mrs. Browne welcomed us in charming fashion and organised our departure most admirably.

On June 3 we left Ranikhet with six Sherpas : Nima II, Nima VI, Nuri, Gombu, Tillye, with Angdawa as *sardar*, and forty-three Dotial porters. Lata was attained in ten stages by the Kuari Pass route, rain falling nearly every day. As luck would have it, however, we obtained a magnificent view from the pass itself. As far as this spot we travelled with two young British officers who were spending their leave in mountain explorations, Messrs. Hammond and Whyte. The latter, in particular, rendered us the greatest service en route.

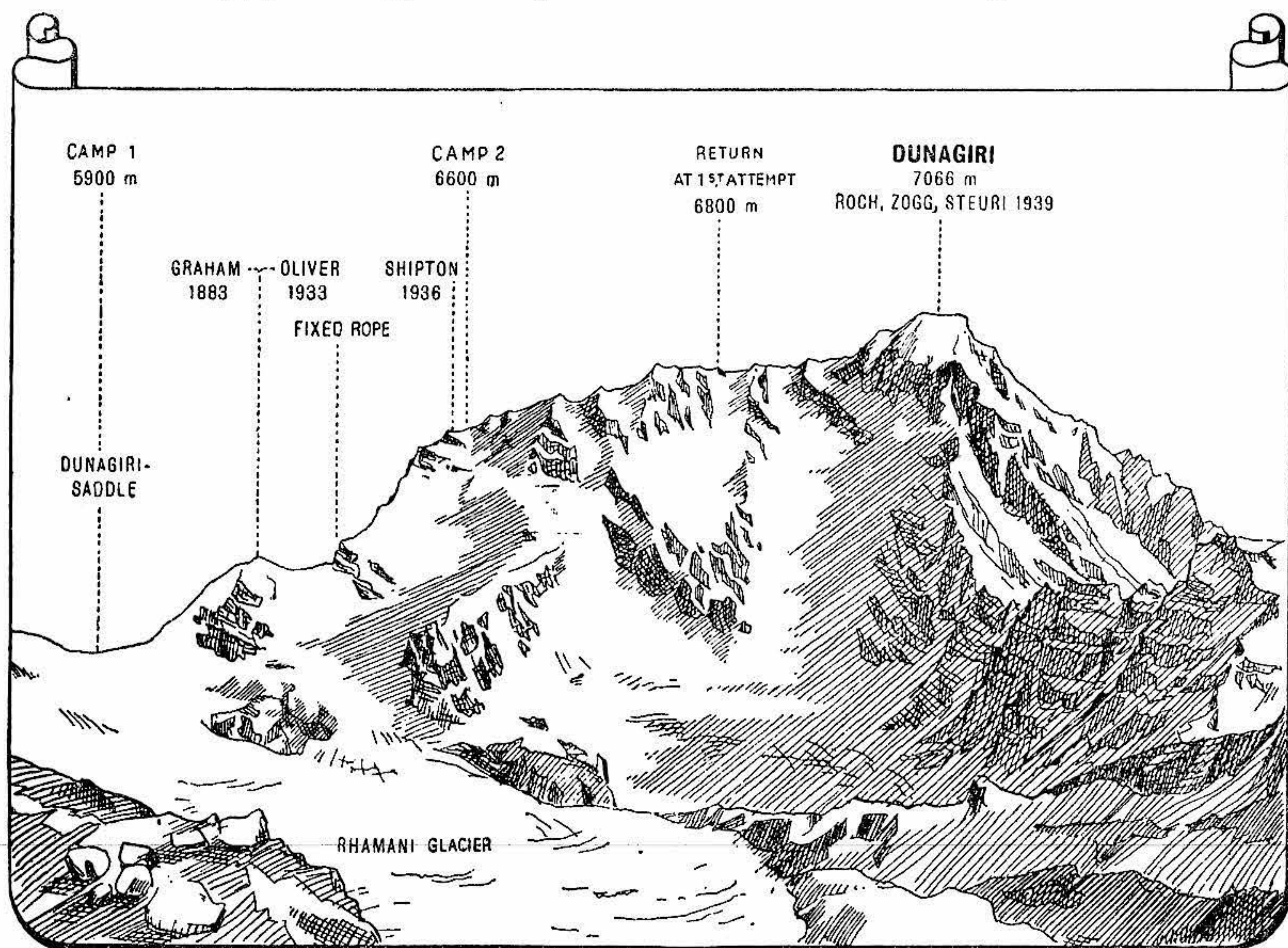
The Attempt on Dunagiri

Our advance guard, after a hazardous approach of five days, attained a little green oasis on the brink of the Rhamani Glacier at a height of 16,500 ft. The savage landscape and the bold track, sometimes overhanging the Rishi gorge for thousands of feet, caused us to wonder. We determined to establish our base in the last meadow whence we might attempt the ascent of Dunagiri. Ten porters had carried up loads of wood, unobtainable at this height. On the following day, June 20, we sent down numerous letters and reports, which the *dak-wallah*, the local postman engaged for this purpose, was to take down. He would take five days along the precipitous path to attain Joshimath, whence the letters were carried for three or four days on ponies, then by car, rail and aeroplane were transmitted to Europe.

On June 21 we prepared our start from the base to a fresh camp at 19,500 ft. in a depression on the S.W. arête of Dunagiri. At 10 A.M. all was ready and a start was made ; our six Sherpas were so laden that

we were doubtful as to when they could reach the depression. Towards the N.E. the bold Changabang rose up like a yellowish obelisk speckled with ice and snow. Following the moraines we rose sharply, while little by little Changabang vanished behind nearer ridges. The foot of the depression was gained rapidly, but the last snow slope seemed terrifyingly long. It soon assumed 'Himalayan' proportions. At last towards 4 P.M. we attained the depression, suffering much from altitude, but the Sherpas, despite their loads, were able to mount with surprising speed. Camp was pitched just below the crest in a small and sheltered recess. At this height, 19,500 ft., we slept very badly, and the next day being very cloudy remained lying down with painful headaches.

On Friday, June 23, the sky was clear in the morning and all summits



glinting. Before early breakfast we went up to the depression, only some 160 ft. above the camp. The view was magnificent, and we took some photographs. While my companions were hurrying down breakfastwards, I took a last glance over the Dibruggheta slope plunging down in a great precipice. While stamping on the slope, I broke through the snow cover of a concealed crevasse and before I could tell what was up, fell head foremost into the great cleft. Almost simultaneously I was brought up abruptly and my first thought was 'Is it already over?' What luck! I had been caught by the upper story of a snow bridge which did not entirely span the crevasse, some 9 ft. in width. My topee had vanished out of sight, but I was still holding my camera. I began carefully to brush myself so as to avoid being cold, the transition from sun to shade being very sudden. I understood then that a mountaineer's life is always precarious; a few minutes

earlier I had been gazing at one of the most glorious of Himalayan panoramas, and then suddenly found myself in the most wretched of plights. I studied my watch to see what time would elapse before my companions should miss me. Through the hole I had made I could see the sky, and glazed ice-walls surrounding me. I was able to stamp my feet gently on my little shelf in order to warm them. I kept calling out every 10 seconds and at last, after 20 minutes which appeared interminable, I heard footsteps. I shouted 'Aufpassen,' but it was a Sherpa so I said 'Achchha' in Hindustani—meaning 'all right'—and off he went to fetch the others. Five minutes passed quickly this time as I knew I was saved, and Steuri threw me a rope. Sending up my camera first, I was soon hoisted like a feather well smothered in the dislodged snow. As soon as I came out into the sun, the Sherpas began brushing me carefully, noticing that my left eyebrow was split open without my having been aware of it. We all descended towards breakfast while I imparted my gloomy feelings to the others.

During the afternoon we went up in several parties to the true ridge of Dunagiri. The latter's first step is a sort of wall of about 160 ft. We wished to fix a rope over this to facilitate the ascent. Zogg rejoined us and fastened on a long rope of 100 ft., all of which he ran out; thereupon he attached another of 65 ft. After a risky performance he attained the top and fixed the rope to a rock. Having completed the work, we descended by the often sharp crest to the depression.

On Saturday, June 24, at 2.30 A.M., Nima II, our Sherpa cook, began working the Primus preparing Ovomaltine and porridge. At 3 A.M. he remorselessly woke us up, so that an hour later in bitter cold we were trudging along the ridge leading to the first step. Two Sherpas accompanied us to carry our sacks to the foot of the fixed rope. As snow had fallen in the night, the said rope proved very useful. Above, the slope was steep and seamed with rocks breaking through; each step was a great effort, but we gained height rapidly. After more rocks we attacked an endless and very steep snow slope, where step-cutting owing to underlying ice proved necessary. Very slowly, and after much toil, we at length gained the last rocks below the arête. These proved steep, loose and snowy, making the climb unpleasant. At 11 A.M. we attained the top of the buttress, the point of junction with the snowy ridge leading gently towards the summit. Halting, we attempted in vain to eat, but drank tea from the Thermos. We then continued along the watershed which appeared easy from below, but was in fact sharp, covered with powdery incoherent snow and corniced on both slopes. Gingerly balancing along it, progress was slow. In places we had to be careful with the cornice, in others masses of loose snow showed signs of avalanching, while foothold was almost negligible. Sometimes we progressed on our knees, at other times we had to go astride over crumbling masses. All this part was exceedingly exposed, slopes of more than 4000 ft. plunged downwards on both sides to the glaciers. Where the angle increased snow was

so deep that we could hardly struggle upwards. Fog covered up everything to such a point that, on attaining a gendarme, Steuri shook hands with me imagining that we were on the summit. After some further 'steps,' we attained a notch. It was 2 P.M. and we were all exhausted; Zogg was in favour of turning back, so was Steuri. I wished to continue as the top appeared so near. This, however, we did not dare as we could not risk a bivouac at such a height without special kit. Accordingly we turned back, descending pretty fast in our old steps on the ridge, while exertion was far less. Still we suffered badly from altitude, as the descent of the buttress proved unpleasant from the continuous care it required. Owing to our inability to eat, every movement of the abdominal muscles gave us agonising qualms. Snow and wind came on, while the fixed rope was damp and painful to handle. Two Sherpas came to meet us carrying warm Ovosport. Steuri on tasting vomited at once, but I with care was able to keep it down. Our faithful Sherpas took our sacks and we descended to camp.

Steuri had been unable to eat anything for several days and was in very bad fettle to undergo such exertion. I was in a still worse state after my fall into the crevasse; I must have had slight concussion because I suffered from violent headaches for several days. Zogg was in the best condition, but was suffering also from mountain-sickness and headache.

Next day weather was cloudy and snow fell; we remained lying down all day. The monsoon being on us, we descended on the following day, June 26, to the 16,400 ft. base, to rest and await another opportunity of renewing the assault.

Ascent of Dunagiri, 23,184 ft.

After a week's rest at the Base Camp on a moraine of the Rhamani Glacier, we started on Monday, July 3, about 10.30 A.M. for the camp in the depression. The weather seemed good, and we hoped to be in for a fine spell. On the last slope, instead of turning to the right as before, we mounted straight up to the left of the rocky spur where the slope was steeper but more direct. In the camp we found all the kit and provisions intact, just as we had left them. Tents were pitched and all the necessaries prepared for the morrow. Zero hour was fixed for 6 A.M., but after breakfast Steuri, who had slept badly, thought the hour too early and wished to await the sun; accordingly we got off at 7.30 A.M. Three of the Sherpas carried our very heavy kits, including sleeping-bags and tent, because we were prepared to bivouac on the top of the buttress. Having attained its base and the fixed rope, the kits were handed over and the climb began. We took $1\frac{1}{2}$ hours to climb the lowest 160 ft., and it was not till 4 P.M. that we attained the last rocks, having cut up the endless snow slope throughout. We had taken $10\frac{1}{2}$ hours to reach the top of the buttress where the tent was to be pitched.

The weather was clear, although much cloud was being wafted about the valleys. To pitch the tent we had to dig into the snow arête and fill up with the accumulated débris a crevasse separating the snow from a horizontal rock. Besides the axes, we possessed a 'Bernina' aluminium shovel and we worked as hard as possible. Often we had to sit down to recover breath or from violent nausea after too strenuous an effort. Towards 6 P.M. everything was ready and we retired all three into the tent, to which we had fixed an interior double fly as protection against the cold. It was a tight squeeze and we sat one in the middle and two on each side, with the Meta heater between us. Cooking at this height took a long time ; icicles were melted one by one and, little by little, we prepared Maggi soup and Ovosport. The imposing summits of Trisul, Nanda Devi, Changabang and Kalanka stood forth in the darkness, while light cloud drifted about the glens. Outside the tent the cold was bitter, but we suffered more from lack of space for sleeping than from chill.

On July 5 I started the heater at 3 A.M. and filled two Thermos flasks with soup. Later we breakfasted off biscuits, jam and Ovosport. At 5 A.M. we commenced dressing, putting on wind-proof trousers, gaiters, boots and crampons ; all this required time and skill in such a reduced space. Finally, we got off at 6 A.M., Zogg at first in the lead, but as he did not feel well, Steuri soon replaced him. I had caught a chill and devastating cough. In spite of some snowfall, our former tracks along the arête had consolidated and facilitated progress. In $2\frac{1}{2}$ hours we attained the spot where we had turned back, having gained $1\frac{1}{2}$ hours on our former time. Henceforward the ridge became more difficult, several gendarmes were encountered, while a long and very sharp crest, corniced on both sides, was especially unpleasant. We arrived at the last part where the ridge steepens in two steps towards the summit. We turned a crèvasse by the left, regaining the steep crest where the snow was good and firm. For the last bit, Steuri stood aside to let me pass in front. There came one abrupt step, then the ridge eased off and we attained the summit at 12 noon.

The view was strange ; to the N.E. the Bagini Glacier cirque appeared very savage, to the E. and S.E. behind magnificent Nanda Devi we could see great mountains in Nepal, the tops breaking through clouds. To the S. lay the imposing Trisul, while Nanda Ghunti and Nandakhna appeared quite small. To the W. above the green valleys were Hathi Parbat, with the Badrinath Peak further off, the Satopanth Peak and Gangotri mountains. To the N.W. Kamet asserted its superiority, while the valleys in this direction showed more and more signs of desiccation. Between layers of cloud we could see the high Tibetan plateaux, barren and luminous. In the middle rose more snowy peaks among which must lie Kailas.

We stayed but a short time on the top, took some photographs and started down. The descent was less trying than the ascent, but we were exhausted and often had to sit down for long breathing intervals. The ridge was so precipitous on both sides that we were obliged to

take the greatest care. Once Steuri, taking the rope in both hands to secure my descent, thrust his axe into a cornice. Hardly had he let go of it, when the cornice went and away vanished the axe for ever. On attaining the tent we made a prolonged halt to boil tea and Ovosport as well as eat something. While Steuri slept on a rock, Zogg and I consumed a tin of liver which was excellent if rather ponderous at such a height.

After a 2-hours' halt, during which we folded the tent and packed our sacks, now again very heavy, we embarked on the descent of the buttress at 4.30 P.M. To save time, Steuri, in the lead and using the 'Bernina' shovel instead of the lost axe, struck straight down the snow, avoiding the rocks. All went well for 60 ft., then he suddenly came on bare ice where he could no longer move for fear of a slip. As the shovel was useless for cutting, I passed down my axe secured to the rope. He had to cut to the left for some 30 ft. to regain the good steps made in the ascent. This performance was exhausting, but little by little we regained our steps to forsake them no more to the bottom. On the middle rocks the snow was melting; Steuri, stamping on his crampons, slipped, but the place was not dangerous and he stopped himself in a few yards. We at last got down to the fixed rope; the Sherpas who had seen our descent had come to the foot of the rope carrying full Thermos flasks. We doubled the rope through the ring and in two *rappels* rejoined the Sherpas who were holding out drinking-cups full of warm refreshment.

The evening was magnificent, the setting sun lit up a series of clouds dispersing by degrees towards the Badrinath range. The summits reflected the last rays, the slender snow ridge leading to the camp was bluish-black on the shady side, while the sunny slope was all aglow. It was like a wonderful dream come to life.

Zogg was better, but I had a terrible cough. On the following morning a horrid cloud-cap clung to the summit of Dunagiri. In blazing heat we sounded the snow around the camp and packed the kits in readiness definitely to abandon this depression of good and unpleasant memory. The Sherpas were very heavily laden, two lost their footing on the steep slope and away went their packs. I reached Gombu just in time to catch his load about to join the others. Nima II was there also but had not slipped; we then began to slide the packs down on a rope. Some 150 ft. lower down, Nima got out of his harness and clumsily let go his pack. It began to slide and then turned over and over at a fearful pace. As luck would have it, just above the tail of the slope, the pack lodged on a ledge and stuck. The wood burst and all the contents were scattered like fireworks. Those of us who had reached the base sat about recovering the scattered food. The Dutch cheese had done an extra bit on its own. During this time I slid Gombu's load down on the rope. The porridge and salt were distributed over the slope, but the Sherpas, fortunately, were not damaged by the fall. The loads were redistributed and the descent to the base called forth no fresh incidents beyond a lowering

sky, and, in thick snow, we regained the pleasant meadow where lay our Base Camp.

We had to wait nine days until the porters ordered for July 15 could come and fetch the kits. We rested ourselves well and I used the opportunity of taking a solitary walk round the formidable walls of Changabang. I tried the ascent of a 20,200 ft. point to the E. of the former. Choosing the S. arête, I rose as rapidly as breath would permit and found traces of a camp. The ridge quickly steepened and the climb soon attained a nearly severe level. I was stopped by a granite pinnacle which had to be turned on the right by an ice slope. I had no crampons and it was late ; in any case I had no time to reach the summit. I was content therefore with a few photographs of the formidable Kalanka-Changabang group, of which I could now see the terrific N. slope.

The *dakwallah* brought us news that on July 2, three days before our successful assault on Dunagiri, the Poles had climbed Nanda Devi East, 24,391 ft. They, like ourselves, had benefited by the same fine weather. The *dakwallah* brought us also a sheep which we cut up in fine weather. As if in contempt of their luckless tame relative, a dozen wild goats grazed peaceably within 300 yards of our camp—luckily for them we had no weapon. The porters arrived most punctually on July 15, and we returned valleywards, delighted to find again marvellously rich vegetation grown up in the last few weeks.

Kosa Glacier and the route towards Gauri Parbat, 22,027 ft.

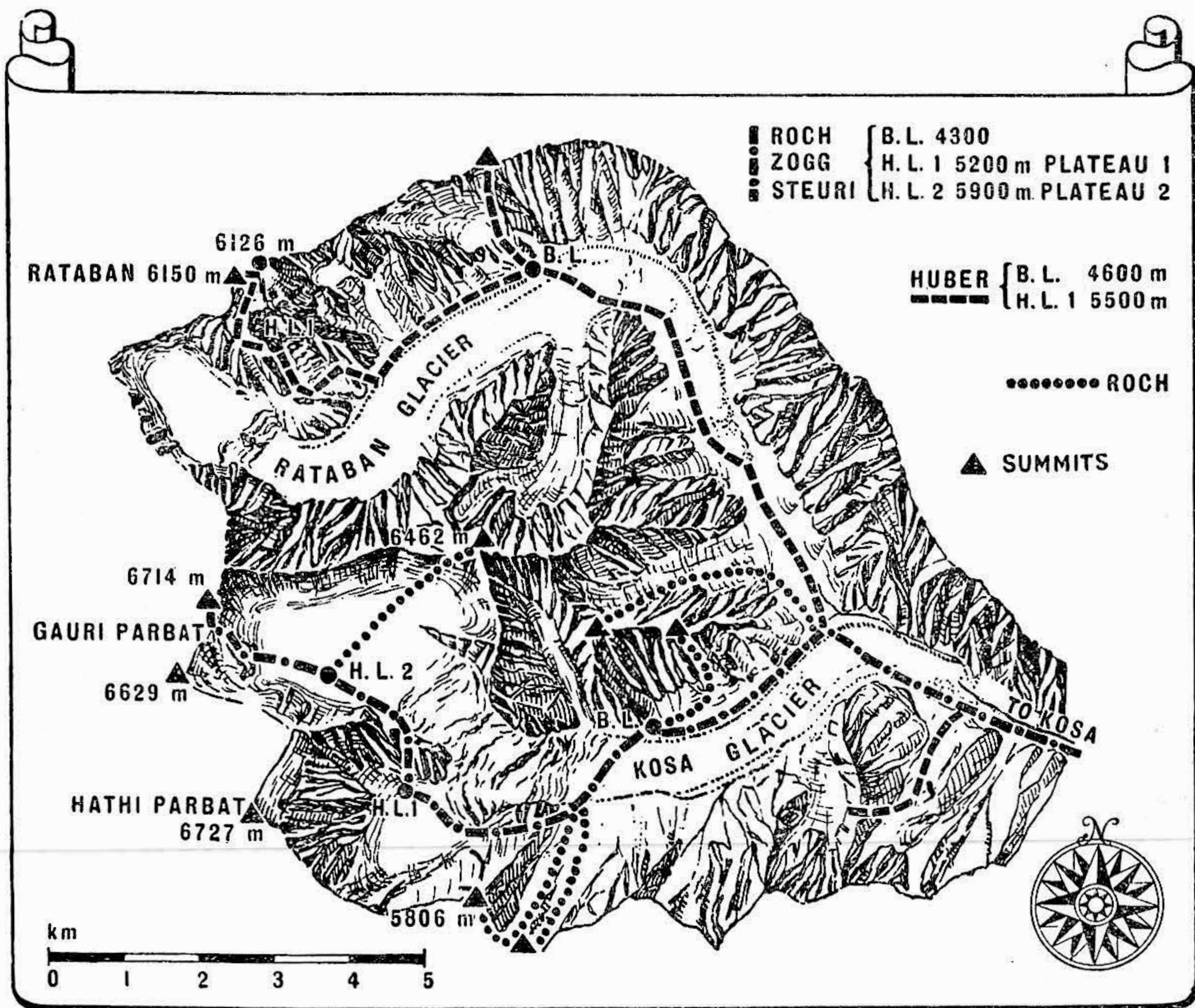
After a quiet rest of six days at Joshimath during which we lived like potentates on a holiday, we started off to explore the upper Kosa Glacier and to ascertain whether it was possible to climb one or other of the region's higher peaks. These are Hathi Parbat, the 'Elephant' peak, 22,070 ft., and Gauri Parbat, or 'Horse' peak, 22,027 ft.²

Following three long marches, we attained the picturesque village of Kosa. Here the natives complained that Mr. Gabar Singh, our liaison officer, had given his own porters to Huber instead of locals. To right matters we wished to engage a dozen, but on the following day, at the start, these flatly refused to follow us, causing much annoyance to Gabar Singh. The difficulty was finally settled by arranging to have the atta and rations for porters and Sherpas transported by a goat convoy, following one day later. We benefited by this means by a reduction of at least one-third of the cost.

On the morning of July 30 we left the village of Kosa and ascended beside the stream flowing from that glacier. The glen was wild and enclosed, and we soon reached the glacier which was mounted by its stony and rubble-strewn tongue. Our plans were to establish the Base Camp at the foot of the great icefall. This latter plunges suddenly down-

² For remarks as to the possibilities of ascending the two peaks, see *A.J.* 50. 63.

wards in an indescribably torn mass of ice for nearly 5000 ft. Hereabouts the coolies played a trick of their own on us. Not knowing the glacier we were ignorant as to which bank of the snout we should mount. The porters stopped before crossing over, and at the extreme end of the said snout. The weather was dull on the following day, and after a late start we traversed N. across the glacier over moraine and rocks to attain a large goat-grazing alp on the far side. Mounting the left bank we soon reached a fascinating plain covered with flowers and great boulders where we halted. In the afternoon we mounted the length of the glacier to discover a spot to establish our base. After



but half an hour's climb, we found a new position, the last place where wood could be obtained. Some of the coolies knew perfectly well of the existence of this place, but none would say except a very young Kosa boy who wanted to lead us there direct. The others laughed at him and refused to go further. The result of all this was that we took three days accomplishing what could easily be done in one. Soon after settling down in the base, the goat convoy arrived with the atta and rations. The place was most fascinating, being at the foot of a series of granitic Aiguilles and on the left bank of the glacier. This latter is framed to the S. by a series of crumbling and serrated peaks of wildest form. To the W. lie the terrible séracs dominated by the summits of Gauri and Hathi Parbat; the glacier forms two terraces, the first



Photo, Swiss Climbing Party, 1939 ; Fritz Steuri.]

WAY FROM BASE CAMP TO CAMP I ON UPPER KOSA GLACIER.

Left : Pk. 19,050 ft., climbed by André Roch with Gombu.

Right : Hathi Parbat.

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| Fixed Ropes.
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Photo, Swiss Climbing Party, 1939 ; A. Roch.]

WAY FROM CAMP I TO CAMP 2 ON UPPER KOSA GLACIER.

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at about 16,000 ft., the second and upper at about 19,000 ft. The icefall itself is quite impossible, and we had to find, to the N. or S., access to the upper regions. The natives call this icefall 'Barpur bandar,' or inexhaustible source.

An old Kosa shikari or guide offered to show us the way to the upper terrace, stating that it could be reached via the Aiguilles immediately N. of the camp. These are five in number; for simplicity I will number them '1' to '5' starting from the W. Their height varies between 16,000 and 18,000 ft. On August 2, with our old shikari, we scaled with many détours Aiguille '4,' from the summit of which we could see a plateau, access to which seemed somewhat problematical. In the descent we tried a variant along awkward slabs, and I was obliged to take off my nailed boots and go barefooted to stay on the smooth rock. I was astounded at the way the old hunter climbed: he moved like a chamois in places where I dared not follow, then held out his hand to help me.

Two days later I started again with the Sherpas, Tillye, Gombu and Gabar Singh's personal porter, Baly, an excellent climber. We turned the group of Aiguilles by the N.E. Roped, we cut up some bare ice couloirs and scrambled up several exposed walls before attaining the top of Aiguille '2.' From the summit we saw the camp 3300 ft. below and heard two shots. The Sherpas prayed for a weather clearing and, at last, in an opening of the fog we were able to see that the supposed route was quite impossible for laden porters. On our return we found fresh meat, Zogg having killed two bharal which were excellent eating.

I now directed the reconnoitring to the northern chain of the glacier. On August 6, with the Sherpa Angdawa, I climbed a little peak to the S.E. of Point 19,050 ft. The summit boulder afforded a short and interesting scramble. The view on to the Juma cirque was magnificent, the shapes of the peaks are fantastic. We found quite a crop of small quartz crystals which we collected. From our top we could make out a snowy couloir connecting the lower and upper Kosa glacier terraces. The said couloir merges almost in the top of the icefall, and I thought that the upper terrace was accessible without too much trouble; at all events, this route appears to be the only possible one.

Two days later, with the Sherpa Gombu, I also climbed Point 19,050 ft.—a splendid mountain. The summit appears to be the highest of the chain separating the Juma basin from that of Kosa. We erected an enormous cairn. On the same day Steuri and Zogg, with the Sherpa Tillye, explored the access to the first terrace. They avoided a wall of rock by means of the glacier, fixing a rope on the said wall for their return.

Back in camp we found Huber who, with the Sherpa Nima VI and Mourcoulia of Lata, had made the ascent of Rataban,³ 20,100 ft., on August 8, by the S.W. slope. The postman brought us the news of

³ A. J. 50. 62.

the accident to the Poles ; one of their tents and all of its occupants had been swept away above the Milam Glacier.

On August 11 we at last got off. We started with five Sherpas and five of Gabar Singh's Dotials to pitch the first ' terrace ' camp. At the fixed rope the men had to be secured and the loads drawn up by ropes. This awkward work required two good hours, but everything went off well. Higher up we had to scale a low wall of some 30 ft. ; here again a rope was fixed, and some of the heavy loads hauled up. We easily traversed some slabs dripping with melted snow, next we crossed the glacier. This latter was very crevassed, and one porter nearly vanished through a snow bridge. Fortunately Steuri was at hand and got man and load out without difficulty. On the moraine on the farther side we left Zogg, Steuri and Nima II with their loads. They were to pitch the First Terrace Camp and explore on the following day the little couloir leading to the upper terrace. I then descended with the other Sherpas and porters, intending to return next day with more baggage. Paraffin had leaked and a porter's back reeked of it. It was late, but the porters understood the rope manœuvre so well that everything went off perfectly and we were back in camp before nightfall.

On the following day all went well again, and we took but 1 hour, instead of 2, in hoisting up the loads. Some of the porters climbed the vertical step with their loads on their backs ; one fellow scrambled up with a paraffin tin in his hand. One sack came off on its way up but Angdawa caught it neatly. Higher up on the glacier Gombu broke through a snow bridge and nearly vanished. At 1 P.M. we reached camp and a little later Zogg and Steuri returned from their exploration of the couloir. The reports were good, but above, the glacier was considerably cleft for a certain distance, entailing many deviations and some step-cutting. They had had a good view of Gauri Parbat which appeared unapproachable and tremendous. In camp we kept the five Sherpas only, and on August 13 we all went up to the second terrace to prepare Camp 2. Before entering the couloir the Sherpas roped and put on crampons. We moved in two parties of four, steps having previously been cut in the ice of the couloir. Our heavily laden porters were obliged to go straight on without a halt, since nowhere was it possible to stop and put down the loads. Above, the extremely crevassed glacier compelled many détours, but at last we reached the flat basin in the centre of the cirque formed by the slopes of Gauri and buttresses of Hathi Parbat. We pitched Camp 2 and kept two Sherpas ; the other three descended to Camp 1 with instructions to return in three days with fresh provisions.

On August 14 we awoke under a veil of snow, the sun came out in the morning, but it soon clouded over again and snow fell all day. We kept wondering how the Sherpas could return in this bad weather. The next day layers of fresh snow covered the tents ; we had little hope of seeing the Sherpas. Towards 1 P.M. Gombu went out to look and found all three of them arriving exactly as arranged. We were delighted to see them, as butter and sugar had failed, only a little



Photo, Swiss Climbing Party, 1939 ; A. Roch.]

PK. 21,200 FT. CLIMBED BY A. ROCH AND GOMBU, SEEN FROM GAURI PARBAT.



Photo, Swiss Climbing Party, 1939 ; A. Roch.]

GAURI PARBAT, FROM PK. 21,200 FT.

[To face p. 44.

Ovomaltine remained and enough, at a pinch, of soups for two or three days. The porters brought three legs of goat and paraffin. Unfortunately the meat was raw and at a height of 20,000 ft. required a deal of cooking. In the afternoon I went as far as the base of Gauri Parbat's rocky buttress. Its commencement appeared repellent, while the upper part seemed possible. Further to the left between Gauri and Hathi Parbat flowed a very steep glacier giving also possible access. It might be that the ascent is easier by this glacier, but the angle appeared too severe and we feared falls of séracs and avalanches.

The morning of August 16 was fine, but it soon clouded over and more snow fell. Weary of inaction, I determined to climb, on the morrow, Point 21,200 ft., the highest of the chain of Aiguilles separating the Rataban and Kosa Glaciers. As my companions found the weather too doubtful, I started alone with Gombu. We mounted an easy glacier and followed a ridge on the S.E. slope to a notch between two summits. To our astonishment we found there in the notch, at a height of nearly 21,000 ft., quite a large and partially frozen tarn. We steered towards the E. and apparently higher summit. Mounting some couloirs we soon attained a snowy ridge recalling that of Dunagiri although this was but 20 yards long, while that of the former was more than 1000. Fog came on at the top and we returned after building a small cairn. We both suffered from altitude and severe headaches, but the descent went quickly, and we regained camp in 2 hours, well content. The weather cleared in the evening and appeared favourable for next day. Despite fog, the fresh snow fallen each day had melted. If no more fell during the night, next day should be suitable for an attempt on Gauri Parbat by the rock buttress.

At 4 A.M. on August 18 I aroused Nima to prepare breakfast : this was brought to us in the tents. At 5.40 we were ready, but Steuri objected and said we must wait for the sun. Nevertheless, once the sun is up, it becomes so hot that any ascent becomes exhausting. Finally at 6.45 we got off, but the delay of an hour proved nearly fatal and was the cause of almost a failure. A nearly level walk brought us quickly to the foot of the wall, we crossed the bergschrund and then a diagonal ascent over ice led to the rocks. The ice was hard and steep and the labour for Zogg proved long and intense. On the rocks we shed our crampons in a crack and Steuri took the lead. We climbed by a ledge on the right, finally turning over on to the other slope of the ridge where progress was somewhat easier along an open chimney. All this hunting about consumed much precious time, but we were obviously on the right route. The arête rose in front of us, difficult at first, but later without serious trouble although of immense length. With much luck we climbed all the steps without great difficulty ; still every movement proved a great effort, the weight of the sacks combined with altitude effects being equally apparent. Higher up the view of the great walls became more and more fierce. On the left a bulge of hanging glacier some 300 ft. thick threatened the couloir. Stones fell on the wall further off with such speed as to render them

practically invisible. The rocky buttress ends in an ice slope up which we had to cut. At last at 12.30 P.M. we arrived on a snowy plateau; leaving our sacks we studied what remained of the ascent. A serrated arête descending to the S.E. was obviously our route to the top, avoiding some gendarmes as best we could. Without sacks we climbed its S. slope over slabs of excellent granite. On the arête itself progress proved easy to a vertical step. This was turned on the left over exposed slabs, the rocks of the step itself being too steep and rotten. By an extremely awkward traverse, Steuri contrived to leave the slabs and rejoin the crest of the arête above the step. We were now nearing the summit, a few more gaps, one gendarme turned to the right by crawling on all fours on a snowy ledge, yet another scrambled over, and we came to an easier 30 ft. leading to the summit. The actual top is a snow crest. We built a small cairn in the rocks just below the summit. Through cloud openings we could see the enormous snowy plateau of Hathi Parbat. There are no difficulties to an ascent of this peak, but the way must be long and tiring.

It was already 3 P.M., high time to think of the descent. We at once set about the arête, avoiding the bad slab with a *rappel*. We soon regained first our axes and then the rucksacks. Then came the descent of the snow-covered ice clinging to the upper buttress, followed by the long toil in the rocks below. In places we were able to move fast, but in others care was needed while fatigue grew ever greater. Small cairns constructed during the ascent much facilitated the finding of the right way. After a very necessary halt we began the descent of the lowest and most difficult part. We avoided the last chimney by a 65-ft. *rappel* which brought us close to the cleft containing our crampons. Night was coming on as we pulled down the rope. It was necessary to hurry and, resuming our crampons, we began the unpleasant descent leading to the bergschrund. Hardly had Zogg attained the end of the lead, when a violent stonefall occurred all round us. Boulders arrived with such speed that nothing could be seen till after they had whistled past. Fortunately no one was touched. The two Sherpas were coming to meet us, but nightfall was all but complete. Steuri coming down last could hardly see the steps. At last we crossed the schrund and fled down the snow slope. We retrieved our padded coats left on the snow in the morning. Thanks to their shouts, we found Nima and Gombu in the darkness who relieved us of our sacks. We were thoroughly tired out and painful coughs forced us to rest from time to time. Progress towards camp was exhausting in the deep snow on which a freezing crust was now formed. In camp we joyfully crawled into our sleeping-bags, consuming tea and a little food. Darkness was complete long before we had gone to sleep after this very full and satisfying day.

We were completely worn out after the ascent of Gauri Parbat and had no wish at all to scale another mountain! We awaited the Sherpas on the following day, August 19, as we were almost out of food. They had instructions to come up on that day were the weather bad enough



Photo, Swiss Climbing Party, 1939 ; A. Roch.]

HATHI PARBAT, 22,070 FT., FROM GAURI PARBAT, 22,027 FT.

to force us to remain longer. If the weather, on the other hand, were to prove fine they had orders to come up on the 20th only, to fetch the kits and return with us. We waited all day ; Zogg had contracted a chill the day before the climb and was feeling it. We had no tea or sugar left. That night the weather worsened and it snowed again. Reasons against our intended assault on Hathi Parbat were accumulating. Early next morning we struck camp and prepared to carry a heavy load apiece. Just as we were ready we saw our three Sherpas approaching : they brought us a bottle of liqueur and our mail ; letters from home and news from everywhere, so pleasant to receive even if reports from Europe were gloomy.

We now definitely left the upper cirque. At the couloir we strapped on crampons for the dangerous descent ; in spite of nervousness on the part of the heavily laden Sherpas, all went well. Most of the steps had to be remade, because the lazy fellows when coming up in the morning had not cut at all ! At the worst place we hung a cord to enable us to balance down more easily. On reaching the névé at last, all were delighted to have done with the couloir. Twenty minutes later we were in camp, discussing an excellent leg of bharal shot by Gabar Singh's shikari. Steuri continued as far as the Base Camp so as to send us the coolies next morning. Next day we packed up Camp 1 and started. At the upper rope the coolies arrived and we could redistribute the heavy loads. At the lower step the necessary manœuvres lasted an hour ; we were all back at the base in the afternoon, delighted at having not only avoided any mischances but even the slightest hitch.

For the return journey, the coolies were ordered for the evening of August 23, to enable a start on the 24th. We enjoyed two days' rest, during which I worked at an aquarelle of Gombu and Nima VI. Then we descended to Joshimath preparatory to a start on the last of our programme.

The Accident on Chaukhamba (Badrinath Peak), 23,420 ft.⁴

To climb this mountain our project was as follows : we intended from a base camp pitched on the Bhagirath-Karak Glacier to climb to the gap (19,130 ft.) in the E. arête of our peak with six porters. Thence we wished to establish a second camp on a shoulder of the ridge at about 21,000 ft. This camp was intended for the climbing party only, the porters being straightway sent back to the camp in the gap. From the upper camp we meant to make the ascent by traversing the N.E. slopes to the horizontal part of the N. ridge, completing the ascent by the crest of the latter. We thought that we could descend direct to the camp in the gap, and return to the base on the following day.

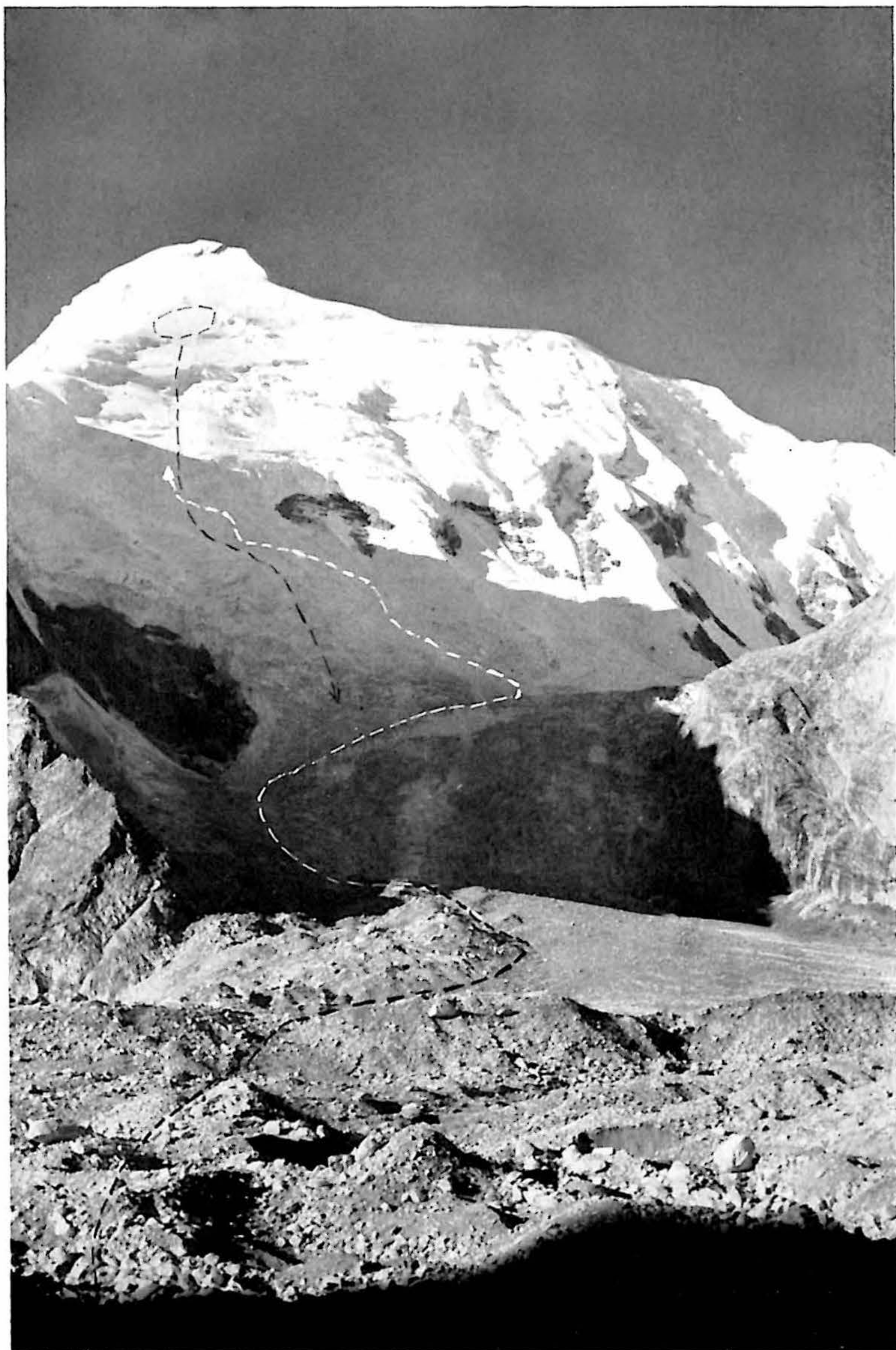
After some bad weather, September 8 was a splendid day, so that we decided to start on the 9th. Zogg, Steuri, six porters and I accordingly left the base. The ascent on crampons was easy, but by degrees the

⁴ ' Chaukhamba ' = Four Pillars.—A. R. For further illustration, see C. F. Meade, *Approach to the Hills*, photograph facing p. 166.

heat became overpowering, although clouds veiled the sun. After the first terrace we took to the great N.E. face furrowed with traces of gigantic avalanches. We mounted a great couloir overhung by a menacing bit of hanging glacier; higher up the slope eased off somewhat till we came under fresh bulges of glacier. Zogg was in front breaking the trail and we were all roped. Towards 3.30 P.M. we arrived at the base of a very steep slope, the ascent of which in deep snow was strenuous. The steps held badly and the porters had to struggle much. It was getting late and Zogg and Steuri wanted to camp there, although my wish was to continue in the direction of the gap. We were at about 18,800 ft. and as we were on a ridge, distant itself considerably from the face, we considered that we were in complete safety and decided accordingly to pitch camp. The porters were not yet up and as they were in trouble, we threw down a rope to help them in the ascent. One was unable to climb because of the weight of his pack, this latter was accordingly pulled up by a cord, and finally everyone was up. We cut out platforms in the ridge on which to pitch the tents.

On the following morning, September 10, on looking out of the tents, we perceived that it had snowed in the night and was still overcast. We decided not to start but to wait for better conditions. Towards 10 A.M. the sun broke through and we went out to photograph. We amused ourselves by rolling snowballs down the slope. This latter was very long and at first exceedingly steep for some 150 ft. The snowballs fell with great speed and then hurried like flashes of light over the great slope describing entrancing parabolas. Soon, feeling the heat, we retired into our tents where we conversed stretched out on our sleeping-bags. The tents were anchored by guy-ropes secured to ice-axes. My boots and crampons were outside fastened to my axe.

At noon, all of a sudden, came a terrible blast of wind on the tent. I seized the front pole to secure it thinking that a hurricane had arisen, which would have been a phenomenon at midday. Then at once clouds of driven snow burst against the canvas more and more violently; next the entire tent moved and began to slide. We could see nothing, but still sitting, we all three went down in front; the pace soon became terrific, easing off a little however on the great slope. Convinced that we were all about to perish, I became frightened and seized Steuri beside me by the arm so as not to die alone. The floor of the tent was torn asunder, and now outside the canvas we began to roll over one another in every direction. At this moment it occurred to me that we must swim as hard as we could so as to keep on the surface. After one or two rolls, however, the avalanche stopped where we lay, continuing however in its central part to flow towards some great crevasses and another precipice. My feet were jammed, but in spite of this, I soon worked myself free. I realised at once that it was a disaster and that we had fallen about 1650 ft. I saw Steuri and Zogg uninjured, but where were the others? The first thing to do was to put on my



Photo, Swiss Climbing Party, 1939 ; A. Roch.]

CHAUKHAMBA (BADRINATH PEAK), 23,420 FT.

△ Camp and Avalanche.



NIMA VI.



GOMBU.



NURI.



TILLYE.

Drawings by A. Roch.

[To face p. 46.]

trousers ; my snow-boots were on my feet, but my nailed boots were lost. Zogg managed to find his pair, but Steuri could find only one.

Our three tents had all been swept away, the entire slope was littered with refuse, canvas, axes, boots, rucksacks, etc. Close to us lay Angdawa and we hurried to free him ; his head and one arm were clear, but everything else was buried in the snow and he was spitting blood. With bare hands we began digging and kept on digging as quickly as possible ; it was bitterly cold. While Zogg and Steuri were trying to free Angdawa, I started off to search for the others. The upper tent had been swept away much further, being right in the middle of the avalanche. Some 160 ft. lower down I found Gombu and a bit further on, Baly. The latter seemed very bad, he was semi-conscious and moaning continuously. Gombu was also spitting blood and was bent over backwards. I began to dig him out, Steuri joining me almost at once and we carried Gombu on to a ledge. Then we started on freeing Baly. The avalanche had stripped him almost entirely, his naked body lay in the snow. At last we got him out. Two of the other Sherpas had not been smothered and were but slightly injured ; they had so completely lost their heads that they were incapable of giving any help. Zogg traversed the slope, collecting four axes, crampons, and other things that might be useful. We laid Angdawa carefully down on the canvas of the larger tent and slid him down to where Gombu lay. We could find no trace of Ajitia.

What were we to do ? We consulted and I determined that one of the three Europeans must remain with the wounded, while the other two must descend to the Base Camp with all the others capable of movement. Tomorrow the climbers must come up again with boots, axes and crampons to help the descent of the injured remaining above. I stayed up with the three wounded, while Zogg and Steuri went down with Nuri and Tillye who were by now strapping on their crampons. We thought of sending down Baly as well, but when we tried to get him up he could not stand on his legs and fell back as if fainting. He seemed to be off his head, so we carried him to where Gombu and Angdawa were lying. Steuri had one nailed boot for his right, and a crampon fixed on the snow-boot of his other foot. I gave my axe that I had found to Zogg ; accordingly all were fitted with axes. They roped up and started.

When they had gone far, I began to light the Meta cooker which we had found in a sack, together with spare fuel. As the snow melted I explored all the slope, finding the most heterogeneous collection of articles. Everything light, such as sleeping-bags, rubber mats, clothing, etc., had remained on the surface of the avalanche, while heavy objects, like boots, crampons, etc., were buried in the snow. In this way Zogg had lost his camera. About 100 yards off, near the avalanche, I found a right-foot boot, several rubber mats, as well as tent debris, which I collected. Lower down I searched again for Ajitia, of whom we had found no signs. He must have been hurled into a crevasse below the spot where we had discovered Baly. I found a blanket

lower still. The snow was all stained ; Gombu and Angdawa continued to spit blood. I arranged them as best I could on rubber mats and in the sleeping-bags. I changed the drenched coat of Angdawa, while Gombu raved and kept turning over. He was bent over backwards as if his spine was fractured, and I had to keep replacing him. At last the water boiled, I put in Ovosport and started to feed my invalids. Baly clenched his teeth, his religion forbidding him to touch food prepared by infidel hands. He glared madly at me, as if I could do something, while Gombu, vomiting up all he had swallowed together with blood, appeared to stretch himself backwards and then expired. I covered him up fearing the others would see what had happened. I waited an hour to be sure that he really was dead, I felt him but he was quite cold. I dug a grave in the snow and laid him in it. There Gombu rests peacefully in Chaukhamba's mighty glacier.

I again filled a pot with hot water and prepared tea. By degrees Baly, who was feverish like all of us, finished by drinking the sacrilegious beverage—it did him good. Night came on slowly, and I built a snow wall around the wounded to prevent them while delirious from wandering about or stripping off their coverings. I then gave them a good dose of Alcacyl⁵ and two Optalidons apiece. They slept and raved at intervals. I had also dug myself in to sleep. In my sleeping-bag and covered with tent canvas I was sufficiently sheltered from cold. We were lying on the avalanche itself ; it was all very well to say to oneself that if a second avalanche started it would fall well to the side, for all conjecture was useless, and whenever a sérac detached itself from the mountain I started up thinking our last hour had arrived. I had taken two Alcacyls and every hour swallowed Optalidons without shutting an eye or escaping nightmares. It snowed a little, but at dawn all was clear again. We had to wait till 9 A.M. for the sun to reach us and reduce a little the atmospheric chill. I relit the cooking apparatus and, while waiting for the water to boil, descended in the deep but now frozen track to the place whence I could see all the lower part of the glacier. I could perceive our two friends remounting and I made signals to them. I then returned, breakfasted with my invalids and waited. Two hours later as no one had arrived I went to have another look. It was now 11 A.M. and Zogg alone was coming up. I could not understand it as I had seen two persons earlier. Yet another hallucination provoked by fever and a sleepless night !

We prepared for the descent. The two invalids were rather better ; they were still gasping in their breathing but Angdawa was spitting less blood. I had found three right-foot boots and Baly succeeded in booting both his feet. I put on my remaining boot and strapped a crampon on the snow-boot of the left foot. I injected the invalids with a sedative. I roped up with Baly who took the 'Bernina' shovel in lieu of ice-axe and we started to meet Zogg. Angdawa on seeing our start was in despair for a moment, he would not believe what I said, that Zogg would bring him down, but thought I was abandoning him.

⁵ Alcacyl = Acetylo-salicylic Acid + Hydrate of Alumine colloidal.—A. R.

Zogg, on arrival, arranged his own crampons on Angdawa's footgear, roped him up and followed us. The descent was unpleasant; a steep slope where the steps were bad exposed us to danger. To secure Baly, I cut out a belay in the ice with the shovel, but when Baly had nearly reached the bottom, he slipped and the taut rope carved out the belay in the rotten ice. Fortunately Baly brought up on a small ledge without dragging me down, an event that might have had fatal consequences. I held Zogg's rope when accomplishing my own descent. Lower down Baly became exhausted, and often fell just above gaping crevasses.

Fog was increasing, but the end of the descent, becoming more and more exhausting, was accomplished without further incidents. Gabar Singh's coolies were awaiting us at the foot of the last slope. As they met us they perceived that Gombu and Ajitia were missing; they burst into tears and then at once set about helping the invalids. Hardly had we left the part exposed to falling séracs, when a great mass of ice broke off, frightening everyone with the noise. Fortunately we were well out of range.

Before reaching the Base Camp, Gabar Singh came to fetch us and gave us news of the declaration of war. The coolies were in a state of panic and we ourselves were oppressed with gloomy reflections. For three days we awaited the arrival of the twenty-four coolies coming from Mana to fetch what was left of our gear. The condition of the invalids had improved by degrees and we started slowly valleywards.

At Ranikhet X-rays showed that Angdawa had broken his shoulder in two places, while Baly had suffered nothing worse than bruises without evil future consequences.

Conclusions

It appears that the northern flank of Chaukhamba, despite its gentle angle, is not to be recommended as a route.⁶ Even had our camp been pitched nearer the depression, or col, our line of ascent would have forced us to traverse higher up that part whence the fatal avalanche broke off—a height of some 22,000 ft. We should have been in grave danger of destruction on the face, where séracs and snow collapse without respite. The sole route to be considered is that by the N.W. arête which shows one highly complicated step.

As regards Hathi Parbat, the ascent should be made by the same rocky buttress followed in our ascent of Gauri Parbat. From the upper terrace it would be necessary to *descend* towards Hathi Parbat by the slope shown on Marcel Kurz's telephotos taken from the Kuari Pass. This slope does not appear too forbidding or steep. The ascent of the last snowfields of the mountain should provide no danger or difficulty.⁷ The difficulties occur in the climb to Camps 1 and 2. Moreover to attain the summit of Hathi Parbat in one stage, starting

⁶ See *A. J.* 51. 82; *H. J.* xi. 140 *sqq.*, with striking illustration of N. face opp. p. 146.

⁷ See the illustration: 'Hathi Parbat from Gauri Parbat.'—A. R.

from 2, appears to be too long. Another camp should be installed on the rocky buttress used by us in our ascent of Gauri Parbat—or bivouac en route. This latter appears the best solution since the lower part of the buttress is difficult and very awkward for the raising of loads ; it is, moreover, exposed to stonefall. The expedition would be very interesting but not without danger.

As for our topographer, Ernst Huber, he fulfilled his duties most conscientiously, a task that was not by any means easy. The photogrammetrical construction of the map is not yet completed, but the work appears to be good, and the sheet will be more correct than the plane-table survey, which nevertheless is itself excellent.

The expedition's programme, comprising three different campaigns, was very optimistic and, well before the end, my companions wanted to return home. On the other hand our programme was very elastic, enabling us to settle down in a new district to await the best periods of fine weather. We had left Europe too late in the year, but yet hoped to climb Dunagiri before the monsoon. We never had sufficient time to acclimatise. At the time of the first attempt and later, when we did climb Dunagiri, we suffered much discomfort owing to lack of altitude training. Luckily for us the monsoon in Garhwal was very mild this summer. Inhabitants of the high valleys even declared that there had been no monsoon !

Despite often doubtful weather this summer, we found that *this* season of the year was the best for high climbing in Garhwal, principally owing to the high and pleasant temperatures. Moreover, when high up, the bad weather was never very menacing. One of the great advantages of this country lies in the fact that the Garhwalis, inhabitants or porters, are honest. When one has got to know them, they are even extremely sympathetic. Our Sherpas had a responsible job, one that was often strenuous and dangerous ; they acquitted themselves in a fashion that was both devoted and time-saving. We were accompanied by Mr. Gabar Singh as liaison officer, and his agreeable character and the assistance he rendered were alike admirable. His own Dotial porters were an excellent help to our Sherpas. We deeply deplore the loss of two of our most faithful followers, the Dotial Ajitia and the Sherpa Gombu. Notwithstanding the terrible avalanche that might have destroyed us all, I cherish a wonderful remembrance of this expedition.