

THE HIMALAYAN JOURNAL

RECORDS OF THE HIMALAYAN CLUB

Edited by H. W. TOBIN

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*Shiwakte Peak I (19,400 ft.) from 16,000 ft. col
above upper Kaying Jilgha*

THE
H I M A L A Y A N
J O U R N A L

RECORDS OF THE HIMALAYAN CLUB

EDITED BY

H. W. TOBIN

*'To encourage and assist Himalayan
travel and exploration, and to extend
knowledge of the Himalaya and adjoining
mountain ranges through science,
art, literature, and sport.'*

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EDITORIAL

IT is regretted that so many months have passed since the publication of volume xvi. The chief reasons for the delay have been tardy receipt of copy and pressure of work on our excellent publishers. We are indeed grateful to all our contributors, many of whom are finding it increasingly difficult to follow up the high objectives of the Himalayan Club as set out on the title-page of this and of every issue. And we warmly thank all our kindred clubs, both in the United Kingdom and elsewhere, for their continued co-operation. The Swiss Foundation for Alpine Research, the Club Alpin Français, the Groupe de Haute Montagne, the New Zealand Alpine Club, our own Alpine Club, the Royal Geographical Society, and the Climbers' Club have been unfailing with help and courtesy. As anticipated last year, costs of production have risen. Paper has become more expensive as old stocks get exhausted, and reproduction of illustrations and maps costs more. We have been able to make economies by sharing blocks with reciprocating journals and this issue is rather larger. It is satisfactory to note in this connexion that the demand for the *Himalayan Journal* is increasing and this year it is proposed to print 1,000 copies.

Owing to copyright the Everest story cannot be up to date in this number; but in order to preserve continuity we have begun the record of the new approach with articles by Charles Houston on his visit in 1950 and by W. H. Murray on the 1951 reconnaissance. We hope to tell in volume xviii of this year's splendid attack by the Swiss and of our own party's doings on Cho Oyu. We have been promised by Gurdial Singh and General Williams an account of the spirited attempt this last summer to scale Kamet. (The loss from blood-poisoning, after successfully bringing him down, of one of the party was cruel luck.) The period under review is especially noteworthy for the interest and active participation of Indians in Himalayan mountaineering. In addition to liaison work some have done very creditable climbing, notably Gurdial Singh, first Indian member to scale a major Himalayan peak, and Major Nalini Jayal. In this members of the Doon School, inspired by Holdsworth and Gibson, and of the Indian Corps of Engineers at Roorkee have been to the fore.

TOWARDS EVEREST, 1950

CHARLES HOUSTON

IN the fall of 1950 I had the unique opportunity of travelling across eastern Nepal to the foot of Mount Everest. The trip was planned and organized by my father, Oscar R. Houston, who in common with other mountaineers had long dreamed of such an expedition, but like others had repeatedly been refused permission because of the tradition of exclusion of foreigners by the government of Nepal. The political atmosphere of Nepal has recently changed drastically, however, and late in the spring of 1950 permission was unexpectedly received, first for a brief visit to Khatmandu, and subsequently to travel from Biratnagar on the Indian frontier to Everest on the Tibetan border.

Eastern Nepal has been almost untouched by Europeans. Joseph Hooker in 1857 travelled for several days inside the border and reached the Tamur river from which he gazed longingly up the valley to the hill village of Dhankuta which he considered one of the loveliest villages in the foot-hills, a judgement with which we heartily agreed nearly a century later. In 1934 J. B. Auden was invited into eastern Nepal for a post-earthquake survey, and his journeys took him about 30 miles inside the foot-hills. More recently Dillon Ripley in 1947 travelled along the foot-hills for a month, but his travels did not bring him closer than 70 air miles to Everest. Finally, in 1949, St. George and a companion crossed from Khatmandu to Solah Khumbu below Everest, but so far as I know no account has been published of their trip.

The southern face of Everest has a great attraction for mountaineers, though it has been photographed but seldom from the air and never closely examined prior to 1950. Should an attractive climbing route be found on the south, it would offer many advantages over the conventional north-east ridge. For one thing the sun would be on the climber most of the day to mollify somewhat the extreme cold on the shadowed northern slopes. The strata of the sedimentary rocks, which slope downward like the shingles on a roof on the usual northern route, would offer better hold on the south. Access to the mountain is through low, fertile, and very pleasant valleys in Nepal, and requires less than three weeks, as compared with the long six weeks' approach across the inhospitable Tibetan plateau. Most important of all, Tibet is closed to westerners by the Communists, whereas the Nepalese seem eager to welcome a small number of foreigners to their country, at least for the present.

But, of course, the attraction of the south side of Everest would depend upon the existence, or the discovery, of a climbable route.

In the short time available after permission was received it was not possible to plan a serious attempt on the mountain, nor did the uncertainty of the project make this desirable. Since we did not even know the access route across Nepal, nor even whether Everest could be reached easily from the south, it did not seem wise to plan a major reconnaissance, for we knew that little time was available between the end of the monsoon (which renders the southern approach difficult due to high water in the rivers and attendant malaria) and the beginning of the winter snows which would close some of the passes on this route. All we could hope to do was to approach the mountain from the south and to make a superficial examination with as many photographs as possible.

The party, consisting of Mrs. Elizabeth Cowles, Anderson Bakewell, my father, and myself, assembled at Jogbani at midnight on 26th October. There we met Major H. W. Tilman, whom my father had encountered in Khatmandu, a month previously, and who had yielded easily to persuasion to join us on the second part of the trip. He and I were old friends, having climbed Nanda Devi together in 1936. We spent that night in the government rest-house at Biratnagar, and at sunrise next morning had superb views of the snows of Kangchenjunga, Chamlang, Makalu, rising ever so faint and ethereal above the flat plains. By air they were little more than 100 miles distant, but our trail would cover nearly twice that distance.

By truck we rode for 40 miles over execrable roads through the jungle, to the village of Dharan, at the base of the foot-hills which rise abruptly from the hot, dusty jungle which forms a dense band along the southern boundaries of Nepal. There we recruited sixteen local porters, who, with the six Sherpas brought from Darjeeling, would carry our equipment. The rest of that afternoon was spent in a hot, dry climb over a 5,000-foot ridge and down to an abutment where we camped, the rosy snows of Makalu directly before us. On the next day we crossed the Tamur river, passed the place where Hooker, nearly a hundred years earlier, had yearned to see Dhankuta, and climbed up the long winding road to this lovely village.

Dhankuta is a town of 4,000 people, capital of this district, and is situated astride a narrow ridge with room for barely one row of houses on each side of the paved street. The houses are clean and well built, freshly whitewashed, with nice wood carvings along their second-story balconies and eaves. Here as usual we were the centre of attraction, as if a new and exciting circus had come to town. The children surrounded us—alert, cheerful, bright-eyed, and eager for our candy, although none of them begged. We were astounded to

hear many words of English, but after we had pitched camp in a lovely glade of lone-leaved pine the mystery was explained by the arrival of the village schoolteacher who spoke good English and who took us on a tour of the town.

First we visited the town library which included twenty-two volumes in English: *Victory*, *Lilliput*, *David Copperfield*, and *Now We Are Six* being among these. We learned that the town had a small police force, a jail, a municipal water-supply, and radio communication with more remote villages, as well as a telephone of sorts to Dharan. By now, thoroughly staggered by these 'improvements', we were escorted through the school. Here, in several small, clean, but poorly lighted rooms, about 400 boys and girls were taught algebra, composition, and English. School was not in session at the moment, but we read the school motto over the doorway, written in large English letters—a good one for all the world today—'Gather courage, don't be a chicken-hearted fellow'. We left Dhankuta regretfully, and I often think back to the clean, attractive houses with magnificent views down the deep blue-green valleys and the English school.

For the next five days we marched up the Arun river. In places our path led along gravel flats, impassable during the high waters of the monsoon, and in others we climbed steep spurs or traversed wooded slopes high above the river. Though most of the trail might be suitable for horses, with considerable difficulty, we saw only one or two horsemen and no transport. We met several hundred, and sometimes as many as 2,000, travellers on this main road, and, of course, were the centre of attention everywhere. Above the village of Tunlingtar we crossed the Arun at Khatia Ghat in a public ferry made from a huge hollowed tree, and maintained by the State. We then climbed a well-settled and terraced shoulder, and descended to a tributary of the Arun—the Irkhua Khola, up which we marched to the village of Phedi. This lovely crystal-clear mountain stream was full of small mahseer, but these failed to respond to my wide selection of lures. Above Phedi (5,000 feet) we climbed to the Salpa La (nearly 11,000 feet), on the summit of which we saw our first chorten, marking our entry into Buddhist territory.

On 10th November we crossed our second 10,000-foot pass above the village of Bung, and camped high above the Inukhu Khola, in a narrow almost unpopulated valley. That evening we could look across the valley for perhaps 2 air miles and see our third base, but we had to descend nearly 4,000 feet, cross the river on a precarious bamboo bridge, and climb back up the full distance next day. After crossing our third pass we found ourselves in the Dudh Kosi valley, whose milky glacier water drains from the Everest massif. In this valley are most of the villages from which come the Sherpas. The

natives look more Tibetan, there were fewer signs of western culture, and the villages were more primitive. Curiously enough in all our travels we saw no saws or axes, for the natives use only the universal kukri to fell and hew their timbers, and what ploughs we saw were of a very primitive type. And yet we saw real window glass in at least one house. By contrast to the barefoot, scantily clad Nepali of the lower valley, these people wore sturdy felt and leather boots, and heavy homespun coats and trousers. The women usually wore an attractively woven coloured skirt or apron, and took pride in the large collection of silver coin and stone jewellery which in many cases represented their entire wealth.

Up the rugged Kosi valley we walked for three more days, and finally reached the village of Namche Bazar on 14th November, the fifteenth day of our march. Here we were well received by every one of the 400 inhabitants, and camped on a terrace outside the home of the village headman, who served us a formal tea. Privacy as usual was a luxury we did not have, and there were dozens of friendly faces peering at us far into the night and again next morning when we awakened to the first bad weather of the trip, a light snow-fall. In a very unhappy frame of mind we packed up and divided our loads into two sections, for Tilman and I with four porters were to go on for the following week to the south side of Everest, while the others would stay at the lamasery of Thyangboche, 5 miles above Namche Bazar.

The snow was falling wet and heavy as we walked up the valley, blocking from us our first view of Everest. For two weeks we had travelled through the foot-hills with never a glimpse of our objective, and here on the first day when it should be in sight the snow had hidden it. We wondered whether the winter had finally arrived, and the happy, sunny days were at an end. When we climbed over the steep ridge on to the plateau of Thyangboche, we were wet, cold, and discouraged. Surprisingly enough the lamas had not heard of our impending arrival, and since none of them had seen a white man before they were astounded by the two ragged travellers who dropped into their midst. But they soon made us welcome with rugs and charcoal braziers, and our spirits were accordingly cheered. The remainder of the party came up just as we were about to leave, and we saw them safely ensconced in one of the stone houses adjoining the lamasery, where we shared luncheon before a roaring fire on the open hearth. Early in the afternoon the snow stopped, and as Tilman and I walked up the valley the clouds before Everest seemed about to break. We camped in a stone shepherd's hut near the village of Pangboche, and on the following morning we had our first view of the breath-taking precipice of Everest which filled the upper end of

the valley. Bathed in the first light of morning, its ridges of steep and broken rock stood out boldly, accentuating the purity of the white snow which in places lay almost vertical. The morning was bitterly cold, and we hurried up the valley, reaching the confluence of the two main sources of the Kosi by mid-morning.

As we faced the great massif of Everest, many details previously obscured from us became obvious. We were not, we now realized, looking at the true southern face of Everest, but at the tremendous rock and ice buttress of Lhotse (east peak) and Nuptse (west peak), an unbroken 5-mile ridge. We could not as a matter of fact even see Everest from where we stood, for its summit was hidden by this ridge. Though we did not appreciate it at the moment, the summit of Everest is about 4 miles behind this bulwark, and the intervening distance is filled with fantastically broken ridges and glaciers. Our inspection from this point confirmed decisions made previously: there was little point in examining the east side of Everest (beneath Lhotse) for no route was likely to exist there. Instead we decided to concentrate our little time on the western side. Accordingly we turned to the left, and after a few hours crossed a large level plain, obviously the bed of an ancient lake, now covered with low shrubbery and plants which gave cover and food to large numbers of snipe-like birds.

We were now at approximately 13,000 feet, well above standing timber, although dwarf juniper and other stunted bushes were abundantly available for fuel. About us rose magnificent peaks, 21,000 to 26,000 feet high, but so precipitous as to put all thought of climbing out of our heads. We camped soon after noon in a stone hut recently abandoned after the summer grazing, and after lunch Tilman and I climbed to about 17,000 feet on the north side of this valley where we had superb views of Chamlang, Makalu, and Amdanglungma.¹ Though we had hoped to reach the ridge and closely examine the south face of Lhotse, this proved impracticable and we returned to camp at dusk. After a cold night in our stone hut we resumed our march up the valley, now turning at right angles towards the north, planning to camp as high as possible in this valley which contained the Khombu glacier. In the afternoon Tilman and I set out to try to turn the corner at the head waters of the Khombu glacier, thereby gaining a look into the great West Cwm, which lies directly below the summit of Everest and into which the true south face falls. We soon found that this was far too ambitious a plan, and in the late afternoon we crossed out on to the glacier, in order to pass a small tributary glacier, deeply crevassed, which fell from the wilderness between Nuptse and Everest. Once on the glacier it

¹ The tentatively accepted name is now Ama Dablan.

seemed wiser to try to cross to the west bank, hoping for a look around the corner, but this, too, was denied us—the going was slow and darkness would fall soon after five. We now realized that entry into the West Cwm was the crux of our examination of the south side of Everest.

We returned gloomily in the dark to a cold and windy camp. The small camp-fire of shrubs did not do much to warm or cheer us, and the night was pessimistic. Next morning we started at first light on the second overcast day of the trip, planning to cross the glacier, climb high on Pumori, and to return to the lower camp where the porters were to meet us. We found a good crossing of the glacier, reached the western shore about nine, and climbed to approximately 19,000 feet by noon. This seemed to be about the farthest point which we could reach in our limited time, and would have to serve for our examination of the mountain we had come so far to see.

Well below and almost due east the upper Khombu glacier curved tortuously around the rocky 'corner' we had tried to turn on the day before, falling in fantastic pinnacles to the lower glacier. This was the mouth of the West Cwm, a narrow ice-choked corridor less than 1,000 yards wide, through which is crowded all of the snow and ice which falls from the Lhotse–Everest saddle (the South Col). From our vantage point we could see no obvious route up this ice-fall. Not only was the glacier badly broken and crevassed, but it also appeared to be swept from side to side by falls of ice and rocks from above. We both believed that the ice-fall could be forced, but it did not appear to offer a very attractive route of access to the upper West Cwm, a view of which was still denied us by intervening ridges. Rising 9,000 feet or more above the debouchment of the West Cwm was the summit of Everest. We could see the two 'steps' of the north-east ridge silhouetted on the sky-line, and the 'yellow band' was very prominent, as was the Great Couloir, which has given so much trouble to former parties. To our astonishment there was almost no snow on the summit cone; it stood out as bold, bare rock against the cirrus clouds above. The southern side of the pyramid was very steep, and even though the strata appeared to slope inward as expected, there was little there to encourage the climber. Running straight toward us was the west ridge, deceptively foreshortened, so that it appeared to be only 1,000 yards from the western buttress to the summit, instead of about 2 miles.

The western buttress fell sharply to the Lho La, the 20,000-foot saddle on the Tibetan border. The Nepalese side of this pass looks very steep, and is swept by snow and rock fall, but the Tibetan side, climbed by Mallory in 1922, is known to be relatively safe and easy. From the Lho La one would have access to the North Col, approaching it via

its western face which has been climbed by several parties. Thus it may be possible to reach the North Col from the southern side of Everest if—and it is a big ‘if’—the Lho La can be climbed from the south. We cannot answer this ‘if’, but I am sure the climb would be difficult and would lead only to a well-known route which has defeated some of the world’s finest climbers.

Continuing to the westward from the Lho La our eyes were carried over a series of splendid peaks and passes to the bulk of Pumori above us—a mountain which, in contrast to most around us, seemed to offer some prospect of success for the climber. Named by Mallory ‘Daughter Peak’ in 1921, the Tibetan translation appears on such maps that exist of the area: it is a splendid wedge-shaped peak some 25,000 feet high which should be climbable from Nepal. Directly to the south of Pumori lies a large, flat glacier surrounded by lower and unattractive rock peaks, which appears to drain from a low pass which may lead to the valley of Cho Oyu.

We sat for quite a time in the warm sun sheltered among the huge granite boulders which had fallen in the ancient pass of Pumori, discussing possible routes on the peaks and ridges before us. So far as the south face of Everest was concerned the prospect was gloomy: we could see no feasible route up the western buttress, nor did the passage of Lho La offer much hope. As we examined the opening of the West Cwm, we felt that although it could undoubtedly be forced, its passage would offer many hazards and obstacles to a full-scale expedition with laden porters. Should the West Cwm be entered, there remains the snow slope below the South Col, an unknown quantity probably very similar to the corresponding slope on the North Col, and finally the summit pyramid of steep rock which we could see clearly. Much of this putative route was hidden from us, but the parts we could see were most unattractive, and our considered opinion was that such a route was probably impracticable. From where I sit today, thousands of miles and many months distant, with my mind’s eye I can recall that view, pore over the pictures, and persuade myself that some route may lead to Everest from the deeper recesses of the West Cwm; we could not see it then, and the chances appear to me to be small.

One important observation was the freedom from snow of the summit of Everest. No European has seen the mountains so late in the year from this side, and if it is characteristic of the mountains to be blown free of snow during the late fall, then the climbing at that season should be much easier than before or during the monsoon. We saw very strong winds blowing clouds across the peaks, which would present a considerable hazard to the climber, but these winds are also present during and before the monsoon. One disadvantage of the

late climbing season would be the great cold and short daylight. During the week we spent near the foot of Everest, the temperature was only a little above freezing during the day and closer to zero at night. But it is quite possible that temperatures do not fall continuously as one climbs higher on these very great peaks as it does on lower mountains. Undoubtedly cold would be a greater hazard in the fall than in the spring, and the short daylight would be a considerable handicap. All in all, however, the perfection of the weather and the freedom of the high rocks from snow should offset the cold and shorter days, and if the snow is adequately consolidated lower down, the post-monsoon season would appear to me to be the best season for an attempt on the mountain.

Reluctantly we started homeward in the already lengthening shadows. Along the western moraine of the Khombu glacier going was somewhat easier although the way was considerably longer, and we crossed a number of large, flat meadows with small streams meandering through them, ideal locations for a base camp, although firewood would be scarce. Soon after dark we stretched out before a roaring fire which our Sherpas had built of materials which we suspected came from the shepherds' huts, content to be at rest although unhappy at the discouraging outcome of our mission, and frustrated by the incompleteness of our accomplishment.

One of the Sherpas was quite ill next morning, apparently with a recurrence of old malaria, and we were forced to carry him for the six-hour march down the valley to Thyangboche. We were a tired and bedraggled group late that afternoon as we straggled into the warm welcome of our companions and their new friends the lamas. They had had a wonderful time. Bakewell had made three fine expeditions up the sides of the Kosi valley, reaching 17,000 feet where he had commanded splendid views of the mountains. He had completed a number of panoramas of areas previously not clear to us, and felt that a way might exist between the valley south of Makalu and Lhotse, having seen a low pass in that direction. He made a great many rough triangulation sights, which will be of assistance in correcting maps of this area. The rest of the party had spent the entire time at the lamasery, the subject of many attentions and kindnesses from the entire lamasery. They had attended several of the four daily religious ceremonies, consisting mostly of chants and musical pieces played on long Alpine horns, trumpets, conch shells, huge kettle-drums, and cymbals. The lamas had produced their gorgeous rose silk and brocade gowns with devil masks, and had put on a full-dress dance in the stone-flagged courtyard enclosed by the four walls of the monastery. The party spent a great deal of time in the library, a dimly lit room on whose shelves lay over 500 volumes of Buddhist

Everest from Thyangboche

Photo by Mrs. E. Coates





Photo by Mrs. E. Cowles

Abbot of Thyangboche

writings, each volume consisting of a hundred or more pages of hand-made paper (from oleander root) about 18 inches long and 4 inches wide, printed with hand-cut wood blocks. The labour and time expended on this library, an unusually fine one, are staggering. Each volume was wrapped in old rose silk, with a neat label affixed, and the whole had an atmosphere of tender, loving care. Another room was filled with statues of Buddha, some of brass, some of gold or silver, and some small ones of jade and crystal. Here, too, we saw beautifully wrought silver prayer-wheels, teacups, ceremonial vases, incense burners, and beautifully painted silk scrolls (*tankas*). We were given a solemn reception by the head lama, a young man of sixteen elected when a baby, after portents and auguries had indicated that he was a reincarnation of the previous lama who had died at the moment of his birth. This system of succession seemed strange to occidental minds but is inherent in the Buddhist faith, and we were greatly impressed by the appearance and bearing of this young lama, though he spoke only a few words to us. After whispered instructions as to our department we were escorted before his low dais, and after a few gestures and a whispered prayer he hung about our necks a small, neatly made charm box containing as we were told the ashes of a dead lama, draped us in a ceremonial scarf, and gave us a small packet of 'food' for our safe return. The brief reception was quite impressive and confirmed our respect for the religion of our host.

After exchanging gifts with our new friends, and giving all the children of the village below the lamasery candy, we turned sadly down the steep path that led back to the outside world. The return trip was happy and uneventful, for we were in wonderful condition and the familiar trail to Namche Bazaar, Phedi, Tumbling Tar, Dhankuta, rolled away beneath our feet. Old friends greeted us along the trail, we were given gifts at every turn, and entertained in the village of Majhua by dignified old gentlemen whose hospitality brought tears to our eyes. Some twelve days later we stopped briefly at Chatra to inspect the Kosi dam, a joint project of Indian and Nepalese governments, and met our transport which brought us back to Viratnagar on the thirteenth day from Thyangboche.

We had been for some forty days in a part of the world seldom visited by Europeans, we had marched 150 miles or more over rough mountain trail to the foot of the highest mountain in the world, there to find a small community, centred in religion, self-sufficient, self-respecting, healthy, and happy. In all our travels we had met nothing but friendliness and courtesy. Our eyes had been opened to a different way of life, a different religion, and our minds to different thoughts and motives. Surrounded by scenery beyond description, the lamasery

of Thyangboche and its attendant village seemed to us a beautiful oasis in a troubled world. Our impression of the south side of Everest was one of impressive and massive bulk. Such access as we saw to the summit did not offer much encouragement to the climber, and although a route may be worked out with hazard and toil through the West Cwm to the South Col and thence to the summit, it does not appear to us a practicable route. As we returned to the worries, burdens, and responsibilities, and the pleasures imposed upon us by our way of life, we would always remember the motto over the door of our favourite school in our favourite town of Dhankuta: 'Gather courage, don't be a chicken-hearted fellow.'

THE RECONNAISSANCE OF MOUNT EVEREST, 1951

W. H. MURRAY

ON 19th July 1921 Mallory and Bullock climbed from the West Rongbuk glacier on to the north-east col of Pumori and for the first time looked down on to the Khombu glacier of Mount Everest. The west ridge hid from them both the upper basin and South Col, but what they could see, Mallory summed up thus: 'We have seen this western glacier and we are not sorry we have not got to go up it. It is terribly steep and broken. . . . It was not a very likely chance that the gap between Everest and the South Peak could be reached from the west. From what we have seen now I do not much fancy it would be possible even could one get up the glacier.'

Thirty years later, Michael Ward, Campbell Secord, and I were able to look at Mallory's own photograph taken from that same spot and yet arrive at a more optimistic conclusion. Nepal was open; Tibet now closed. Where the light of hope can shine, the eye of faith may see and believe. And it shines no more in Tibet, which the Chinese communists have seized. But in Nepal a new day has dawned. This same principle guided Mallory in one direction and ourselves in another.

Our hopes of last year were supported by two other photographs. One was taken by Tilman when he and Houston's American party made their pioneer trip to the lower Khombu glacier in November 1950.

Tilman's photograph showed the upper Khombu glacier flanked by the high west ridges of Everest and Lhotse, between which it poured level at a height of apparently 20,000 feet (it is in fact higher), then burst through a slit where the walls drew together. The narrows were a quarter of a mile wide. The glacier plunged through them to the valley floor in an ice-fall of more than 2,000 feet, then turned sharply south into Sola Khombu. The photograph was substantially the same as Mallory's. It gave us good news of a negative kind: no reason to believe that the ice-fall was unclimbable. It did not, however, show the South Col.

The second was an aerial photograph. It revealed the south-east ridge of Everest, which drops 3,300 feet to the South Col, as broad, snow-covered, apparently not difficult. It, too, showed nothing of the South Col. This absence of information about the western slopes of the col seemed to demand a reconnaissance expedition, more particularly when the ground below and above bore no mark of impossibility.

The men who knew Everest best were most pessimistic about our finding a route on this west side of the massif. Moreover, from the top of the ice-fall the glacier seemed to run level into the upper basin. If this were so, then the South Col slopes might rise 6,000 feet in 4 miles. That is, the col would lie above the basin at the same height and angle as the Matterhorn's summit above the Schwarzsee. It is one of the few disadvantages of great experience that a man is apt to discover too many excellent reasons why an adventurous proposition should be impossible; and one of the advantages of inexperience (when high spirits go along with it) that he has an urge to attempt the impossible, which he will then achieve if Providence so disposes.

The dynamic urge was supplied last year by Michael Ward, whose Alpine experience was unadulterated by Himalayan. His correspondence and conversation, alike explosive, had highly desirable effects. He had a powerful abettor in Campbell Secord, who put the proposition for an autumn reconnaissance before the Himalayan Committee. Since no other route was open to us the Committee sponsored the expedition.

The party agreed upon consisted of Michael Ward, Tom Bourdillon, Alfred Tissières, and myself. Tissières's professional duties obliged him to withdraw, and then Eric Shipton came back unexpectedly from China. This was the arrival of the right man at the right moment. We asked him to lead the expedition, because no one alive knew Everest better than he. Later on, when we reached Nepal, we were to be joined by two New Zealanders, E. Hillary and E. Riddiford.

It is worth recording that this is the first instance where the members of an expedition to Everest have chosen themselves, chosen their leader, and initiated the expedition. It is unlikely to happen again. But on this occasion at least we are able to look Mr. R. L. G. Irving in the eye.

Supposing Everest to be hopeless we should need a second objective, and for this chose Cho Oyu. In any event a reconnaissance of it would be made and the surrounding mountains explored so far as time allowed. In regard to Everest there were four questions to which we had to try to find answers. Could a way be found through the ice-fall? Were the slopes of the South Col climbable? Was the south-east ridge as easy as it looked in the photograph? Was autumn a better or worse season than spring for an attempt on the summit? If we could answer the first three of these questions in the affirmative, than a new chapter would open in the history of Mount Everest.

The party assembled at the railhead of Joghani in south-east Nepal on 23rd August. We had arrived in mid-monsoon with the prospect

of a thoroughly unpleasant march in front of us. We received hospitality from Mr. T. G. Law, the resident engineer at Biratnagar Jute Mills, and his wife. They told us that Jogbani gave a better view-point for Everest than Tiger Hill, Darjeeling; but alas, Everest and all other peaks had long since been submerged in the cloud-sea.

As measured on the map, our march to Namche Bazar, the Sherpas' headquarter village in Sola Khomba, was 140 miles, then 20 miles north-east to Everest. In the course of it we should rise from 300 feet to 18,000 feet at base-camp on the Khombu glacier. We reckoned that the journey to Namche would take a fortnight, but in monsoon rain that time was destined to be doubled; river-flooding, the need of detours, the recalcitrance of Tamung coolies—of such were the route's delays.

We had asked Angharkay to meet us at Jogbani with four Sherpas. He turned up with fourteen, of whom one was female. This was a providential acquisition (the ten extra Sherpas) in view of the Tamung trouble to follow. We set off on 27th August. Col. R. R. Proud, of the British Embassy at Khatmandu, kindly travelled with us for a few days to ensure that we got safely away.

Our first stage was 30 miles by lorry to the road-head at Dharan: a journey of six hours. The road was a mud-track driving straight across green fields of jute, where long-legged white birds waded in the marshes. At night the air was alive with fireflies. Dharan lay at the very base of the foot-hills. We stopped at the Governor's empty house and there engaged some twenty-five Tamungs. Then we took to our feet.

Two days steeply up and across hill-ridges, one of 4,000 feet, brought us to the little township of Dhankuta. There our Tamungs deserted. They hated marching in the rains, this was their district boundary, and they would go no farther. We lost two days getting new men. Dhankuta was a delightful little township stretched along the crest of a ridge at about 4,000 feet on a rising incline. The entire village positively sparkled in the sun (when it shone) against a background of wooded hills.

Beyond Dhankuta we crossed a ridge of 6,000 feet and descended 5,000 feet to the Arun river, which we crossed from east to west by means of a dugout canoe. This was malarial country, but safe enough when one takes paludrine. The heat was intense; we marched stripped to the waist. At every opportunity we walked straight into the river and wallowed like water-buffaloes. Not once between Jogbani and Namche did we ever have to pitch a tent at night. Always Angharkay found us lodging in house or hut. Usually we slept in the loft on top of corn-cobs, but occasionally down on the ground floor alongside a tethered calf. The hospitality thus shown to

us was indeed a blessing; none of our tents could have withstood monsoon rain. If there are any unfriendly people in Nepal, we never met them.

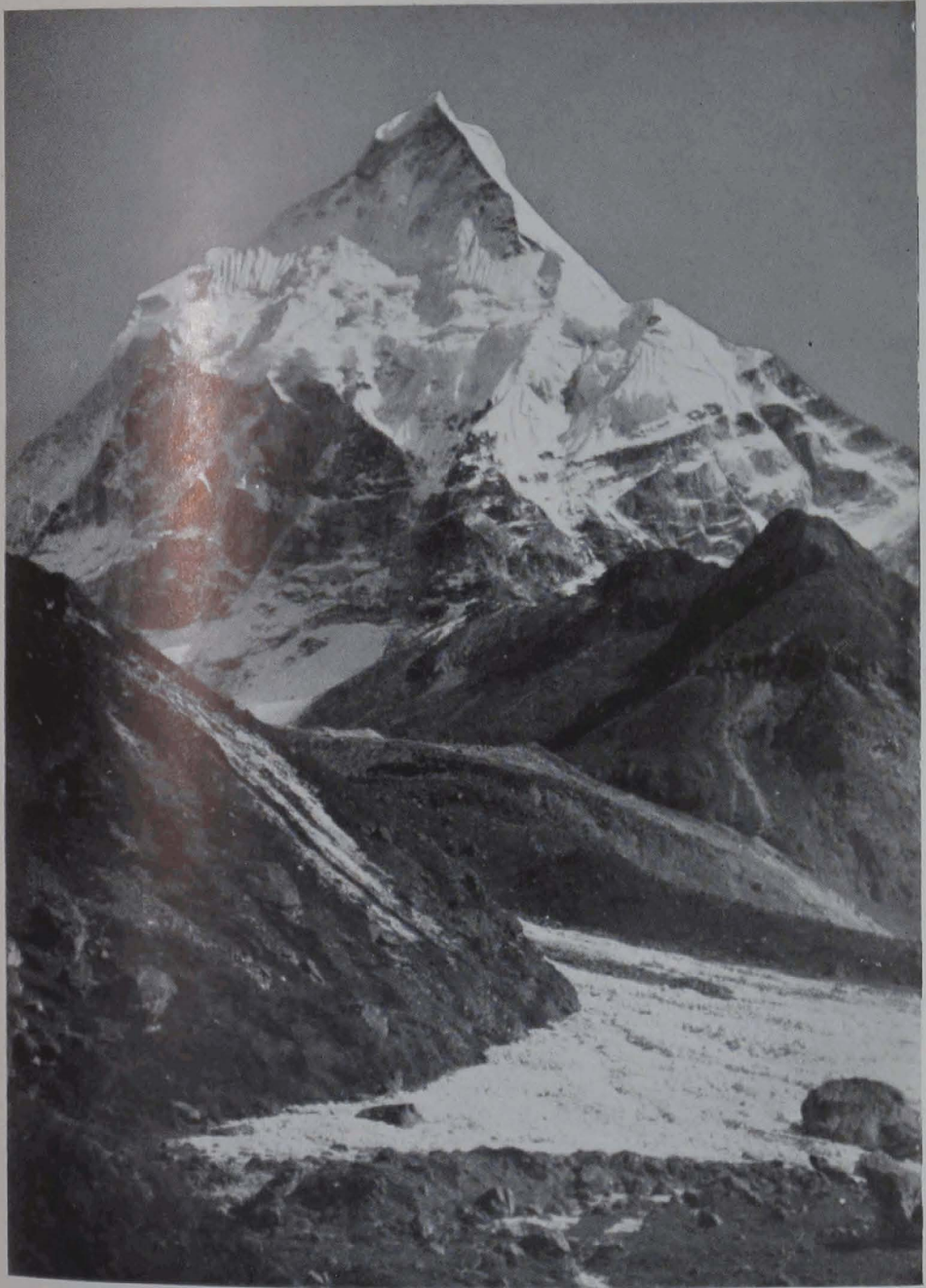
We travelled three days in the Arun valley. On the second day we climbed up to the village of Komaltar. Thus far we had had at rare intervals but fleeting glimpses of the high Himalaya. Early in the morning we came out of Komaltar on to a little plateau. Deep beneath our feet lay the Arun valley and 45 miles beyond were the snows. It was a perfect morning. The sun slanted low and golden over the foreground grass; the vast basin of the Arun brimmed with a pale purple haze; and far back, amid a white tangle of peaks, crouched the Everest massif, like a Titan Atlas supporting on hunched shoulders the whole blue heavens.

Next day we came to Dingla at 5,000 feet. Once again our Tamungs deserted, and this time we were held up for four days. The delay allowed Hillary and Riddiford to catch up with us. They had been climbing during the summer in western Garhwal and turned out to be excellent men. Henceforth we left the Arun and struck north-west to reach the Dudh Kosi, which would lead us direct to Namche Bazar.

This was the worst part of our journey. Rain fell incessantly, leeches everywhere abounded, and their bites caused septic sores. We were now moving against the grain of the country and had to cross three passes of 10-11,000 feet. The rivers between were in spate. At one of these, the Inukhu Kholā (a tributary of the Dudh Kosi), we had our first stroke of good fortune in finding its milky flood spanned by a three-log bridge, which within one hour of our crossing was swept away.

Our luck was promptly countered. A swarm of huge hornets attacked us on the far side. It is said that five stings from a hornet can kill a man. Several of our Tamungs got two or three stings and collapsed. They could no longer carry loads and had eventually to be discharged. Beyond this river we climbed our third 10,000-foot pass and so, after three weeks' travel, came down on the Dudh Kosi. We were now in Sola Khombu, the Sherpas' home-country. On this same day, 20th September, the monsoon ended.

In all its lower part the Dudh Kosi is an open, sunlit valley, spattered with villages. The Sherpas turned out and lined the route. Every household brews and distils its own *chang* and *rakhsi* (beer and spirit) and at every turn we were waylaid by almond-eyed bowl-bearers, so that our progress up the valley tended to be slow and erratic. Many were the toasts that were drunk to the health of the Treasurer of the Himalayan Committee. In its upper part the Dudh Kosi becomes a rock-gorge. Splendid snow and rock peaks rise to



Menlungse, 23,560 ft. Highest of the Gauri Shankar



The Lhotse-Nuptse mountain wall which masks Everest from the south-west

each side. Only a few miles up this gorge we broke out on the north side by a steep, pine-scented track, which in 1,700 feet brought us out at long last at Namche Bazar.

Namche is set in a bowl of the hills at 12,000 feet. Sixty houses and more are arranged round the amphitheatre in tiers, and the whole is backed by great snow-peaks. It is a notable fact that this village, and others even higher like Khumjung at 13,000 feet, are occupied all the year round; whereas in the central Himalaya villages at 11,000 feet are in winter buried right over the roofs by snow: the upper valleys have to be evacuated. It seems that in the Everest region the winter climate is relatively dry and the Sherpas can move about without undue inconvenience. Again, the rivers draining the huge mountain cirque from Cho Oyu to Everest and Makalu are remarkably small. One wonders how they can possibly be so small, especially when they drain southward-flowing glaciers, until one learns that the snow-fall is negligible compared to that of the western Himalaya. We found a rain-gauge at Namche. It had been set up some years ago by the Indian Survey and records are being kept by the Gorcha (headman). These records show the mean annual rainfall to be 30 inches. The only point to be verified is whether the Gorcha keeps them accurately. That he does so I was assured by G. N. Dutt, an Indian geologist who arrived while we were still in the village.

Sherpa houses are quite unlike those of the Indian Hills. They are solidly built of good stone in two stories. Only the upper half is inhabited. The rooms are big and spacious with high roofs and wooden floors and window-frames. A fire is kept burning against one wall, and around the others are great shelves bearing huge, shining copper gourds filled with grain or water, polished wooden churns, brass bound, for making Tibetan tea, tubs of *chang*, silver and china cups, and teapots. One of the elders swings a Tibetan prayer-wheel beside the fire, above which maize is drying on a bamboo mat. The floors are clean and there are no offensive smells. The houses have double roofs, the inner of bamboo matting, the outer of heavy wooden slats.

We stopped two days at Namche to reorganize and engage Sherpas. On 25th September we set off on the last lap, 20 miles north-east to Mount Everest. That first night we stayed at Thyangboche monastery. It is set on a hill-top at 13,000 feet where the Imja Khola joins the Dudh Kosi. The traditional Chinese tent had been pitched for us on a four-acre meadow before the monastery. The Lama received us with great kindness. On this and other occasions he entertained us with Tibetan tea (which we all liked), yak milk, boiled potatoes, and *rakhsi*. Forty monks lived at the monastery, occupying a dozen houses that flanked the central gumpa.

The Lama showed us round the temple. We discovered above the courtyard an iron gong, which the monks beat in signal that village women working in the precincts must leave. On examining this gong we found it to be an old oxygen cylinder from a pre-war Everest expedition. The Sherpas had carried it home over the Nangpa La.

When we looked out of our tent in the morning we all agreed with Dr. Houston and Tilman that Thyangboche was the most beautiful place we had ever seen. At the farthest fringes of the meadow a screen of silver fir, pine, and juniper trees sloped down north-east into the valley of the Imja Khola, which ran straight to the south face of the Lhotse-Nuptse ridge, on to which we now looked. The summit of Everest was snow-clad even on the steepest face. The meadow, lightly frosted, sparkled at the first touch of the sun—and the frost was no more. The light fired a ring of great and icy peaks, which just leapt out of the earth. Well to the right of the Everest group stood a vast and bluntly pointed mountain like the Mustagh Tower, all snow and ice. Its name, said the Sherpas, was Ama Dablam. Close at hand to the south-east were two great peaks which they named Kangdekha and Tamashumu, and to the north, the white spire of Taweche. These mountains were all over 21,000 feet.

The gompa, of pale red colour, and the white monastic houses, fitted perfectly into this scene. Annually in mid-November a religious festival is held at Thyangboche. In November two years ago a great company of Sherpas had gathered there when the *yeti* is said to have appeared through the screen of trees.

We left at midday. Travelling 4 miles farther up the Imja Khola, we turned north into the bleak valley of the Lobujya Khola, which drains the Khombu glacier. Stark and spiky mountains flanked it. We lodged in low stone houses at Pheriche and next day climbed on to the desolate screes of the Khombu glacier. Pumori, Lingtren, and the North Peak of Everest dominated the head of the valley. That night we pitched our tents in hail and drizzle, lower than we should have liked. We moved on in the morning but altitude was telling (our height was now above 17,000 feet) and progress was poor among a wild jumble of boulders. We camped beside a lake, only to find after reconnaissance that we were still too far from the great ice-fall. On the 29th September we finally established base-camp at 18,000 feet under Pumori. We faced the ice-fall across the glacier and our first impression was not too good. It looked even more crevasse-riven than photographs had suggested, and was obviously threatened by avalanches from the west ridge of Everest.

In the morning we made our first reconnaissance of the ice-fall

and West Cwm. Riddiford, Ward, and Bourdillon went to the ice-fall itself, while Shipton, Hillary, and I climbed up the east face of Pumori.

Shipton and Hillary followed a broad, rocky rib to 20,000 feet or more, whereas I struck much farther north, 1,000 feet lower, in hope of seeing both the flank of the Lhotse-Nuptse ridge and the right-hand half of the ice-fall. The former appeared to be free of avalanche menace, whereas ice-avalanches discharged from the west ridge of Everest had been raking the left-hand half of the ice-fall. A white corridor of débris could be clearly seen stretching out across the glacier to its centre at about two-thirds of its height. From my own vantage point, which was a good one, I could detect no way at all of climbing up the ice-fall by its right-hand side. It seemed that we were thus limited to a central line. If Riddiford and company failed to find a good route there, our reconnaissance would come to an early end.

A much more enlivening sight was the anxiously anticipated vision of the South Col. I think that we were all fairly confident that somehow we should fight our way through the ice-fall. But the success of our reconnaissance and events of future years would more definitely depend upon what we saw between the upper basin and the col. Gradually these slopes disclosed themselves. They were straightforward, not too steep even when seen face on, free of stonefall from Lhotse; and they were obviously climbable.

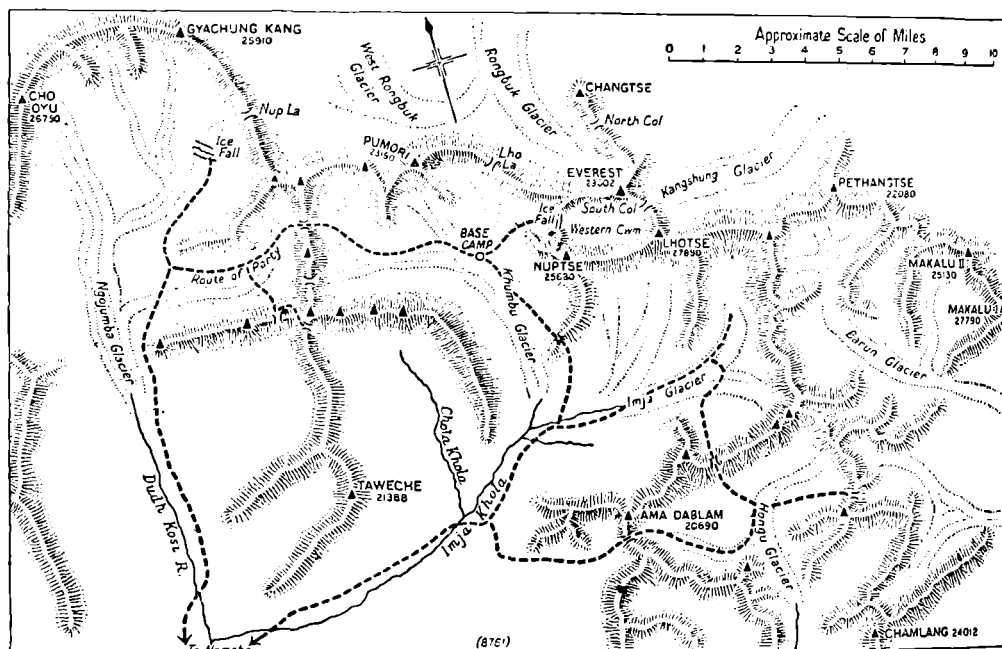
From their higher position, Shipton and Hillary could see the western glacier rise from the top of the ice-fall in broad, level steps to the basin, gaining perhaps 2,000 feet in 2 miles. The base appeared to lie at approximately 23,000 feet, thus leaving less than 3,000 feet to the col. The best route up these slopes lay not in a direct line to the col, but up a broad ice-fall on the north-west face of Lhotse to a height of 25,000 feet, whence a rising traverse would go 1 mile to the col.

It is very evident that before such a long traverse can be justified the snow conditions must indubitably be good. I could not help reflecting that when camps are established on the South Col and higher, and the assault on the summit is launched, one night's snow-storm could cut off the party's retreat, or at best make it an unusually ugly proposition.

Our more immediate concern, however, was the ice-fall. While we studied the upper mountain, the others wrestled with the lower. Ward and Bourdillon tried the centre of the ice-fall to find a start. Riddiford and Passang Dawa had luckily gone much farther leftward and discovered a route slanting up to the centre. On this section they met few crevasses and had a relatively easy climb, but

were slowed down by soft snow and the delays of route-selection. They climbed nearly half-way up the ice-fall.

When we all met in camp that evening Riddiford reported that the avalanche-corridor could be safely turned on the right. The upper ice-fall looked much more complicated and steeper than anything he had climbed, but he was sure that a way through could be found.



Our base-camp had proved to be two hours from the foot of the ice-fall, which was too far. It was agreed that we pitch an advanced base and then try to get through the ice-fall in one day. None the less, it was plain that the snow was in poor condition, and plain, too, that Ward, Bourdillon, and I were not yet acclimatized. In this respect Shipton and the New Zealanders had a great advantage over us. To allow the snow to settle and ourselves time to acclimatize, we agreed that after climbing the ice-fall we should break off the engagement with Everest and explore the mountains to the south and west, returning in two or three weeks. On 2nd October, Shipton, Hillary, Riddiford, and Bourdillon moved off to their advanced base under the Lho La.

Ever since our arrival the wind had been blowing continuously from the south-west. It brought fair weather, the mornings being clear and the afternoons invariably cloudy. Most nights we had light snowfall. But on 3rd October it snowed all day long and the ice-fall party could do nothing.

On the 4th October Ward and I explored the western range of the Khumbu valley in order to seek a pass by which we might later break into the tangled mountain country beyond. Just a little way



Everest—the ice-fall leading to the East Cwm—Lhotse—Nuptse



south we discovered a promising side-valley and glacier leading up to inviting cols in the range. We returned to camp feeling fitter than ever before. Dusk fell shortly after six o'clock. We were in bed as usual about seven. At 9 p.m. we were startled to hear a commotion at the crest of the moraine high above the tents. We looked out and saw lights flashing. It was Passang and Danu clattering back at top speed from advanced base. At once I was convinced that an accident had occurred: nothing else could have brought them back at such an hour. But some time elapsed before we could sort out and sift their tale of events aloft, and once again relax.

They had gone speedily up the first half of the ice-fall that morning, greatly profiting by Riddiford's old steps. At his highest point, Bourdillon had fallen out, being not yet acclimatized. The second half had been more difficult. Their route wound its way through a maze of great seracs and crevasses. The snow was sometimes hip-deep. Late in the afternoon they were almost at the top of the ice-fall at a height of 20,600 feet. They crossed a deep crevasse, above which a wall rose 40 feet at a high angle, fell back as a shelving terrace, then steepened again to a short wall at the top. The total height of this obstacle was 100 feet. They had climbed on to the shelving terrace and Passang was leading a traverse diagonally rightward to avoid the final wall, when the snow avalanched. Shipton and Passang at either end of the rope leapt off the moving sheet on to stable snow. Riddiford in the middle was carried away. Passang had the presence of mind to drive in his axe up to the head and whip the rope round it. Shipton stood firm and between them they stopped Riddiford, who was now upside down near the edge of the crevasse.

This was all rather exhausting at nearly 21,000 feet, and by the time Riddiford was righted and order restored the hour was dangerously close to 5 p.m. They had to withdraw at once, which exasperated them when only 30 feet from the top. On reaching camp, where they had already been a day longer than originally intended, they found the cupboard bare save for two packets of Maggi soup and a little *tsampa*. Passang and Danu were thus dispatched back to base to lessen the number of stomachs. At this not too unhappy ending to the tale we cared little that the ice-fall had not been climbed.

The ice-fall party returned at eleven next morning. We then heard the full story. A point worth noting was the persistence of cold on the glacier until late in the morning. The sun did not strike into the slit until nearly 10 a.m. In consequence, since all work was snow work, they were unable to keep their feet warm. I was particularly interested to hear that Riddiford and Hillary, the two acclimatized men, had had to remove their boots and massage the feet to avoid

frostbite while the others had not been so obliged: thus supporting Howard Somervell's statement to the effect that risk of frostbite increases *pari passu* with acclimatization, because the blood then becomes much more viscous through production of red corpuscles and so fails to pass into the smaller blood-vessels when cold contracts them. On the ice-fall and up in the West Cwm, the tardiness of the morning sun makes special precaution against frostbite imperative.

That same day, Ward and I climbed to nearly 20,000 feet on Pumori. I noticed that in the upper basin of the West Cwm, which is a mile wide, a great avalanche had fallen off the Lhotse-Nuptse ridge, and the débris spread three-quarters of a mile across the floor. Camps there will have to be sited with care. The wind was still south-west and clouds of drift were blowing off Nuptse into the slit of the ice-fall. If this drifting were to continue there would seem to be little hope of our getting snow sufficiently good to allow us to climb on to the South Col.

We descended. Shipton and Hillary moved off to explore the mountains south of Everest, and in particular to try to find a pass near Pethangtse, which might lead down to the Kangshung glacier on the east side of Everest. We agreed to meet again 'sometime after the 16th'.

THE EXPLORATIONS OF THE NUP LA AND THE HONGU BASIN

In the course of the next six days, Ward, Riddiford, Bourdillon, and I, with six Sherpas, carried our food and gear up the side-valley running into the western range of the Khumbu. Delays had occurred in getting supplies up from the lower valleys, and then in ferrying fourteen days' food and gear up to the pass. Six Sherpas could not move all our gear in one 'lift'. However, on 11th October a camp was established in the glacier-basin of our valley's right-hand fork. Ward and I had already reconnoitred the pass and considered that we had a fairly good chance of finding a way down the far side.

We had several objectives in the country beyond. Sen Tensing had said that a pass at the head of the Chola Khola led into Tibet. According to the map our own pass must give access to the Chola Khola, and the pass at the head of the latter must lead into the West Rongbuk glacier. We wanted to cross this pass, and if time allowed we might be able to make a quick attack on Pumori by its north-east ridge. Secondly, we wanted to visit the Nup La. This col had been climbed from the West Rongbuk glacier by J. de V. Hazard with Indian surveyors in 1924, but no descent had been made on the Nepalese side. It was therefore not yet a true pass. We hoped to

make it one, and in the course of that effort we should be able to reconnoitre the east flank of Cho Oyu.

The glacier leading to our camp-site of the 11th was a highway, only lightly crevassed. So, leaving Bourdillon to bring up the laden Sherpas, Riddiford, Ward, and I climbed the pass and tried to find tomorrow's route of descent. We judged the pass to be about 20,000 feet. Our map was so inaccurate that we could recognize nothing on the far side. The valley below and its many tributary glaciers, the very mountain ranges from which these plunged, were not marked on the map, which showed instead a quite different valley and ridge system: apparently a figment of the map-maker's imagination. If there have to be maps at all, more maps of this kind would add to the joys of travel.

Before us spread a vast mountain scene. Directly beneath, a broad, stone-covered glacier flowed in a westward curve to join a still greater glacier 5 miles away and flowing north to south. At first we thought that this must be the Chola Khola, but soon realized that it was too far away. The true Chola Khola had vanished without trace.

The descent was 1,200 feet, the angle steep and the rocks snow-covered. We had difficulty in selecting a route, but finally chose a long rib on which 300 feet of cutting had to be done in hard-frozen snow. The rib then became bare rock, easy but painfully loose. We prepared a staircase for the Sherpas in the upper snow-slopes and returned to camp. The tents were pitched on the bare ice of the upper basin. Although the Sherpas had newly arrived with 70 lb. loads, they were now playing leap-frog on the ice and chanting songs.

The cold grew intense at sundown. I had to write my diary quickly before the ink froze in my pen. This was one of our coldest camps, yet the temperature inside the tents was no worse than -10° Centigrade. It is a curious fact that at no time this autumn, not even in November, did we experience cold as great as I met in eastern Garhwal at similar and even lower heights in May and June of 1950. Is autumn weather less cold in the Everest region than in other parts of the Himalaya? Or did we chance on a freak season when the weather was milder than normal? The latter seems more likely, but no sure answer can yet be given.

The morning was sunny and the loads were carried 800 feet up the steep and stony pass in relays. We had feared great delays in roping the Sherpas down the icy snow-rib on the far side, but even with very heavy loads they quickly showed themselves competent climbers. I remember that day's journey, and the next, without much pleasure, for the sahibs had to carry loads too, and my own was 49 lb. One had to breathe deep and rhythmically to avoid

exhaustion. This was a hard day for the Sherpas, who had to make double journeys on both sides. Yet they came down that evil rock-face in the late evening singing. The song echoed across the glacier and round the walls of splintered rock.

That night we again camped on bare ice. We did not know where our glacier led, but next morning struggled over its deeply furrowed face to the northern moraine, down which we sped westwards to the false 'Chola Khola'. A continuous stream of grey cloud was pouring up it, filling the valley from side to side. We could see nothing. We camped where the glaciers joined.

The mist cleared in the night. The morning brought blinding sun. To our astonishment we found ourselves close under the shining, ice-clad flank of what was obviously one of the great mountains of the Himalaya. It could be none other than Cho Oyu's east face. And so it proved. We had arrived on the Ngojumba glacier—the main source of the Dudh Kosi. The missing Chola Khola must take its source not from the Tibetan frontier, but from the uncharted range that walls the south side of the glacier which we had yesterday descended.

We had thus no chance in the time remaining to us, and with the food available, of reaching Pumori, but we could climb the Nup La and reconnoitre Cho Oyu. If Cho Oyu were to be attempted in spring-time, a route from the north, south, or west must be exposed to the north-west wind and an east face route would be highly desirable. But, although we subsequently travelled the full length of Cho Oyu's 10-mile long wall, not one chink could we find in its icy armour.

There remained the Nup La. The 14th was an off-day to rest the Sherpas. Ward and Bourdillon went north up the Ngojumba to find the Nup La at its head. Their report surprised us. It was protected, they said, by a formidable ice-fall. We planned to take tents and three days' food up to this ice-fall next morning, spend the afternoon exploring its lower part, and then mount a full attack for the second day.

The scale had deceived us. The whole of the 15th October was spent in reaching the foot of the fall. It rose abruptly. Its left-hand half was a tottering mass of seracs and cliffs, every ledge between being piled with débris. We had never seen such a ruin in ice. The right-hand half was only slightly less steep. We know of nothing like it in the Alps. The centre line up the Géant ice-fall is an afternoon's stroll in comparison, and the Everest ice-fall likewise.

We chose a safe start on the right-hand half and began moving up in crampons at 9 a.m. on the 16th. Riddiford led and Passang and Danu accompanied us. There followed one of the best ice-climbs

we have ever enjoyed. The ice was dry and we made good progress for a few hundred feet. Then we came in among the seracs, which were big and broad, and grew as thick as trees in a forest. Between them the great crevasses were bridged with ice often enough to let us through. But from the heart of the forest we could not see even outwards, far less ahead. So that route-selection appeared always a chancy affair; never did we have the certainty of getting round the next serac. We traversed this way and that, sometimes on knife-edges between the plunging walls, sometimes on a chaos of ice-blocks choking a wide crevasse. Icicles hung in curtains from the seracs overhead, and flashed in the sunshine. Caves in the walls loomed green, and chasms beneath our feet yawned blue. Constantly to our ears came the crack and tinkle of ice-fragments dropping into invisible depths.

At 1 o'clock we were close to the top of the fall and came under the last ice-cliff. It was split by a vertical chimney of 40 feet. Passang led up. Above, we balanced along another thin edge and so came to level ground. We now discovered that far in front was still another ice-fall, as big as the first (which was 1,200 feet) but less steep. Beyond that again a long slope led to the col. We were thus less than half-way up to the pass. The rest would undoubtedly go but time forbade. At 2 p.m. we lunched and withdrew. Our conclusion was that to reach the Nup La from its base we should need three days. The date was 16th October and duty demanded our immediate return to join Shipton on the Khombu glacier.

In our tents during the night we could hear water burbling through the ice some way beneath us. It is strange that October frosts are not harder. Two avalanches fell down the ice-fall. In the morning we packed up and started down.

Before we left the Ngojumba, Riddiford, Ward, and Bourdillon climbed two passes on the south side of the tributary glacier that we had descended a few days ago, and succeeded from there in establishing the correct position and limits of the Chola Khola. After that we retired down the Dudh Kosi to Namche Bazar. The lower mountain slopes had by now taken their full autumn hues of bright red and gold—red from the blood-coloured leaf and berry of dwarf thorn: gold of the dying grasses. Ram chakors ran across the slopes, grey birds white in the chest, plump but of long neck, which they stretch like geese on taking to flight. On the 25th we rejoined Shipton and Hillary on the Khombu glacier, and there we exchanged tales.

When they had set off nearly three weeks ago, Shipton and Hillary had planned to enter the Imja basin under the Lhotse-Nuptse wall, in hope of finding a pass at its eastern head into the northern head

of the Barun glacier; thence over the watershed of the main range by a probable pass near Pethangtse. On arriving in the Imja basin, where a surprisingly small volume of ice flowed from such a great mountain cirque, they saw no pass over its east wall. Perforce they turned south and succeeded in making a pass of 20,000 feet into the head of the Hongu glacier. The pass was difficult and much time had to be spent hauling loads up the harder pitches. For this reason they carried only a light camp and three days' food.

From the Hongu they broke east to the Barun by a pass of 20,300 feet. But they were now too far south. The watershed above the Kangshung glacier was 12 miles distant and they could no longer hope to reach it with such small resources.

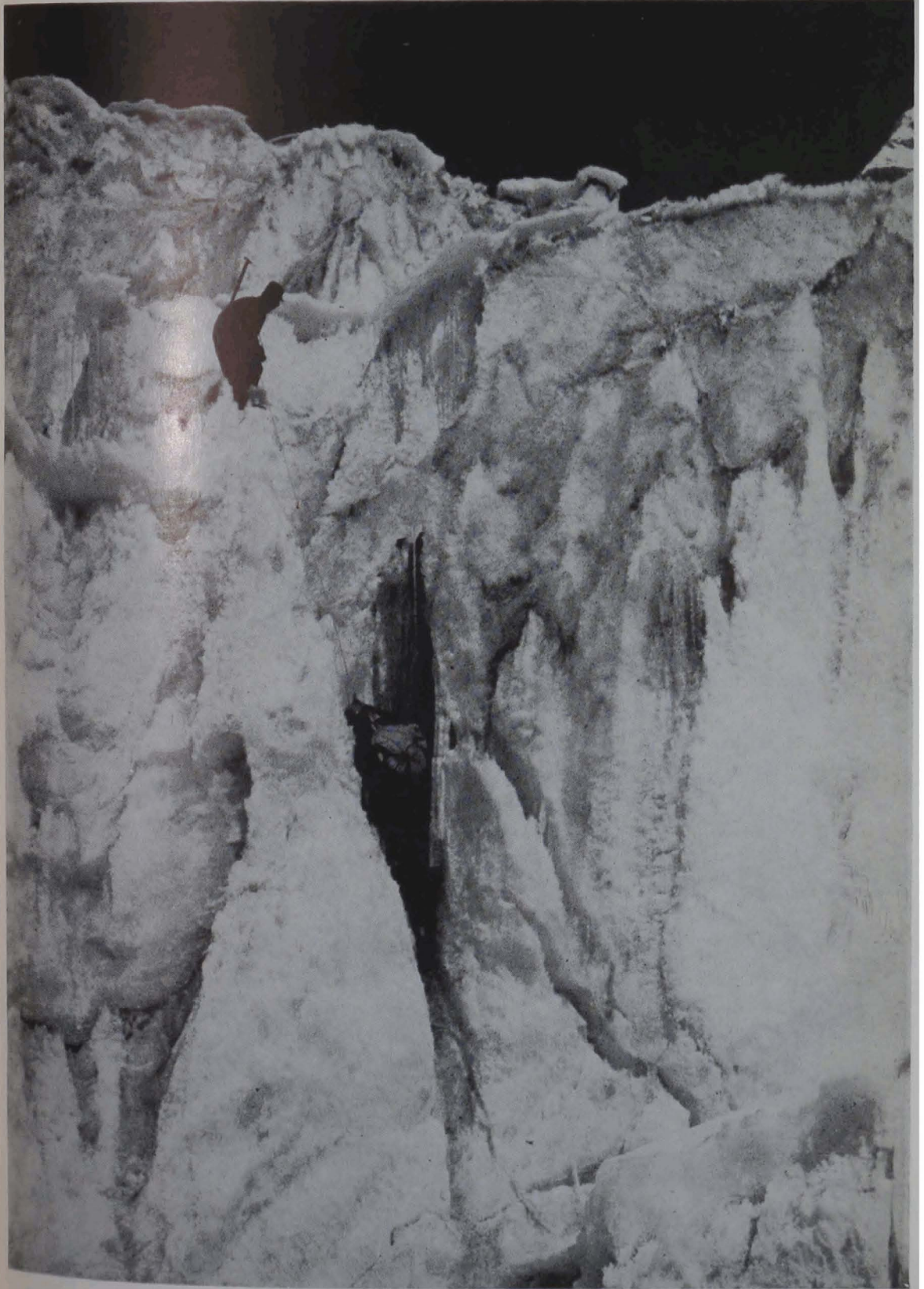
Accordingly, on the 16th October they turned back westwards and made a third pass from the Hongu basin over the south ridge of Ama Dablam. The ascent went easily, but the westward descent involved a laborious passage down 400 feet of fluted ice, followed by an ice-fall. Long after dark they pitched camp in a valley, which next day led them down to the Imja Khola. They returned to Everest by the upper reaches of the Imja Khola, from which they crossed a pass in the south-west ridge of Nuptse, and so came down on to the Khombu glacier.

A benediction of good weather had accompanied all their labours, as it had ours, the western party's. Every afternoon cloud drifted up the valleys, and each evening dissolved. In mid-October, when the moon was full, the white spears of an unnamed host invaded the night skies, and encircled our many camps.

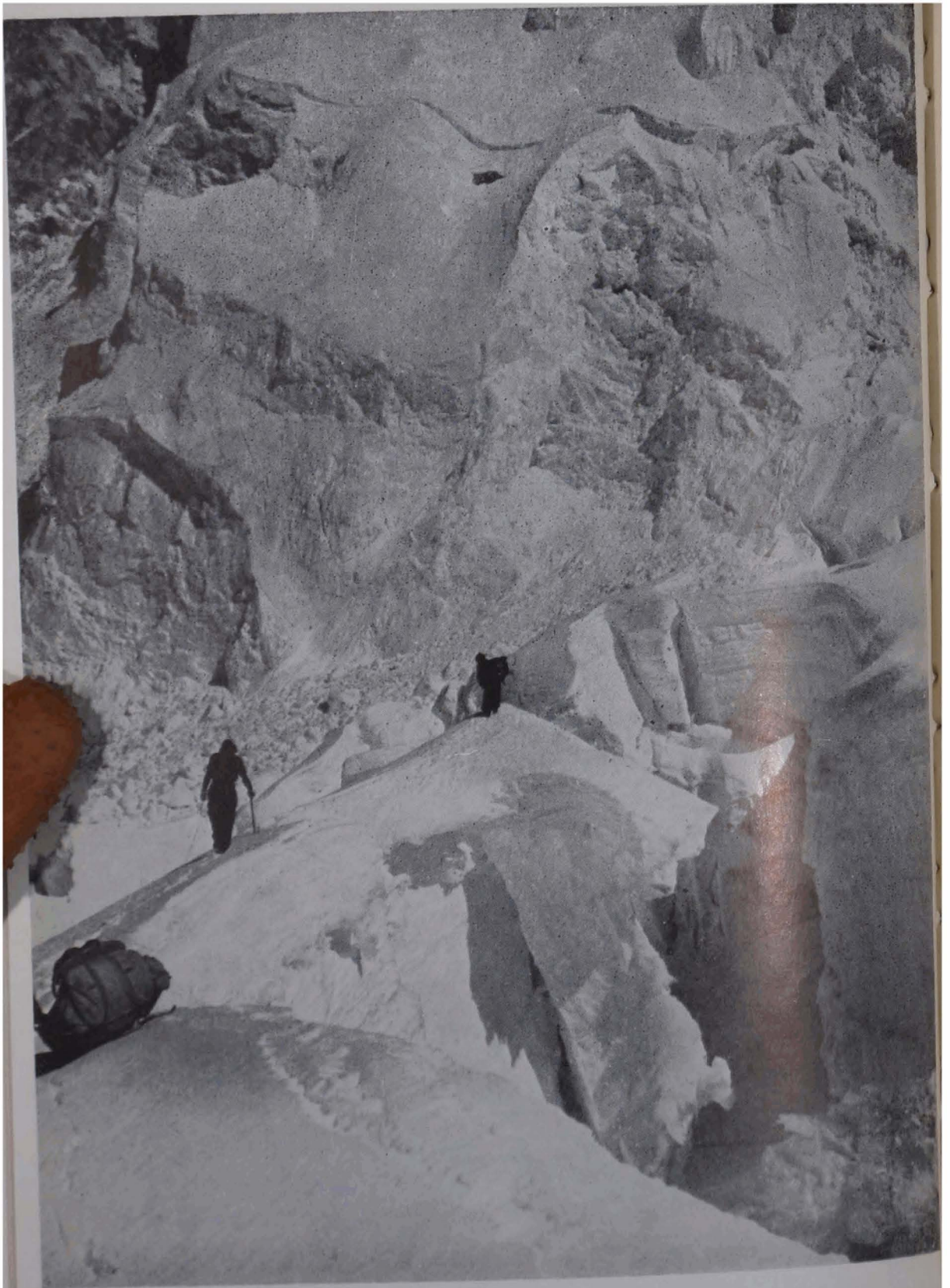
THE ASCENT OF THE ICE-FALL

Shipton and Hillary had arrived back at Everest five days before us. They had gone straight to the ice-fall and re-established camp at its foot on 20th and 21st October. Next day, with Angtharkay and Utsering, they stamped a safe track up the first 1,000 feet of the fall. On the 23rd they went up again to complete the route to the top, but just beyond the previous day's limit they found that a very great change had overtaken the glacier. It looked as though an atom bomb had dropped on it. Over a wide area the seracs had collapsed in shattered ruins and the very surface structure of the glacier was threatening further collapse into a deepening and opening abyss.

On 100 feet of rope, Hillary made an effort to cut a way through the tumbled blocks. One of the blocks fell with a long roar into the underlying chasm, and the area on which they stood trembled as though in an earthquake. The Sherpas threw themselves to the ground in terror. That the two sahibs remained standing, said



Pasang and Riddiford on Nup La ice-fall



Bourdillon and Sherpa at the top of the Cwm ice-fall

Shipton afterwards, was due only to their having been brought up in the European convention.

They could see that beyond the devastated area countless new cracks had opened on the ice-cliffs and seracs as though an even worse cataclysm threatened. They withdrew and tried farther to the right, but here found a second and even wider shattered area. They returned to camp.

We heard Shipton's tale without any overwhelming dismay. All this had happened two days ago. If we gave it another few days, perhaps the glacier would have changed in our favour. Such optimism seems hardly accountable, and yet was to prove in some measure justified. On 28th October, all six of us, accompanied by Angtharkay, Passang, and Nima, climbed the ice-fall. Just before the sun struck us we reached the danger area.

A small change had occurred, and it was in our favour. The central, collapsed part of the glacier had sunk between 6 and 30 feet more. The ice-blocks bridging the enormous chasm (the word 'crevasse' would misrepresent its indefinite character) had become more safely wedged. The upper glacier overhung this area. If the upper glacier were to move again, the blocks would presumably become wedged still more firmly. But if the lower glacier moved first—disaster. It may be that I am wrong in thinking that the ice-fall moves thus in unco-ordinated jerks, but such was the impression it gave me.

Meantime, there was no doubt that with careful ropework the shattered area could be crossed safely. And cross we did without incident. A level stretch followed, but the ice was shot through with innumerable cracks. An ice-axe thrust hard down was only too apt to encounter space. Otherwise all went well. None the less, it was already clear to us that the ice-fall in its present state could not be used as a packing route to supply high camps.

Very soon conditions improved. We zigzagged back and forth among the cliffs and seracs, steadily gaining height, until at noon we came under the last big ice-wall, where Riddiford had been avalanched. He and Ward and Passang attacked it direct by the old route, but as they neared the upper section it became evident that although the snow there was sounder than before, it was still not trustworthy.

Bourdillon and Nima had meanwhile started on a route to the right, using the near side of the crevasse where its edge flicked up steeply to a high bridge. Since this edge was in fact a massive ice-cornice projecting over the depths, a better way should if possible be found. Shipton, Hillary, and I therefore tried leftwards without avail. In the end we had to choose Bourdillon's route or turn back.

He had now spent an hour on his edge, clearing sugary snow and excavating a staircase in the solid layers beneath. At last he was up. The rest of us followed. When two men were half-way up the whole structure gave a loud report, as if it were about to crack off. However, it held. We were up. The glacier flattened out. The ice-fall was climbed.

And yet we marched but a short way beyond the top to be confronted by the biggest crevasse that we had ever seen. At the widest point I judged it to be nearly 100 yards wide, at the narrowest 100 feet. It split the glacier almost from side to side. There was no possible way of turning it on the right. On the left a tempting snow-corridor lay shining in the sun. From this we were at present cut off by impassable crevasses, but the corridor could certainly have been reached from a point much lower down. Unfortunately, it was the corridor made by avalanches falling off the west ridge.

We were thus defeated. Despite the bad state of the ice-fall I think that we should have been able to carry up one light camp. A brief exploratory journey into the upper basin would have yielded most valuable information about camp-sites and the chance of access to the South Col slopes, and so helped a second expedition. But any idea of putting a tent on top of the ice-fall had now to be discarded. We had no means of coping with the great crevasse. It was 100 feet deep. We could have roped into it and crossed the chaos of ice-blocks on the floor, but the farther wall was vertical and unbreached.

We returned to camp. A new question confronted us. Would an expedition next year be justified? We had found the ice-fall in such parlous condition that it could not possibly have been used to supply camps below or above the South Col. On the other hand, ice-falls in late autumn are notoriously at their worst. It seemed reasonable to suppose that after a winter's snowfall had consolidated on the glacier a good packing route would open up. Further movement of the glacier might change in our favour the uncompromising shape of the great crevasse that stopped us.

The vast size of this crevasse is due to its position. It is sited where the ice-fall pulls away from the almost level glacier above. Being thus a result of difference in rates of flow it will be a permanent feature. But there are bound to be considerable changes in detail as it goes over the lip and the new one opens behind. Fifty feet of drift snow in the bottom would make the farther wall climbable. There seems no good reason to believe that since it was impossible this year, so it will be next.

Thus a second expedition seemed to us all to be justified. From the West Cwm to the summit there is every sign of a practicable route. But what would be the better season? We saw the South Col

slopes at too long a range to be sure of the snow conditions there, but the ice-fall on the face of Lhotse was not heavily covered. In spring these slopes will probably bear more snow, and since they are above 23,000 feet such snow is likely to remain powdery. To me, autumn seems a better time to climb them, and also to attempt the summit. We saw no storms. Down at our own level the air was still and calm, although the north-west wind had lately been re-establishing itself. The rock walls under the summit were again growing bare and blank. We could often see drift snow blowing around the summit ridges, but hardy with spring-time violence. Often the familiar plume was there—but only a little plume—never the vast and appalling ostrich-feather of May. In spring one may expect no more than one or two calm days in a month near the summit. Last autumn such days of calm were more frequent.

None the less, the lower ice-fall had been proved too open and unstable in autumn. We felt obliged in future to favour April and May when crevasses should be safely bridged by the winter snow-fall and so likely to afford a good packing route. The point is decisive, because the ice-fall as we found it was not a practicable route. But for that, my own preference would be for the autumn, although on this score I think that Shipton may be found to disagree with me.

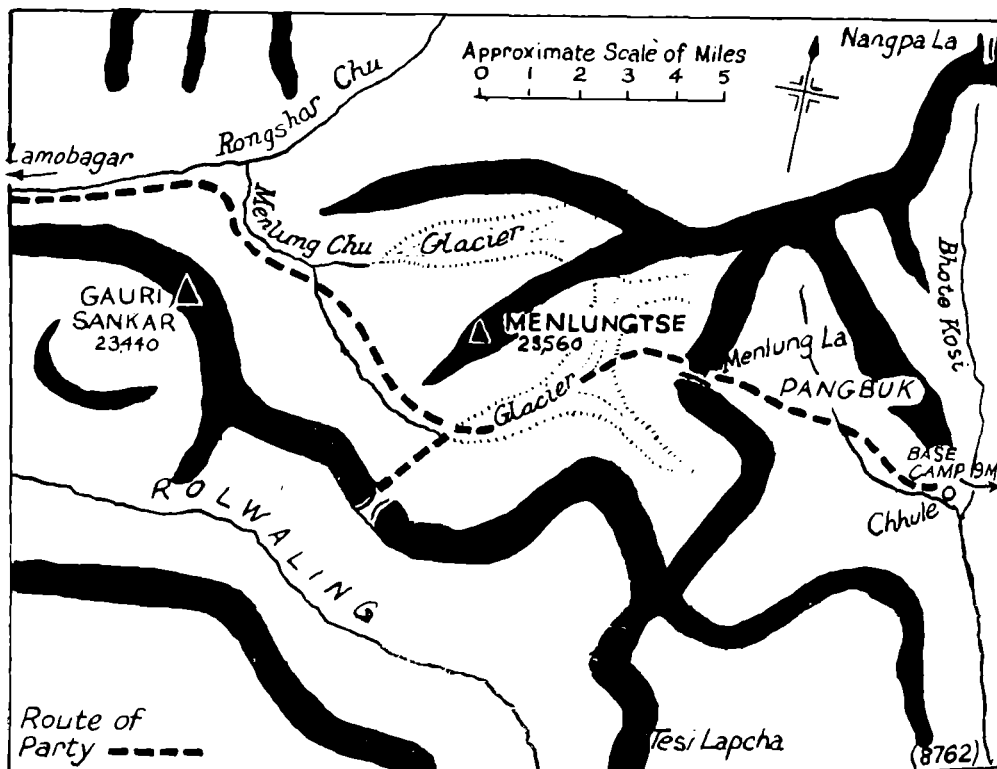
Before leaving our ice-fall camp, Ward and Bourdillon reconnoitred the right-hand side of the ice-fall from a ridge near the Lho La. Shipton and Hillary went to the ice-fall itself. Neither party could detect an alternative route. On 30th October we packed up and next day arrived back at Namche Bazar.

THE GAURI SANKAR RANGE

Work by day and revelry by night filled the first three days of November. The headman at Namche and Angtharkay at Khumjung both had us to dinner; on each occasion *rakhsi* and *chang* flowed freely, songs were sung, and we adjourned to a dance. The dance is the principal social function of Sola Khumbu. Every village has one nightly. Light is supplied by pine-chips blazing on a metal tray on a stand. A dozen dancers link arms, men and women indiscriminately, and perform a shuffle-step not unlike a *pas de bas*; at the same time they chant a never-ending song. There are no drummers. The time is given out from a many-stringed guitar, which is plucked. On the floor stand great tubes of *chang*, to which the dancers help themselves as they feel the need.

We still had important exploratory work to do westwards. Between the Bhote Kosi of Sola Khumbu (which takes its source near the Nangpa La) and the Rongshar Chu, there stretched 25 miles of

unexplored mountain country, which, for the sake of brevity, we might call the Gauri Sankar range. Shipton and Ward proposed to break into this territory by making a pass westward from the middle part of the Bhote Kosi valley. Hillary and Riddiford proposed to cross the Tesi Lapcha pass from the south extremity of the Bhote Kosi, and so drop down to the Rolwaling gorge under the south wall of the range. Bourdillon and I resolved to travel up the Bhote Kosi to



A map of the Gauri Sankar range.

the Nangpa La, reconnoitre the north-west face of Cho Oyu, and then follow in the trail of Shipton and Ward. Light travel was essential. The bulk of our baggage was therefore sent back to Katmandu in charge of a Nepali lieutenant, who took the normal, southerly route by the Dudh Kosi to Jubing and Charikot.

We left Namche on 4th November. At the confluence of the Thami Khola and Bhote Kosi we bade farewell to the New Zealand party, who were honoured by the company of Mr. Dutt. They travelled 9 miles west to the Tesi Lapcha, found it higher and harder than they had expected, and through a failure to hit off the best route spent two days crossing the pass. They had much rope and axe-work on ice-falls. Beyond, down in the grand canyon of the Rolwaling, they found a Sherpa monastery where the party's safe arrival was celebrated.

The rest of us continued northward to the grazing grounds of Chhule, where the Pangbuk valley branched north-west. Here the party split again. Leaving Bourdillon and me with two tents, three Sherpas, and four days' food, Shipton and Ward went up the Pangbuk in search of a pass. Their first move was to climb a peak of 18,600 feet, from which they saw the difficult barrier range to the west. Only one high col offered hope of a crossing; this they reconnoitred. An easy glacier led to its foot, above which rose 1,500 feet of loose rock. Early in the afternoon they reached a broad snow-plateau on top. Due west across a deep, glaciated valley sprang the highest and most noble peak of the range—a pyramid of milk-white granite which they identified as Point 23,560 feet. At a later date they named it Menlungtse and the pass Menlung La. They could see that a snow-covered glacier dropped to the valley below, which ran south-west, but were at a loss to know where the latter found exit. They returned to camp.

On 8th November, leaving Angtharkay and half a dozen Sherpas to wait for Bourdillon and me, Shipton and Ward set off for the pass with Sen Tensingh and seven days' food. That same afternoon they reached the main glacier on the far side at 18,000 feet. Half an hour later they came on the tracks of the Abominable Snowman. Sen Tensingh recognized them at once. They were *yetis'* tracks. At least two of them had left spoor. Shipton and Ward followed the tracks for more than a mile down the glacier, finally losing them on the lateral moraine. Some of the prints were particularly clear. Pad marks could be seen within the footprints, which were 12 inches long, and where the creature had jumped the smaller crevasses the scabble-marks of its toes could be seen on the far side.

That night the party camped on ice, but next day came on to an old moraine having enough pasture in its ablation valley to nourish wild sheep and goats, and presumably *yetis* too. The glacier ended. The valley turned west, widening into flats. On their right hand was Menlungtse, on their left, but some miles ahead, stood a great mountain which they identified next morning as Gauri Sankar. Below its east wall the flats narrowed again to a gorge and plunged to a still deeper valley-system. The riddle was solved. The more distant valley must be the Rongshar, and that in which they stood the Menlung Chu.

On 11th November they climbed on to the south rim of the Menlung Chu. They used a snow-covered glacier to reach a col at 19,500 feet, from which they found themselves looking down a 7,000-foot wall to the pine woods of the Rolwaling Khola. Although they were unable to see the lower 3,000 feet, it was their opinion that a way down could be found. They returned to the Menlung Chu.

This side glacier is just a little way above the snout of the main glacier, and their camp stood on the flats below.

THE NANGPA LA AND CHO OYU

Bourdillon and I left Chhule on 6th November. Within a mile we passed the snout of the glacier and took to the old moraines of its left bank. At last we could see the distant Nangpa La (we thought), where steep scree-slopes at the glacier's head rose to a col exactly as marked on the map. Suddenly our track swung right (north) into what turned out to be the true continuation of the main glacier, which falls from the Nangpa La. The map wrongly marks the Nangpa La at the head of the westerly branch, and does not mark in the very much greater eastern branch. In brief, the map-maker had not gone up to the Nangpa La, which is the principal trade-route between Tibet and Sola Khumbu. At last the moraines petered out. We had travelled 9 miles in nine hours when we dropped on to the glacier and pitched camp in a stony hollow.

In the morning Bourdillon and I and Ang Puta followed a track of yak-dung through the mass of stone covering the glacier. After a mile of hard work we came on to ice, in which the yaks had trodden a deep channel. No snow had fallen for a very long time. Daily sun and nightly frost had transformed the surface into clear ice. For this same reason the ridges and faces of all the great peaks, which sprang up on both sides of the glacier, were sheeted in snow-ice. Without crampons it was manifestly impossible to make the ascent of a single peak in the whole area. None displayed bare rock-ridges.

In four hours we covered 2 miles and arrived on the pass, a wide and spacious snow-field, full of sun and the stir of air. It was set about with splendid snow-peaks, many of which looked climbable—in crampons. Far off to the north lay the brown, warm hills of Tibet, roofed in shining blue. At the centre of the pass, a thick mass of tattered prayer-flags hung from a short pole. We sat by it and sunned ourselves. The snow-field stretched before us half a mile into Tibet at a gentle angle; then the Kyetrak glacier, stone-covered, continued, still at a mild angle, and curved eastwards out of sight towards Kyetrak, 10 miles distant. The village, said Ang Puta, was occupied only by Sherpas, who used it as a salt depot for the trade with Nepal.

We could as yet see no sign of Cho Oyu. But a big tributary glacier flowed on to the Kyetrak glacier from a re-entrant a quarter of a mile away on the right. At the head of this re-entrant must lie Cho Oyu. Therefore we walked on until we could see up this side glacier. And there was Cho Oyu. It presented to us its north-west



Everest from 20,000 ft. on Pumori. North Peak—Everest—Lhotse—Nuptse

face and a long north ridge. At one glance we could see that two good routes were offered.

First, the north ridge: it swept down at a moderate angle to a low col, which could be reached from the glacier's head without apparent difficulty. High up, the ridge hunched itself into a steep shoulder, but this looked as if it could be turned on the west side and the upper ridge regained.

Second, the north-west face: this fell towards us in an eminently climbable ice-fall, which bore no trace of soft snow. It could be approached from the glacier by a long rocky hill. This ice-fall appeared to us to be a better route than the north ridge because it was so much broader and provided numerous camp-sites on its steps. It ended below the shoulder of the north ridge, which could then be reached by a rib.

This north-west face was the most promising route I had ever seen on any big Himalayan peak. It was inviting. It was safe. The snow was in perfect condition. There was no wind. All that we lacked was food, equipment, and Sherpas; otherwise nothing (we felt) could have stopped us. We went away feeling almost frustrated.

This route, excellent as it is, will in spring-time be exposed to the full blast of the north-west wind. In short, autumn is the time for Cho Oyu.

A caravan of yaks and Sherpas passed us on the Nangpa La, south-bound for Nepal. The maps mark the pass 'Open May to August', and the Tesi Lapcha 'Open July and August'. In fact they can be used freely in the autumn. The Nangpa La is apparently crossed in all seasons, although not without loss of life in blizzards. We noticed that some of the Sherpa herdsmen carried short ice-axes, like slaters' hammers, with which they cut hoof-holds for the yaks in steep or icy parts of the glacier. Have Sherpas been cutting steps here, and yaks using them, before the founding of the Alpine Club?

We now beat a retreat. On 9th November, after an anxious search high in the Pangbuk valley, we discovered Angharkay and company stowed snugly in a cave. On the 10th we crossed the Menlung La. Like Shipton and Ward we discovered the tracks of the *yeti*, and like them followed the tracks for the better part of 2 miles until (on our second day) we, too, had to take to the moraine. At our first camp in the Menlung Chu we had only two small Meades for nine Sherpas—but they all packed in. The cold at nights was noticeably growing. On the following evening we discovered Shipton and Ward. We heard the news of their excellent exploratory work, and had then to decide whether we should head for the Rongshar or the Rolwaling Khola. The issue stayed unresolved until the morning of

the 12th, when we chose the Rongshar. It is one of the great gorges of the Himalayas and was not to be missed.

Among the gravel flats below camp we saw the spoor of wolves. We passed close under Gauri Sankar. The valley narrowed, swung northward, richly coloured now in autumn vegetation, then plunged. Through pines and rhododendrons we dropped to the Rongshar. We turned south.

Dense-growing rose-bushes flanked the valley for several miles: the sight and scent must in summer be unique, and altogether enchanting. The moon was full, so we pressed on and on. At last we entered the true gorge. Its sheer walls towered 4,000 feet above the pine-tops by the track, and on we went until the moon set. We bivouacked at 10,000 feet. Three days later we were down among the cicadas and lizards. Already the high Himalaya seemed utterly remote, and our many journeys approaching their end. On the 21st November we entered Khatmandu.

MERITS AND DEMERITS OF THE WESTERN ROUTE

Despite our disappointment in not reaching the slopes of the South Col, our reconnaissance had been successful in that we had found answers to all the questions we had set out to answer, and that these answers were for the most part favourable beyond expectation. The western route may yet prove to be a better one than the old north route, over which it offers these six advantages, some of which are still to be proven:

First, the main difficulties occur low down, whereas on the north route they start at 28,000 feet, where the climber commands less energy.

Second, on the last 3,000 feet of the south-east ridge the strata dip northward, in favour of the climber, and so should give better support for the snow and more tent platforms.

Third, the route is protected from violent wind until close to the South Col (c. 25,800 feet).

Fourth, the south-east ridge is broad and should give a wider choice of route than the northern line.

Fifth, on the north side the snow above 25,800 feet refuses to consolidate, and by remaining powdery makes climbing impossible until it is cleared by the north-west wind; whereas the fact that snow lies always on the south-east ridge, despite wind, would imply that there it does consolidate and *may* give satisfactory climbing.

Sixth, the slopes above the South Col are in sunshine from dawn, thus allowing climbers to make an earlier and easier start than from camps on the northerly side (where the old Camp VI was in shadow until 9 a.m.).

The disadvantages are (at the time of writing) less numerous.

First, at the narrows of the West Cwm there appears a threat of avalanche from the flanking walls not present on the East Rongbuk glacier. The threat, however, had less substance to it last autumn than we had feared. The threat might greatly increase if a party were so unwise as to remain in the upper basin at the break of the monsoon.

Second, the traverse from the face of Lhotse to the South Col, although tactically good (granted good snow), is strategically bad. If the weather deteriorates while men are above the South Col their safe return is unduly compromised. It may be that the col can be climbed direct from below, but that line looked unpromising from six miles' range on Pumori.

Third, an aerial photograph of the summit shows that the south-east ridge may become unpleasantly like a knife-edge along its last 300 feet. Prayers for freedom from wind near the top will have to be redoubled.

As always hitherto, so in future, no expedition, however strong and energetic, can hope to achieve the summit unless it be aided by three major strokes of good fortune, *which must all concur*: freedom from high wind near the top; no deep powder on the slopes below or above the South Col; and the right man high at the right time. Good fortune of that very special kind has graced none of the previous expeditions.

Defeat, however, is not failure so long as the will to try again persists.

NEW ZEALAND EXPEDITION TO THE GARHWAL HIMALAYA, 1951

H. E. RIDDIFORD, W. G. LOWE, AND F. M. COTTER

THE idea of going to the Himalaya was first broached two years ago. Several of us were very keen but all who had wanted were, in the event, unable to go and the actual composition of our party was: E. P. Hillary (Auckland), W. G. Lowe (Hastings), F. M. Cotter (Christchurch), and myself.

We had not all climbed together before so, in company with W. B. Beaven, one of the original planners, we all went into the Burton during the 1950-1 season as a dress rehearsal, though that trip meant a good deal more to us than that.

It had become clear that the Garhwal district was the only feasible project and permission finally came through early in 1951. It would be difficult for a party visiting the Himalaya for the first time to make forward arrangements were it not for the Himalayan Club, who engaged four Sherpas for us. After we had all made our contributions there was still a gap in the budget and I want to say how very much we appreciated the financial help from members of the N.Z. Alpine Club and other friends. We thank all of them for their support then and we also thank most warmly the Everest and Cho Oyu expeditions for all they did to help us.

The months before our departure were very busy and the pace and excitement became more hectic day by day. We left Auckland by air on 3rd May and three weeks later were in India.

The Indian scene had a fascination of its own, as we saw it on the long, hot, dusty, five-day train journey from Colombo up to Madras and Calcutta, and across to Lucknow and Kathgodam. Business is dead slow and we spent hours in a bank at Calcutta arranging money matters. The climax of the heat came in Lucknow. As we journeyed to the U.P. Government buildings in the afternoon by rickshaw, the temperature was 113 degrees in the shade. We wanted to make sure that an Inner Line Pass would be issued to enable us to visit the Tibetan border in Garhwal. On the 30th May we arrived at the beautiful, cool hill-station of Ranikhet, situated on the crests of pine-forested hills and looking out over deep, terraced valleys to the summits of Nanda Devi and Trisul in the distance.

There was much to be done in Ranikhet; the gear to be sorted into 60 lb. loads, coolies to be engaged and food supplies to be bought from the local bazaar. Mr. Frapolli, the proprietor of the West View Hotel and a member of the Himalayan Club, gave us

invaluable help. Our four Sherpas arrived, cheerful, hard-looking characters who soon showed that they were willing workers. There was Pasang Dawa Lama, Nima, his brother Thundu, and Ylla Tenzing, the 'boy' of the party, aged 33. No doubt they looked on our inexperience with tolerance. Pasang was a fortunate choice—an exceptionally capable mountaineer and organizer. The fact that he spoke English solved our language problems.

On the 2nd June 1951 we set out on the ten-day walk through the foot-hills to Badrinath with thirty Dhotial coolies. One traverses a series of deep forested valleys, with many small villages and terraced fields, and crosses a series of passes which culminate in the Kauri Khal, just over 12,000 feet high. From here the high Himalayan peaks of Nilkanta, Kamet, Dunagiri, Nanda Devi, and many others are seen in their true perspective. And they look colossal. Once in amongst them, in the high mountain valleys, they are closer to the scale of the New Zealand mountains.

The pilgrim route to the famous Hindu shrine of Badrinath follows the great deep-cleft gorge of the Alaknanda river. At Badrinath (10,200 feet), across the river from the temple and the numerous pilgrim rest-houses, there is a comfortable dak bungalow which looks up a narrow side valley to the conical ice summit of Nilkanta (21,640 feet), only 5 miles distant. Here we paid off our Dhotial coolies and sorted out three weeks' supplies for our first mountaineering venture. The Himalayan Club had recommended us to try Nilkanta and Mukut Parbat (23,760 feet). These had been chosen as our main objectives. There has been much written on Nilkanta. Its magnificent proportions and difficulty have made it famous, but on the subject of Mukut Parbat, which had not been attempted, we could find no information. It had been described to us as 'a lovely unclimbed mountain near Kamet'.

Nilkanta has three ridges; south, east, and west. Smythe had attempted the south ridge and attempts had been made recently on the south and west ridges by Wylie's party. The east ice ridge is apparently considered unclimbable and the south and west ridges are both defended by big pitches of steep rock but Wylie considered the west ridge to be the more feasible proposition of the two. It was this west ridge that we now proposed to attempt from the Satopanth glacier.

After a haggle over pay, eleven Mana porters were engaged to carry our gear up the Satopanth. Mana is the last village below the Tibetan border, at the junction of the Satopanth and the Alaknanda. Its inhabitants are a hardy and independent mixture of Tibetan and Indian blood. It was a two-day journey up the Satopanth, camping the first evening on a pleasant grazing alp, and establishing a base

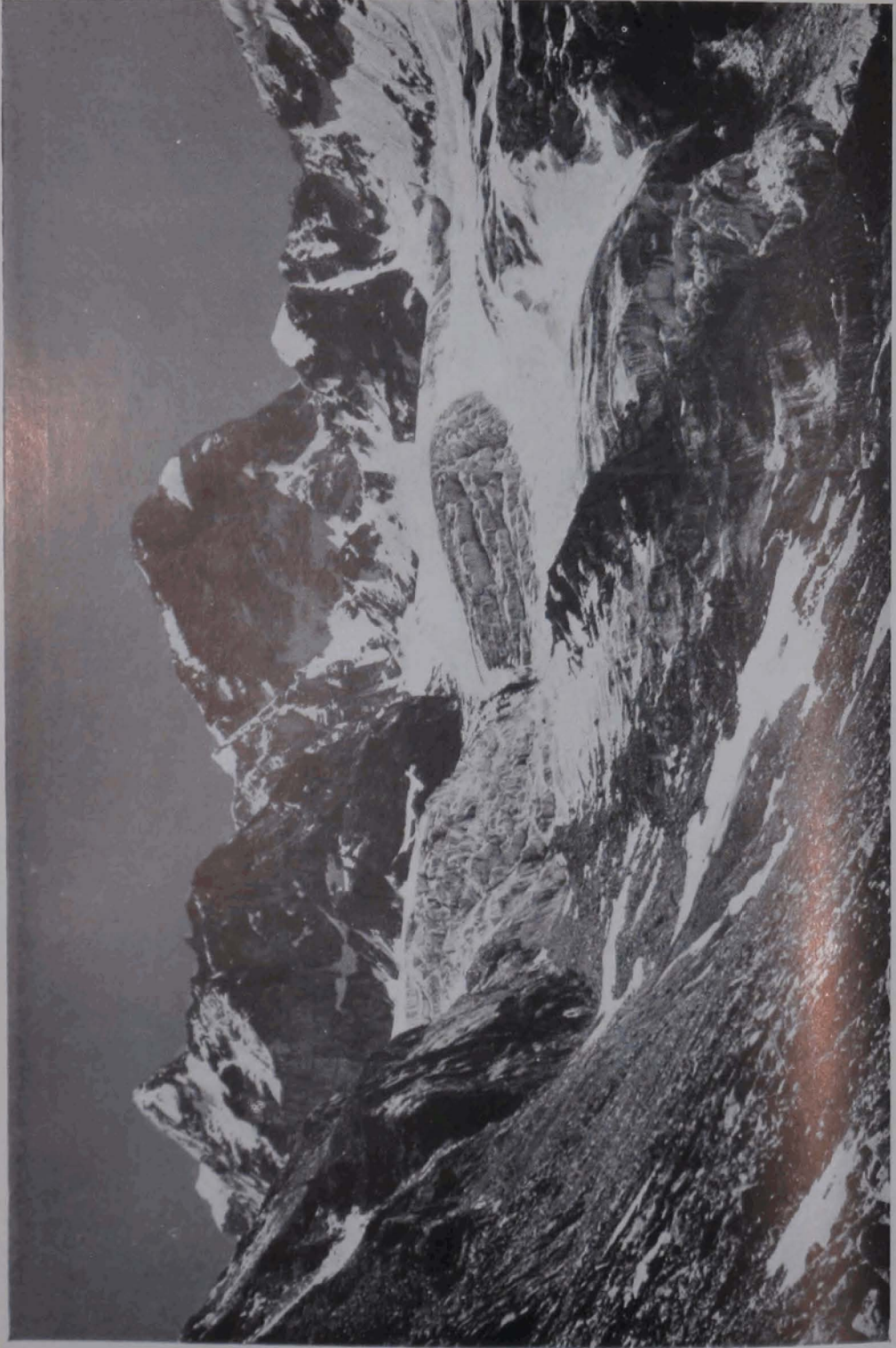
camp at 13,500 feet on the lateral moraine of the Satopanth glacier on the second. The Satopanth is a rather barren valley before the monsoon but dominated by two magnificent mountains, Nilkanta rising 8,000 feet to the south and the great mass of Chaukamba dominating the head. The weather was a rather unpleasant surprise—heavy clouds coming up every afternoon and some heavy snow-falls around base camp. The steep rock west ridge of Nilkanta looked a difficult proposition and would be hopelessly out of condition with all this snow. Nevertheless, after spending several days waiting for the weather to improve and making a reconnaissance of the northern aspect of the mountain, we decided to go up to the snow col (approximately 18,500 feet) at the foot of the west ridge.

The fact that we did the 5,000-foot climb to the col in one day shows our lack of experience of Himalayan conditions. In addition we were foolish enough to carry 30–35 lb. each. The last 1,000 feet up steep slopes of deep soft snow took five hours. The Sherpas followed behind with heavy loads, while we plugged steps in turn, ahead. Two two-man tents were pitched just below the col, in near blizzard conditions. The Sherpas hurried back to base. The weather held us in next day but the Sherpas, misunderstanding their instructions, showed their keenness by returning with more supplies, after the briefest of rests. The weather was better the following day, the 21st June. The 1,200 feet of rock, rising abruptly from the col towards Nilkanta, looked out of the question but there was a virgin peak (20,550 feet) to the west, which might be reached along a long snow ridge. So off we went but we didn't get far. The big day up to the col had weakened us to an amazing degree and soft snow conditions finished us off.

It did not take so long to cover the same ground, in our old steps, on a second attempt the following day and we pressed on towards Peak 20,550 feet. We were still going far from strongly, and trudged on in a sort of stupor, plugging steps in turns. The ridge was heavily corniced on our right above long steep ice-slopes (on the Satopanth side), and fell away with increasing steepness on the other side. We kept well back from the edge. Suddenly there was a loud crack and a great rip opened up to the left of three of us. We awoke with a start and jumped to safety while the cornice roared off towards the Satopanth. It was a near thing and a very good lesson. This forced us down on to much steeper slopes. We pushed on for a little but were completely without the strength to do the two or three hours' more work required to reach the summit. We turned back just under 20,000 feet and returned to camp. It was obvious that a rest was needed. The decision was made to return to Badrinath for a few days, before going up to the Tibetan border to attempt Mukut Parbat.



Mukut Parbat, the last 3,000 ft. Camp III site on upper ice shelf in middle distance



Mukut Parbat and Chamrao Glacier. Distant snow peak 22,180 ft. on extreme left also climbed by party

The monsoon should arrive soon and better weather could be expected up there. Two Sherpas appeared, just as we arrived back at camp. They cheerfully shouldered enormous loads in order to evacuate the camp. Snow conditions were bad and the descent of the top 1,000 feet had to be taken slowly and with care. Climbing results were nil but we had learned quite a lot, mainly that we could not go at anything like the same pace as in New Zealand.

In the last week of our trip, while the other three climbed Peak 20,760 feet, I returned to Nilkanta with Pasang and Thundu and a Mana coolie, a youth named Gopal Singh. I did not want to leave Garhwal without another look at the mountain. There seemed to me to be another possible route. From the col at the foot of the east ridge, an ice shelf leads diagonally upwards across the north face of the mountain, to a point at the top of the steep rock section of the west ridge. From here there is a steep but feasible-looking ice ridge to the summit. Snow conditions would have to be stable if this ice shelf was to be crossed safely but I did not think it was as steep as it looked. From the vicinity of the east col the angle of the shelf would be seen in profile.

Our reconnaissance had shown that the way to the east col from our old base camp was barred by cliffs and slabs. If the col was to be reached a way must be found up through the cliffs which run along the south bank of the Satopanth, from near the terminal of the glacier. It was 10th August when we set off up the valley from Badrinath. A late monsoon was now in full swing and there was little hope of the two-day clearing, after reaching a high camp, which would be the minimum necessary to an attempt. But 'nothing ventured, nothing gained', so off we set in heavy rain and mist. Camp the first night under a big bivouac rock completed happy memories of the West Coast of New Zealand. Pasang's opinion of my plan was not very high but that evening he got into conversation with some shepherds who said that they took their sheep up through the cliffs. Following their directions next morning, we climbed for 900 feet up a sensational track which one would never have guessed at without previous information. Except for one or two tricky places it was quite safe and easy and, clinging affectionately to the vegetation, we soon reached the grazing slopes above. We pushed on for 1,500 feet or so past a big mob of sheep to the limit of the grass and pitched my 7×7 foot tent, a veteran of many West Coast trips, at about 15,500 feet. It continued to rain heavily that night and the following day and night.

Brief clearings early in the morning revealed our magnificent position. We were perched high on the steep-sided valley. The monsoon had turned the lower slopes of the valley to emerald green. The

ice ridges of Nikanta towered above on the left. Chaukamba at the head of the valley was equally impressive. On the morning of the second day a few hours' clearing enabled Pasang and me to climb up rather unstable snow slopes to within 500 feet of the east col. We picked the safest route we could. Straightforward snow slopes led up to the col. The shelf route looked really feasible now, given safe snow conditions, and even the east ridge looked as if it might go with a push. As the mists closed in we returned, packed up, and descended to the valley floor. A fixed rope was necessary to help Gopal Singh, with a heavy load, down one pitch of the cliff track. We returned and joined the others at Badrinath that evening, the 14th August.

THE RECONNAISSANCE

W. G. LOWE

For two days following the first Nilkanta attempt we rested in the bungalow at Badrinath. Hillary spent much time estimating, weighing, and bagging for the journey towards Mukut Parbat. The map revealed that two glaciers drained the slopes of Mukut Parbat, each of considerable size and needing exploratory examination to choose the more suitable for our purpose. We decided to send on two days ahead a mobile reconnaissance party to report on each, hoping that this would save time and the expense of keeping the porters waiting for a decision. Accordingly, on 27th June Hillary and I with Sherpa Tenzing and the Mana boy Gopal Singh (carrying respectively 25 lb., 25 lb., 54 lb. and 65 lb.—weight indicating social position!) set out to follow the Saraswati river to where the Pachmi Kamet and Chamrao glaciers fed in.

We reached Ghastoli grazing alp the first day. There is an impressive rock defile where the river narrows down to 2 or 3 yards wide and hurls itself down 800 feet in a roaring rock-chamber, so narrow that it twists deep out of sight. A natural rock bridge crosses the defile where a huge rock has fallen and lodged in the gap. The mountain flowers were tiny and of many colours. There were sheep and some cattle grazing. The huge eagles, with their wingspans of 5 feet and more, soar up at 15,000 feet among the crags and then out along the valley sides. At 3 p.m. we came in sight of Ghastoli bridge; at least on the map it was marked as Ghastoli bridge but it had been dismantled during the winter snows. We found two 35-foot poles on our side of the river and spent the rest of the afternoon trying to bridge the gap. As none of our cunning methods were successful we camped for the night, setting our tent under a huge boulder beside a crystal-clear lake that was fed by a

spring. Hillary and I cooked a stew on our pressure cooker; Tenzing made a meal of *tsampa*; Gopal Singh's meal was extraordinary. He brought a quart pot of water to the boil and added flour, stirring all the time, until he had a nice pot of 'hot water paste'. This he boiled for three or four minutes, then ate the lot with his fingers. It contained no salt or any other ingredients, and he ate enough for five ordinary people. In the morning he made a similar brew of rice. He ate only two meals a day, and refused chocolate and other delicacies. His diet was the usual fare for travelling light, though in the village the diet is more balanced and complete.

Next morning Hillary and Tenzing went down valley for 3 miles to where I remembered having seen an avalanche snow-bridge apparently spanning the river. Soon they reappeared opposite me. With stone and rope technique we soon had the 35-foot long, 5 inches square poles in position. Gopal Singh picked up his load and walked across, in spite of mid-river sag. I followed *à cheval*. We hurried on towards the terminal moraine of the Pachmi Kamet Glacier, and just before we left the main track we met two Tibetans with a flock of sheep and goats. The flock was loaded with small 20-lb. packs carrying salt and borax and home-spun materials to Mana village. Both our companions talked excitedly with them, and they told us later that they were the first visitors for the season and their main task was to inspect Mana village and its flocks to see if there was any disease or sickness. Tilman records this in one of his books, and says that the custom is for these men to inspect the village and to receive a stone from the people of Mana. If any disease or sickness is introduced into the Tibetan flocks they promise to forfeit the weight of the stone in gold. These Tibetans were of the typical type we had read about, broad mongoloid features, slant eyes, long hair done in a bob on the top of the head, skirts of leather with embroidered home-spun jackets, and yak-hide boots. They were healthier-looking and apparently better fed than any people I saw on the Indian side of the border.

That afternoon we climbed up 2,000 feet of the terminal moraine and pitched camp among the boulders at an estimated height of 15,000 feet. The scenery was savage—black rock walls and angular peaks. The glacier was a desert of ice-hummocks and boulders and steep rock-chutes leading up into the range. There was no defined moraine wall, and no easy travelling. A small ragged gully between the glacier and the mountainside received the stray boulders and shingle avalanches from the cliffs above. On the third day Hillary and I, with Tenzing carrying our coats and a meal, set off at 6 a.m. We moved quickly and by 9 o'clock had covered about 5 miles and could see the glacier swinging left in a big bend that would take

several hours to turn. A rocky ridge to our left looked as if it would give a view to the head of the glacier, and after a pause we bounded on. I say bounded because that is what we did that day. We covered 5 or 6 miles of rough glacier and climbed nearly 5,000 feet in four hours. It was a few minutes after 10 a.m. when we stopped about 250 feet from the peak marked as 19,960 feet and we could see the head of the Pachmi Kamet glacier and the full sweep of peaks at its head. Kamet (25,443 feet) was supreme. It was only 3 miles away across the glacier and from this side presented rock faces of about 8,000 feet. Mukut Parbat (23,760 feet) was to the left of Kamet and showed a similar rock face of about 7,000 feet and filled the head of the glacier—an impressive and worthy objective. The west ridge, i.e. the left-hand one as we looked at it, appeared climbable but a very broken ice-fall hindered access. Over our bread and honey we debated whether this approach up the Pachmi Kamet would be better than the Chamrao glacier which we had not seen, but we reasoned that the Pachmi Kamet approach was long and arduous and included the problem of a doubtful ice-fall. The Chamrao appeared from our map to offer a less confined glacier, a more gradual gain in height, and if the approach to Mukut Parbat was not possible about ten or twelve other peaks were available whereas the Pachmi Kamet offered none. After an hour we raced back, dismantled our camp, and ran down the moraine and out to Khati, a grassy camping-site in the Saraswati valley.

We expected to find Cotter waiting for us with ten or twelve Mana porters, but he only arrived much exasperated in the evening. The Mana men were being paid by the day and with undeniable logic reckoned that the more days they took over the job the more they would get paid. Between smoking and loafing they managed to do $2\frac{1}{2}$ to 3 hours walking per day, and on reaching the Ghastoli bridge they refused to carry their loads across the doubtful pole. When Cotter had carried most of their loads over himself they did cross, but then sat down for a smoke and then set to work to build the bridge up ready for the yak and sheep trade to Tibet. Cotter and Pasang grew righteously angry and an hour's argument ensued before they agreed to move on. We fared little better next day and after coaxing the porters for 2 miles to the terminal moraine of the Chamrao glacier we chose a camp-site (more from necessity than choice) and called it Base Camp. The Mana men were paid off and we pitched our tents in cold wet drizzle and mist. Late that night Riddiford arrived, having rested a few extra days in Badrinath to try and recover from the weakening stomach disorder which had been troubling him. The day following, 1st July, was declared a rest day. It was a perfect day and we identified various peaks, and gazed



West ridge of Nilkanta, 21,640 ft., from 14,500 ft.



Mukut Parbat (23,760 ft.) and Kamet (25,447 ft.) from Peak 20,760 ft.

long and often at the magnificent rock pyramid at the head of the South Branch which was Kukut Parbat.

In the next four days we explored up the Dakkhni Chamrao and chose the site of our Camp I, and from there Cotter, Hillary, and I reconnoitred through the first ice-fall and traversed Peak 20,330 feet. On this day we chose the site of Camp II and found that the approach we were making was the best available. The climb of Peak 20,330 feet was an interesting but long day—some thirteen hours. From the glacier at 18,000 feet to nearly 20,000 feet we climbed up a steep, well-broken rock ridge. Altitude affected us badly and we climbed sluggishly, breathing heavily, and experienced what Cotter termed 'The Nineteen Thousand Foot Blues'. At 20,000 feet we had a long spell, ate a few dates, and then seemed to move on more easily. The climb was very similar to a traverse of Lendenfeld Peak in New Zealand. We were cautious of cornices. The descent took six laborious hours, breakable crust dropping us through to our hips, mist obscuring everything and later sleet and snow falling to freeze our beards and faces. We traversed a rock peak marked 18,740 feet, and dropped down in late evening to Camp I. After a month in the mountains we had opened our score with a modest but attractive 20,000-footer, and we were unfeignedly jubilant.

THE ASCENT

H. E. RIDDIFORD

On 29th June I set out from Badrinath to catch up with the others. Nima was with me, looking after me and carrying my load. For two days we followed up the broad barren valley of the Saraswati river, reading with interest on the way various little notes left by the others under boulders, telling me how the bridge stringers had been pulled across and of the results of the reconnaissance up the Pachmi Kamet glacier and how the Chamrao glacier had been decided on as the line of approach to Mukut Parbat.

On the evening of the second day we were sitting having a brew of tea in rather desolate circumstances and wondering where base camp might be. Close by was the terminal of the Chamrao glacier which comes almost down to the Saraswati river from the east. The river continues north for another 10 miles or so up to Mana Pass, a trade-route into Tibet. Suddenly a crowd of cold and disgruntled Mana coolies appeared. They told us where base camp had been established together with their opinion on things in general as well. Cracking on all speed we found the camp just as it got dark.

Next morning a fine array of ice peaks was to be seen gleaming in the sun at the head of the various branches of the Chamrao glacier.

One big rocky mass dominated everything else—Mukut Parbat. It was exciting to find that our objective was such a fine looking peak. Two days later Camp I was established in a beautiful little oasis of flowers and grass behind the moraine wall, under Peak 18,700 feet. Thereafter it became our base. Meanwhile Lowe, Cotter, and Hillary were carrying on the work of reconnaissance and on 4th July they pushed far enough up the Dakkhni Chamrao glacier to establish the vital fact that snow and ice slopes led up to the col at the foot of the north-west ridge of Mukut Parbat, and climbed Peak 20,330 feet on the way home, as already related by Lowe.

On 6th July we all moved up the Dakkhni Chamrao glacier and established Camp II on a low col—a magnificent site on the ridge dividing the Dakkhni Chamrao and the Pachmi Kamet glaciers and commanding a view of both. It had been a long plod up the snow-covered glacier under a hot sun and we were very tired at the end of the day. The Sherpas carried up and returned to Camp I. Next day was a rest day for us but not for the Sherpas who brought up more loads. We were now at the foot of the ice-fall leading up to the col at the foot of the north-west ridge of Mukut Parbat. The mountain towered above us and the uncertainty as to whether we would climb it could not have been more complete. The weather during this period was settled; fine every morning with some mist coming up in the late afternoon. The mountains to the south lay under heavy cloud. We never saw Nanda Devi but Kamet, of course, was in full view just across the smooth *névé* of the Pachmi Kamet glacier. We were all much better acclimatized now.

The task for the 8th was to see if the ice-fall could be negotiated up to the col. Lowe and Hillary did quite a lot of cutting on the steeper slopes for the benefit of the Sherpas but on the whole the ice-fall went easily. It was nothing like as broken as a comparable ice-fall in the Southern Alps would be. The chief memory of the day is of the agonizing cold during the two hours before we reached the sun. It made us go as fast as we could. Once in the sun we spent an hour rubbing back circulation into the feet. There were some difficulties below the col: several big crevasses, and finally an exposed slope of ice which required some cutting. At 11 o'clock, after 4½ hours' work, we cramponed over gentle ice slopes to the crest of the col, 21,000 feet. From here we had our first view of Tibet—brown mountains 21,000 feet high, bare of snow, and the yellow, rolling plains showing beyond. A cold biting wind blew steadily over the col from the south. A good site for Camp III was picked out on an ice ledge a little below the col on the route of ascent. During the day the Sherpas did their final carry to Camp II. It had taken three relays for them to carry up an adequate supply of food to Camp II

as well as our gear and theirs. This shows what a mushrooming task it is if a large number of camps have to be established. The carry to the final camp is always a simpler business.

Leaving Camp II after the sun arrived next day at 8 a.m., we cramponed up in four hours to the site of Camp III. It was a bad day for me, every step was a dragging effort. The Sherpas, carrying 60-lb. loads, gave us an hour's start and came up behind us just as we arrived. Pasang was keen to do the climb and we wanted to have him with us. So he stayed at Camp III while the other three Sherpas returned to Camp II. This meant three of us crowded against the sides of a two-man tent, which iced up during the night.

July 11th was the day of the climb. We got away soon after eight as the sun reached the tents. There were two ropes; Lowe and Hillary on one and Cotter and I with Pasang in the middle on the other. From the col there was a difficult traverse in steep soft snow to reach the crest of the north-west ridge of Mukut Parbat. Once there we cramponed up the hard ice crest without much difficulty, for three hours, to the summit of a subsidiary peak, about 22,500 feet, which was reached about midday. The main adversary was a cold steady wind, from the south, of almost gale force, which swept over the ridge. We climbed in full windproof clothing. Photography was almost impossible as circulation left the hands as soon as gloves were removed. Three times during the climb we had to remove crampons and boots and socks in slightly sheltered positions in order to rub back circulation into the feet. Pasang proved adept at this, massaging and rubbing vigorously in a painful but effective way.

From the subsidiary peak difficult work showed up ahead. A short distance below was a little col, from which a narrow crest of ice, corniced higher up, rose abruptly. On the left very steep snow slopes descended to a long, clean, blue glacier below in Tibet. On the right steep slopes of green ice descended a short distance to the crest of the southern rock precipice of the mountain. The unusual feature of this face was its sustained steepness. It appeared to descend vertically for about 2,000 feet. Lowe and Hillary came up behind over the subsidiary peak and on seeing the amount of work ahead decided that the climb could not be completed that day, and turned for home. I must say I agreed with them but decided to cut down to the little col, to see the going ahead at close quarters. Pasang, who was dead keen, came out with some timely words of encouragement, 'Very little time to top, long way come, two hours to top'.

Actually it took six slogging hours, battling with the wind all the time, but fortunately we decided to push on. From the col it was possible to avoid the worst of the cutting on the green ice by a delicate traverse up the crest of the ridge with one cramponed foot in

Tibet and the other in Garhwal. Soon the cornice forced me to cut across to the right and round on to another crest. Ahead was a series of little bumps of mixed ice and rock which were more sensational than difficult but they took time, perhaps two hours, and I was again in doubt as to whether we could make it, but both Cotter and Pasang were keen, and we went on.

Now came a long traverse up a narrow ice crest, passing over several crests, climbed mostly as before with one foot on either side. We were beginning to get very tired. At last about four o'clock we reached the long summit shoulder of the mountain and the technical difficulties lay behind, but worse lay ahead. We struck soft snow. The wind, now much stronger, was direct in our faces and made each step in the soft snow a stagger. We didn't know whether we could make it but managed to push on slowly up the final snow slope to the summit (23,760 feet) at a quarter to six. It was a moment of exhilaration. We closed up and shook hands. There was a basin on the summit which gave a little shelter and made it possible to take a few photographs. Below us the great blue Tibetan glacier flowed away towards the yellow plains of Tibet. We looked straight across to Abi Gamin (24,130 feet) and Kamet (25,443 feet).

There was no time to be lost. Six o'clock had been the deadline for turning back. I took a tight rope and kept a close watch on Pasang as Cotter led off down. But he gave a faultless exhibition of cramponing as we descended off the shoulder, down the steep ridge we had climbed. It was a worrying descent with one eye on the setting sun. The wind howled over the ridge but did not seem to be able to upset our balance except on the narrow rock section. We pressed on, belaying the rope only at the most difficult places. Once over the subsidiary peak we could crampon down at top speed to the col which was reached just as it got really dark. Lowe was out to meet us with a torch. It was a weary twenty-minute trudge back to camp. We were thankful to have boots and clothing taken off us and to crawl into the sleeping-bags. Later in the night Lowe rubbed my feet for an hour. I had numb finger-tips and toes for two or three weeks but no frostbite. Cotter was snow-blind and had a trying day or two at Camp III. Pasang and I returned to Camp II next day. It was hard work getting downhill. By the 15th we were all back at Camp I and all set off for Badrinath for another rest.

THREE MORE SUMMITS

W. G. LOWE

Back in Badrinath after the Mukut Parbat climb we rested for a week. Hillary was less restful than the rest of us and he soon had read

all the books, written his letters, weighed up and indexed all our food and supplies, sketched out three or four plans for exploratory journeys, and was after some more peaks. So he and Cotter set off to re-establish Camp I while Riddiford and I remained at Badrinath to complete the newspaper articles.

The day that Hillary and Cotter departed, the French party from Nanda Devi arrived. Their tragic story is told elsewhere in this Journal. The survivors were six in number and they had with them a seventh, an Indian Army Officer to act as interpreter, a liaison to facilitate the many difficulties. The officer was an Indian of 25, a keen and experienced mountaineer with a very English attitude towards climbing. He had been to the French party's top camp on Nanda Devi (Camp IV) and recounted the story of their attempt in detail. As the French spoke only fragments of English and we spoke only fragments of French our discussions were limited but it didn't stop us from talking for two days and almost all of one night. Their equipment was of great interest to us. Their tents were well designed but far too expensive and luxurious for our pockets. The high-altitude tent (of which they had thirteen) was of orange poplin, with sprung guy ropes, nylon inner linings, and waterproof floor which was detachable (to enable them to get snow from under the floor without having to go out in the storm). These tents weighed $9\frac{1}{2}$ lb. They had other larger tents—mess tents, store tents, Sherpa tents; all large enough to stand up inside. Their single sleeping-bags were shaped too close to the body and were inferior to ours. Their packs were just light sacks, their ice-axes no longer than 2 ft. 6 inches with 4-inch well proportioned picks and tiny spade blades—quite inadequate, we thought. When they saw our ice-axes they roared with laughter and thought we were crazy to carry such monsters. We told them we had difficult ice mountains in New Zealand, and these ice-axes were standard equipment. They were interested to know about our mountains and naturally inquired about the heights. When we told them that our highest was 12,349 feet they were just a little patronizing. Their main baggage required over 100 porters to shift, and their food, climbing equipment, and special valley walking ensembles were for our admiration but not imitation.

At the end of July I returned to Camp I and joined Hillary and Cotter. The weather had been patchy—foggy days with afternoon snow, and had prevented them from doing any climbing. On the morning following my arrival Hillary was out of bed at 3 a.m. The weather was doubtful with only a few watery stars showing, but he hounded me out and after a meagre breakfast we two left to cross a dividing ridge and make an exploratory journey into the Uttari Chamrao glacier. We moved rapidly that morning. A small skiff of

fresh snow covered most of the rocks and we reached the crest of the range just as the sun came up. The sun cleared away low-lying valley mist and the peaks lit up with the pink that we know so well in New Zealand. It was cold and we dropped down on to the ice of the Uttari Chamrao and made for a rock peak marked on the map 19,560 feet. The climb was easy—long scree slopes, snow patches, and then a short scramble to the top of a rocky thumb. The new angle on the peaks and the valley systems was the most interesting part of the day. To the north of us was a symmetrical snow peak marked on our maps 20,760 feet, and we decided to attempt this without delay. We returned to Camp I at about 3 p.m.

The next day Cotter, Hillary, and myself carried a light camp into the Uttari Chamrao glacier. As we pitched camp it began to snow and during the night some 4 inches collected on the ground. We debated for too long the following morning and procrastination lost us the climb. It began to rain about 9 o'clock but eased off and we left at 10 and spent an enjoyable day rock climbing. We climbed Peak 19,450 feet, reaching the top about 1 o'clock in mist and cold conditions. Our food had run out but we decided to exist for the night on a small pannikin of rice and to leave early without breakfast to attempt Peak 20,760 feet. But next day the weather was even worse and we lay in our sleeping-bags discussing queen-bee raising, bulb culture, the sex life of a queen bee, marriage and divorce, education, and finished on New Zealand mountaineering. I may say that by far the most popular topic on the whole trip was the subject of New Zealand mountaineering. We returned to Camp I in a snow-storm.

The next day Hillary and I, with three Sherpas carrying a week's food and our five-man tent, left for the site of Camp II. We re-established this camp and on 1 August the weather developed into a storm. This lasted for two days, and we emerged at 5 p.m. on the second day, dried out our sodden gear, and prepared to climb to Camp III on the following day even though deep new snow covered the ice-fall. The next day we were going exceedingly well and the feelings of altitude were being overcome. While traversing the lower lip of a huge schrund the lip broke immediately under Hillary, who was leading. I jerked the rope tight, which overbalanced him at my side of the slope. The breaking of this lip was most unusual and as far as we could make out was caused by the rotting of the snow in the crevasse wall. The episode completely upset our breathing and heartbeats and although we had been moving well together we found we could only go a few yards before we were breathless. From Camp III we had two objectives. Our first was Peak 22,180 feet and our second was Mukut Parbat. For two days in Camp III we were demobilized

by another storm. On the second day wet-snow avalanches roared off into the ice-fall below us and made the line of retreat seem dangerous. The weather cleared a little, and after a day to let the snow consolidate Hillary and I climbed the snow peak 22,180 feet. We left at 9 o'clock and were on top about 11. There were very few crevasses and the slopes were not excessively steep, but we pigeon-holed the last 200 feet to the summit. Apart from the route we had climbed every other approach to this peak was sensational. We looked down a tremendous cliff of rock and ice to a very large north-flowing glacier that drained into Tibet and looked as if it would give good access to the peaks of Abi Gamin and perhaps Kamet. The descent was easy although we were apprehensive about the condition of the snow, which was thigh deep. We had ample time to study the ridge of Mukut Parbat, which was heavily snowed up, and a strong wind was blowing the loose snow into Tibet; and as the monsoon was properly about us with breaks of fine weather lasting no more than four or five hours we decided that an attempt would be unwise. The four days which we had spent at 21,000 feet had stripped the flesh off us—our appetites were gone, and we were not really fit enough for a long, hard day. So the day following our climb of Peak 22,180 feet we descended to Camp II, and then on to Camp I. Between Camps III and II we crossed some easy slopes which we could not avoid but which had a thin crust, and two or three times the crust settled with an ominous crump which alarmed us not a little.

Riddiford was with Cotter at Camp I, and it was decided that finance would not permit any further exploration or other plans. We had five days' kerosene and four days' food left, and while Riddiford went back for a last look at Nilkanta the rest of us packed a tent and light rations for another attempt at the more approachable but none the less virtuous Peak 20,760 feet.

PEAK 20,760 FEET

F. M. COTTER

A young Mana porter arrived at Camp I as we were about to leave for the Uttari Chamrao. He had come from Badrinath with our mail, and after hearing the latest news and glancing through the mail we saw him off down the moraine wall towards the Saraswati valley, which was enveloped in cloud and fog. Then we shouldered our packs, Hillary, Lowe, and I, accompanied by Sherpas Nima and Tenzing.

We crossed the rock spur below Peak 18,740 feet, down to the stable moraine of the Uttari Chamrao glacier, then headed towards our goal, the glacier head. Three hours after leaving camp we

splashed through cold glacial slush across the glacier and on to the rocky slopes of Peak 20,760 feet. We established our camp on a moraine shelf 100 feet or so above the ice. This site provided a magnificent view-point. At the head of the valley Peak 22,760 feet, a breath-taking pyramid of rock and snow, soared heavenwards, its translucent ice-fluted summit shimmering above the steep, unbroken ridges.

Our camp at 17,500 feet made cosy and a meal under way, we put on a singsong, entertaining our Sherpas with part-songs, solos, and Maori hakas, Lowe proving himself as a man of many parts—song-leader, soloist, and Maori warrior. The unrestrained and boisterous laughter of the Sherpas, though quite understandable, was, nevertheless, rather dismaying—we were doing our best. It was later on that we came to learn that their demonstration was the normal manner in which the Nepalese hill-folk show their appreciation of an entertainment.

The morning dawned fine and we left our tents early to be sure of a view from the summit ridge before the daily deterioration of the weather set in. A steep rock rib led on to the summit ridge. The higher we climbed the more doubtful we became that our degree of acclimatization was as advanced as we had believed it to be. The climbing was straightforward, the ever-widening panorama astonishing. Once on the summit ridge breathing became less strained and cameras clicked busily as heavy cumulus cloud rolled over the Tibetan border, obliterating some of the peaks in the panorama. Kamet and Mukut Parbat were already lost from view, being enveloped in the all-embracing cumulus so prevalent in this region. The ridge on which we stood rose 800 feet to a snow dome, 20,760 feet. In the reverse direction we gazed up to the soaring summit of Peak 22,760 feet.

In his writings Smythe has often referred to the pleasure of climbing 20,000-foot peaks. This, of course, had been recognized by all three of us, but in order that the truth of the claim be verified I was handed one end of the rope together with a compliment on my physical fitness. I accepted the end of the rope together with the doubtful compliment, and plugged up the 800 feet of deep powdered snow to the summit. Like the ridge the summit itself was heavily corniced, so we belayed one another in turns on to the summit, each in turn peering through a hole in the summit cornice down to the moraine of the Balbala glacier, 3,000 feet almost directly beneath our feet. Across the valley the 22,000-foot peaks topped by Balbala itself looked inviting, particularly one which was similar in appearance to our Mt. Sefton. Shouts from Nima and Tenzing accompanied our arrival on top. Hillary hacked a staircase down the now

frozen steps to the rocks and energy was kept in reserve to roll boulders down the 3,000-foot drop on the Balbala side. Down at camp we packed the gear and set out back for Camp I, rain soon setting in.

Late the following afternoon we had packed the last of our stores and equipment into kitbags, and most of these we carried down to base camp at the entrance of the valley. Hillary, Lowe, and I set out for Badrinath next morning, the Sherpas to carry down the last of the supplies from Camp I and to await the Mana porters, who were due any time. The porters and Sherpas arrived at the Badrinath bungalow about midnight, the Sherpas very drunk, and we discovered next morning that some tinned butter and other food had disappeared from the kitbags. Our larder was now completely bare, so as soon as the Nilkanta contingent arrived back plans for the home-ward trip were made.

Pasang's suggestion that horses rather than men be hired to transport the expedition's equipment, on the grounds that 'horses no talk', produced all-round agreement, and an opening bid was made to a man who had four horses available. We estimated three animals would be all we needed, although those who were doubtful if they would make the 120 miles to Ranikhet had thoughts of travelling *à cheval*. He was a likeable old chap and finally had his way by insisting that we hire the four horses or none at all. So four it was.

Hillary and I spent our last afternoon at Badrinath in making a dash to the head of the Rishi Ganga, a small stream rising under the precipices of Nilkanta. We were by then extremely fit, and sad that this was the last we would ever see of the flowers and mountains of Garhwal; but the Himalayas, unrelenting to the human body, had brought us to the state of the pilgrims in J. E. Flecker's *Hassan* who, when challenged

But who are ye in rags and rotten shoes,
You dirty bearded, blocking up the way!

replied:

We are the pilgrims, master; we shall go
Always a little farther: it may be
Beyond that last blue mountain, barred with snow.

The local Indian postmaster and doctor were fine friends to us and farewells were said on the doctor's veranda next morning as we prepared to leave. The cold rain only dampened our spirits the more as we jogged down the pilgrim track to Joshimath, twenty miles down-valley. Smythe's Valley of Flowers (Bhyundar valley), which rises from the Alaknanda valley, was soon by-passed and later the 1,500-foot climb from the river to the Joshimath bungalow was made more pleasurable by the purchase of peaches and oranges. Joshimath is

best remembered for its orchards and for the evening quiet and serenity which is such a lasting memory of Himalayan foot-hill travel. To say farewell to Joshimath is to say farewell to Garhwal, for on this steep, terraced mountainside at the confluence of the Kamet and Nanda Devi watersheds one holds for the last time that affinity with nature which makes us mountain lovers. Ahead lay the plains, and as we left the bungalow, the prettiest of all we had sheltered in, and stared down to the yellow ribbon of water in the gorge, we knew our thoughts would always return to the mountains and valleys which lay at the source of that same flooded mountain river. Soaring mountain eagles wheeling above our entourage ushered us out of Joshimath and down the grassy track towards the plains of India.

The pilgrims along the track whispered rumours of a slip, and the farther we went the louder the whispering became and the bigger the slip. It was indeed a nasty sight—the whole hillside washed away and an ugly brown river of mud boiling down to its junction with the big river. A cloudburst was the cause of the slip, and the only way of by-passing it appeared to be the heart-breaking packing of the gear thousands of feet up to the head of the valley. Hillary and I surveyed the scene of destruction from high up on the hillside, and a discussion later produced a solution. Our pitons and carabiners, which to date had not been used, would be tested on this slip. Early next morning we stamped out a track in the mud to the edge of the 150-foot cliff face and Riddiford was lowered down the steep face to the water's edge and on to a rock in the stream, where he took in some rope before preparing to jump for the far bank. It looked suicidal and nearly was, for he dropped face first into the middle of the torrent, disappeared from sight, and emerged several yards downstream. By a great effort on his part he got to the bank and so the torrent was spanned. Hundreds of feet of rope were used to provide an endless pulley system which took first our packs and then us to the far bank, which was still falling away, hurling large boulders down into the stream. Pasang was last across and was left suspended 50 feet above the river for quite some time. Even his knowledge of fifteen languages didn't help to get him untangled, and his usual superior air and dignity were badly upset.

The journey to Ranikhet was straightforward now, the bare hillsides changing to open jungle of pine and fir. Three days out from Ranikhet we had to part company from the horsemen, who on account of flooded rivers on the usual track went a different route, double marching so as to reach Ranikhet the same day as we did—for a considerable fee, of course. The danger of being attacked by tigers and panthers became a secondary thought when we found loathsome blood-sucking leeches attached to our legs.

Every tea-shop we came upon received our patronage, till our last night away from civilization, at the Gwaldam bungalow at 6,500 feet. The bus terminus was yet another 14 miles off and we left in the dark to make the 8 a.m. departure time. But we missed it and caught another later in the afternoon, to travel a dangerous and hectic 20 miles to a small village; and late that night we reached Ranikhet. Big news awaited us—two to go to Everest with Shipton's party. So ended our three months' mountaineering in Garhwal: yet was it the ending or rather just the beginning?

The New Zealand Alpine Club have courteously permitted us to make use of the foregoing article which is also appearing in their Journal.—ED.

THE FRENCH ON NANDA DEVI
TROISIÈME EXPÉDITION FRANÇAISE
À L'HIMALAYA

JEAN-JACQUES LANGUEPIN, LOUIS GEVRIL, LOUIS DUBOST,
AND LOUIS PAYAN

This tragic story has been pieced together, with the co-operation of the French Alpine Club, from whom we received the beautiful illustrated brochure produced by two of the survivors, MM. Languépin and Payan, and relevant publications of Alpinisme and La Montagne.—ED.

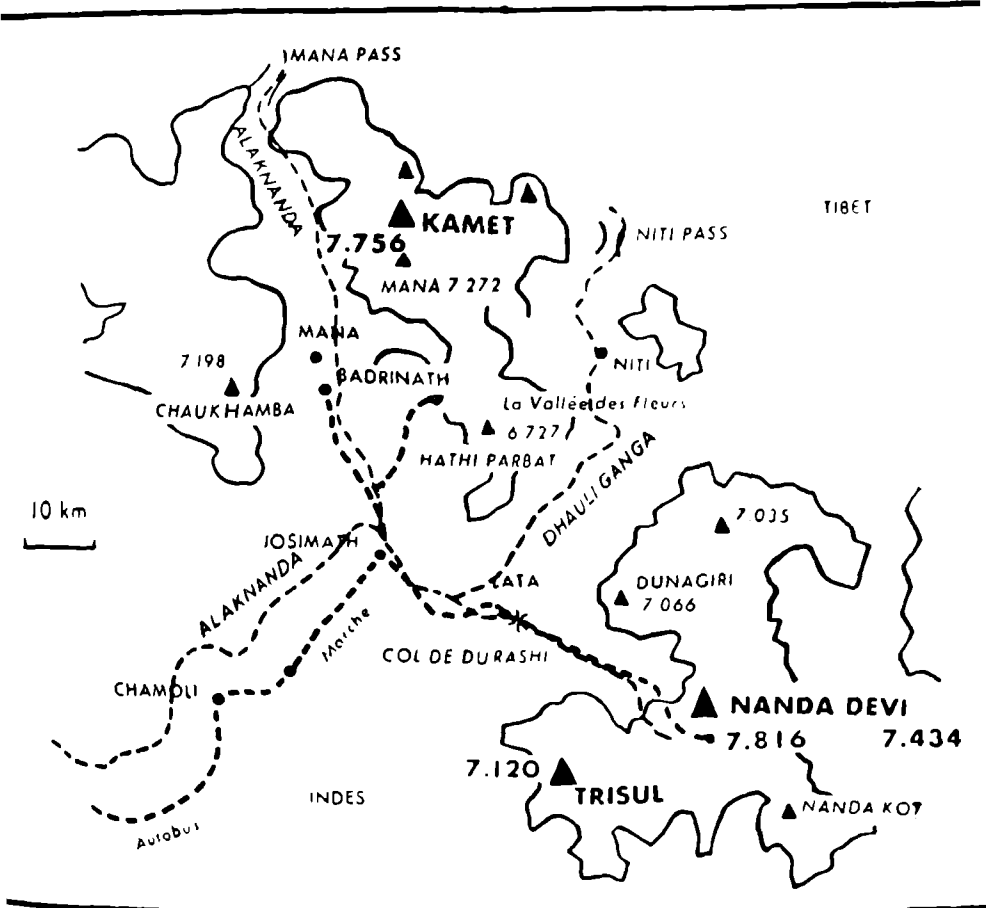
THE Expedition was organized by the Section Lyonnaise of the C.A.F. under the command of Roger Duplat: their President, M. J. Montel, has written: 'A team must have one soul, and the soul of this team was Roger Duplat, a leader of invincible will.' The rest of the party consisted of Louis Gevril, second-in-command, Alain Barbezat, Louis Dubost, Paul Gendre, Jean-Jacques Languépin, Louis Payan, and Gilbert Vignes.

Their first intention was to acquire what few French climbers have had the chance of possessing—Himalayan experience. But the main object was to find out whether, with modern technique and improved equipment, it would be possible to adopt in the High Himalaya the more Alpine practice of varying routes on peaks already conquered, and of making traverses between adjacent peaks at high altitude. The actual project was to attempt the traverse of the formidable arête, three kilometres in length, which links the east and west summits of Nanda Devi. Louis Payan writes that it was 'undoubtedly an audacious and perhaps rash plan. The technical difficulties of the arête, nowhere less than 23,000 feet in height, that "awe-inspiring rampart of rock and ice", would rule out all possibility of retreat and would leave for those who attempted it no alternative to victory: they would have to overcome, unaided, each difficulty as it arose, and their wills must be proof against intense cold, exhaustion, and the numbness of mind and body which would lie in wait for them. Such, then, was the wonderful project!'

With the Sherpas Tenzing (Sirdar, as later with the Swiss on Everest), Dawa Norbhu, Sarke, Da Namgyal, Gyaljen, and Panzi, they reached Chamoli on 27th May, and after overcoming the usual transport difficulties got to the 1936 Base Camp three weeks later.

The plan was simple: first the ascent of Nanda Devi West by its southern spur; then the traverse of the arête linking up with Nanda Devi East and the descent of the south-east spur to Longstaff's col.

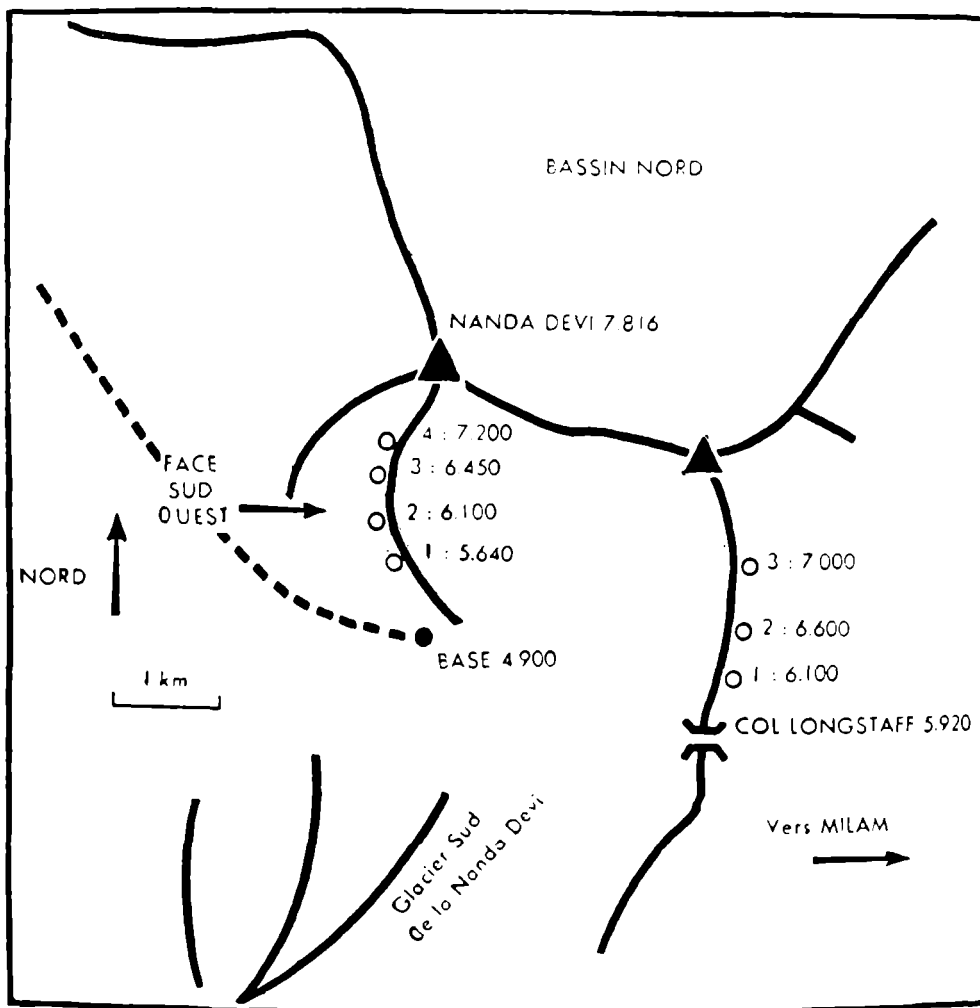
Camps I, II, and III were installed near the same sites as in 1936 and three tents were taken up to Col Longstaff in readiness for the party who would go up to meet Duplat and Vignes, the chosen pair for the arduous traverse. By 26th June all was prepared, the weather was perfect though almost too hot, and next day Duplat and Vignes with two Sherpas ascended to Camp II. On 28th June they passed



through Camp III and pitched their bivouac at Camp IV above the slab pitch over the camp at about 23,700 ft. On 29th June they sent down the two Sherpas with a scribbled message: 'Expect to be on summit by noon—bivouac below eastern summit—sleep at Col Longstaff. From our camp above the slab pitch we send down Ang Dawa and Norbhu, both ill. Succour them, please. Clear camps down to Camp I the day after tomorrow. Bring back everything. I want Tilman's rope. Gil and I are suffering from severe headaches but otherwise all goes well. Camp env. 7,500. Roger.'

They moved up rapidly from the bivouac over ground easy for such as they, unroped and not wearing crampons. They were last seen from Camp III at about 2 p.m. still moving towards the summit. Then the mist enshrouded them.

On 30th June Louis Gevril, second-in-command, climbed to the bivouac site (Camp IV) and searched the long arête, but could see no trace of them. In the afternoon there was a sharp snowstorm but next morning it was fine again. Meanwhile the camp at Col Longstaff had been installed according to plan and on 2nd July Louis Dubost and Tenzing followed the route taken by the Poles, Bujak



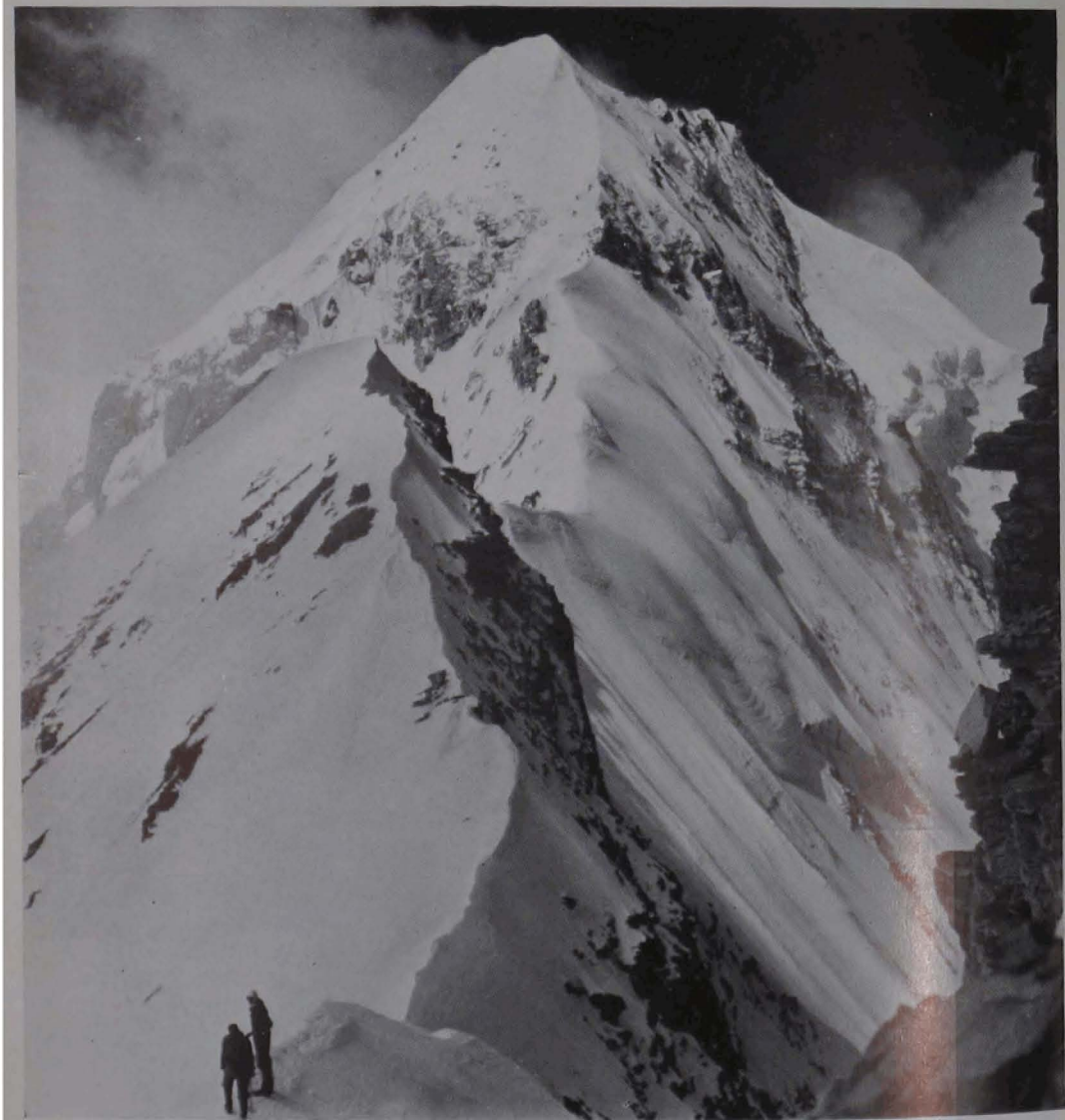
and Klarner, and found some pieces of rope and some rusty pitons. At Camp II they got a message from below expressing anxiety at the absence of news. They went on, continually examining the long arête with their glasses, and on 6th July, both utterly exhausted, reached the summit. Both had frostbitten toes. Tenzing had surpassed himself on the climb. The wind on the summit was so fierce that they were forced to descend some distance before they could use their glasses. They hoped, not seeing any sign of the other two, that they had got back to safety, and they descended to rejoin Payan at Camp II, reaching Col Longstaff on 8th July and going on to Base



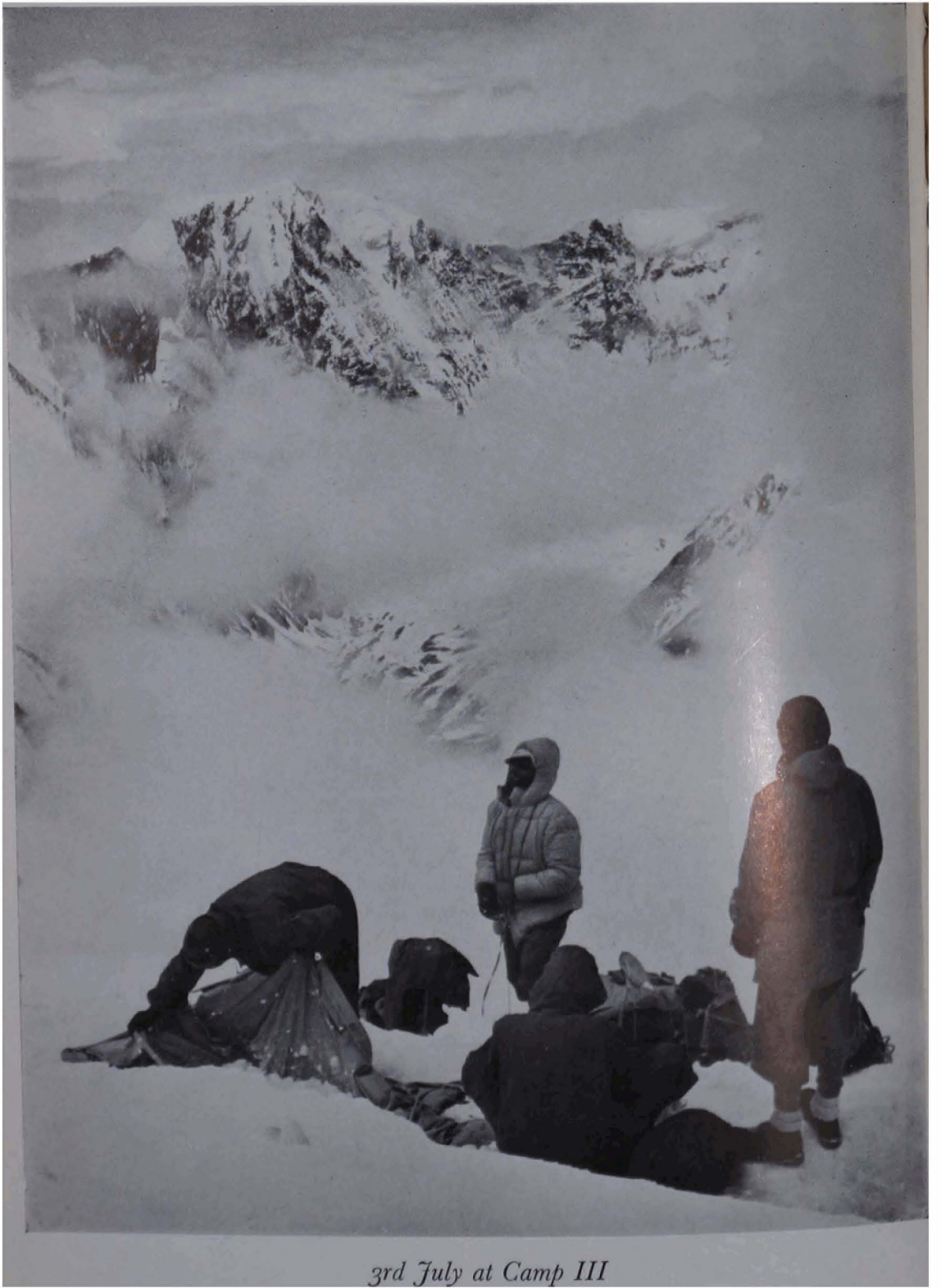
Roger Duplat, leader



Nanda Devi from Longstaff Col



Looking south from Longstaff Col



3rd July at Camp III

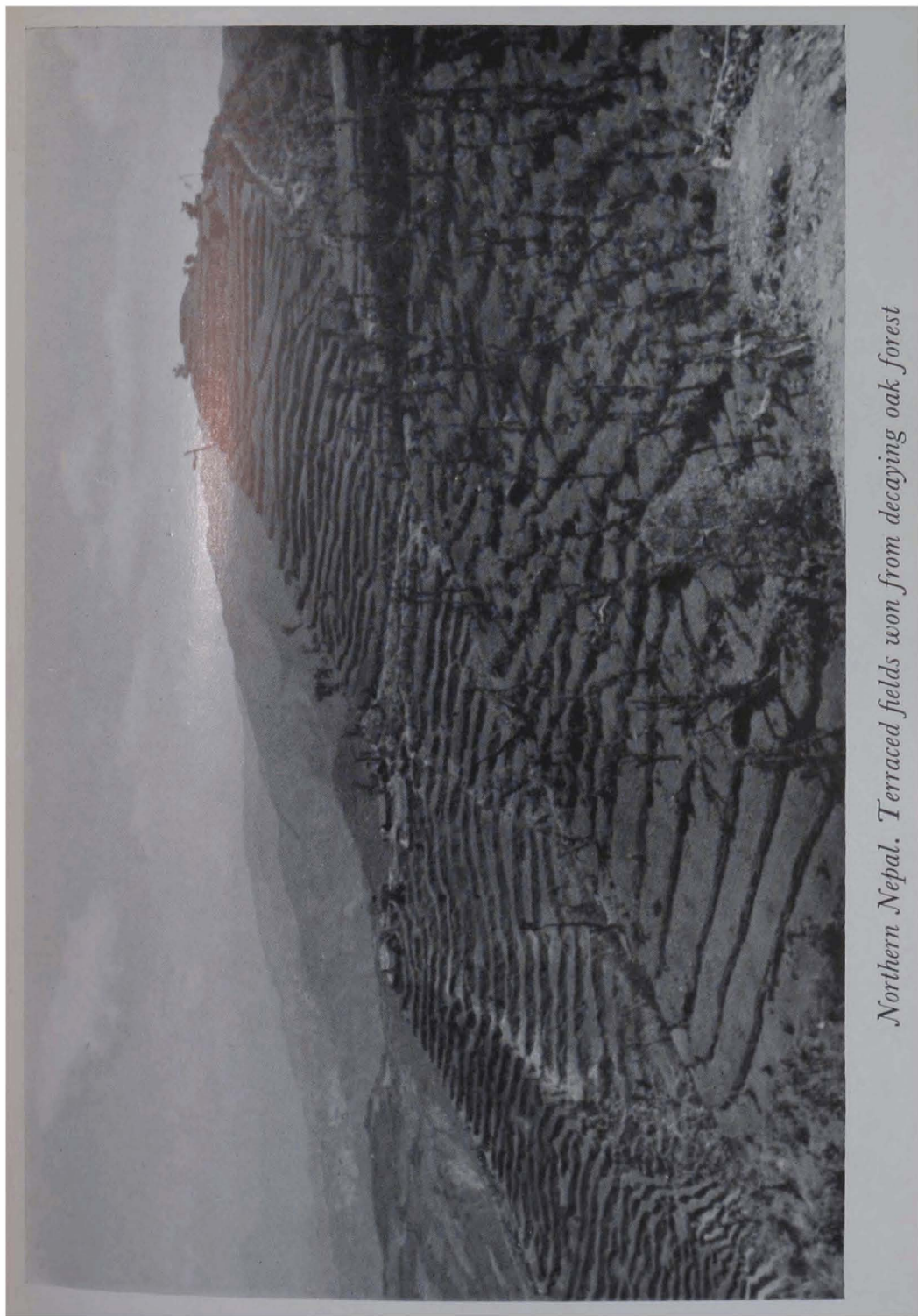
Camp the same afternoon. But by now, nine days after their disappearance, there was no longer any possibility of Duplat and Vignes being alive. Gevril's theory is that his comrades met their death when a cornice broke off and carried them down to destruction. He himself came close to death when making a gallant attempt to cross the Rishi in the forlorn hope of examining the north face, for the torrents were in full flood and it was useless and dangerous to remain longer at the Base Camp. He was rescued through the brave efforts of Sherpas and of coolies.

TO THE GOSAINKUND

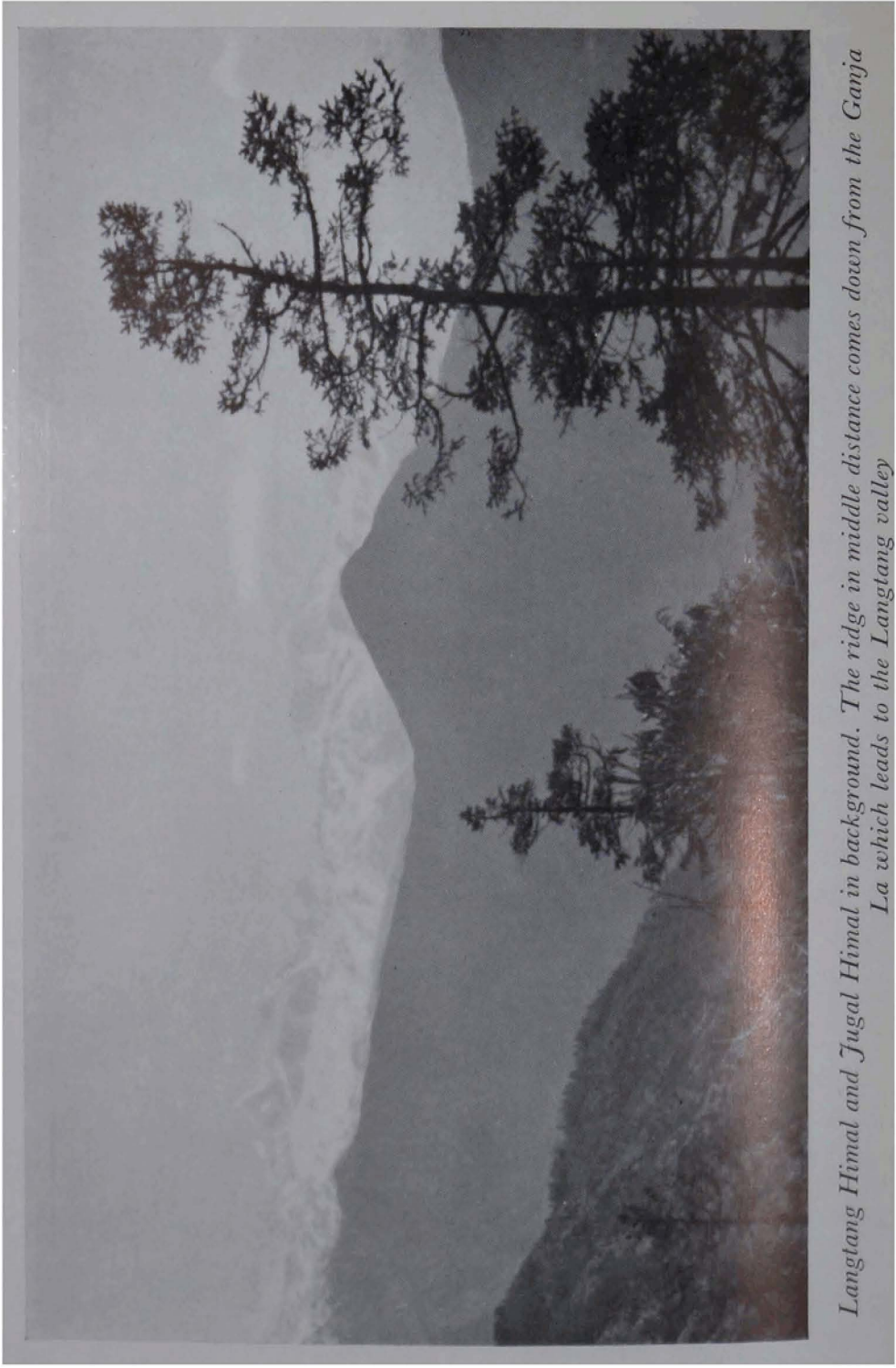
ELLA MAILLART

AT the beginning of April 1951 I landed on the airfield at Khatmandu with the intention of studying some remote Nepalese village as near as possible to the tree-line: its daily activities would in many ways be similar to those of my Swiss village (the second highest in Europe), where the tiny fields are poor and a mere survival exacts much work from the inhabitants. An interesting parallel could be drawn.

Fear of leeches made me choose the season before the monsoon; for my Kodachrome film I also wanted the spring, when the rhododendrons are in bloom. I did not foresee that in March and April the blue sky is often marred by the heat-haze rising from India, affecting the light and spoiling the view. The valley of Muktinath, visited by both French and English, offered me good possibilities, among them girls in colourful costumes. It would take fifteen days to reach that part of Nepal, but I had hardly given my letters of introduction to the Maharajah Prime Minister when troubles upset the capital. The Prime Minister lost most of his power and the few Englishmen living in Khatmandu thought I had only a faint chance of doing as I wished. The Nepalese I met were charming and I knew they would not wish to disappoint me by barring my journey into the mountains—I was told that my entrance visa would have been withdrawn altogether had I not chanced to arrive five hours before the trouble began. The situation remained uncertain, and then my fate fell into the hands of the Home Minister of the Congress party, opposed to the Maharajah's party of the Ranas, or princes: with a sad heart I studied my map, and in order to try and please everybody and everybody I chose the smallest possible tour, to the north-west, in the valley nearest to Khatmandu, and I dismissed the Sherpa I had brought from Darjeeling, since I could never now attain the Tibetan border. I proposed to follow a long ridge to Saone Mani—Mani, meaning 'Jewel', is one of the words in the main Tibetan prayer; used geographically it indicates a Buddhist monument—and from 12,000 feet to drop down some 400 feet to Malemchi and eastwards across the valley to Tarkhe Gyang, two villages on the upper course of the Indravati river, a branch of the great Sun Kosi. Bill Tilman had touched Tarkhe Gyang on his way back from Langtang over the Ganja La in the autumn of 1949. Being over 18,000 feet, the Ganja La is used only in August and September. I intended to climb to the foot of it and, camping there, wait till a clear sky allowed me to film some snow mountains.



Northern Nepal. Terraced fields won from decaying oak forest



*Langtang Himal and Jugal Himal in background. The ridge in middle distance comes down from the Ganja
La which leads to the Langtang valley*

Colonel and Mrs. Proud of the British Embassy were most helpful to a newcomer and gave me details of the track to Saone Mani, and the rest I gathered from the Lama of Bodhnath at the most important Tibetan shrine outside Tibet. This charming and lively man speaks an English of his own; he spends his summers in the tiny hermitage above Malemchi which belongs to him. It looked as though my expedition were to be a mere excursion, devoid of the responsibility of crampons, rope, and ice-axe. Later, when I altered some of my plans, I ended by visiting the sacred Gosainkund, the 'Lake of the Religious', beyond a pass (which seems to be 16,770 feet high) to the north of Saone Mani. The few classical books of Nepal mention this lake: I am probably the first European to have been there, which is why I commit it to paper. Nepalese officials are most orthodox Hindus and they had never allowed foreigners to join the Shiva-ite pilgrimage to the Gosainkund. I did not ask for a permit; indeed, I went there unintentionally, so to speak, when the lake was hidden under an august armour of ice and snow. It was a very interesting tour, especially now that I have forgotten the mad trace of the path that led me up and up only to go down and down—more than once I thought the main result of mountaineering is to make you appreciate your evening cup of tea! Ponies are useless in these mountains—men transport everything for the long caravans one meets, even carrying the old and voluminous, often in slippery gullies with precarious foothold.

I took with me a small tent, a good sleeping-bag, a pneumatic mattress, a petrol primus, a rucksack with three cameras, 30 lb. of Kodachrome 16-mm. film—in all two coolie loads including my big bamboo basket with my cooking-pan, mug, and provisions. These were all bought when at last I was able to set off accompanied by Lieutenant Malla, the best possible interpreter, lent to me by the Army for three weeks, as the Government had not approved my idea of travelling with the Lama of Bodhnath. Milk, eggs, butter, and *tsamba* could be bought on the way; I went to the bazaar for tea, dried apricots, raisins, nuts, rice, and *churia* or local rice-flakes, most useful as a ready meal. My bill came to about £1 sterling—Mrs. Proud presented me with sugar. And then at last we started, with only the weather to worry about, for every day storms were blackening the hills around the valley.

Lieutenant Malla was accompanied by three men—orderly, sergeant, and cook; his army equipment was heavy and he needed five coolies altogether. To the eyes of the Nepalese who saw us he was the 'Sahib' sitting at ease on his spotless camp-bed, under his big double-fly tent, waiting to be served with dinner, while I squatted in my tiny tent, crying over peeled onions, pumping my mattress or cleaning my frying-pan. I had surprised everyone by turning up on a hired

bicycle even when I called on the Maharajah—and I got much fun out of joking with Malla and telling him the new government was going to introduce democracy and considered I was well qualified to demonstrate the inelegant ways to which I was accustomed in the West.

But let us start. I was driven in style in the station-wagon belonging to the British Embassy to the foot of the hills at Sundari Jol, Khatmandu's water-works. Our seven coolies were there, and we began the steep climb to the Shoepuri ridge through tiers of tiny terraced fields, sown with maize and potatoes, the wheat having been harvested. We met many villagers taking goats or kids to the capital, carrying planks, charcoal, bamboo baskets, medicinal plants, or paper made with the bark of the daphne. Bare-legged men with powerful muscles in their hairless calves and thighs, and girls of the Tamang tribe with ample skirts and red necklaces, and coolies like the moving forest in Macbeth—carrying bundles of green foliage for their buffaloes. Next day the panorama was unforgettable: Ganesh Himal to the west, the Langtang peaks and Gosainkund Lekh barring the northern sky and the range of Jugal Himal spreading out in the east confronted me. We followed the ridge to Pati Banjang where our north-south track crossed an east-west path on a narrow saddle, and then on to Gul Phu, where the coolies found shelter from storm in the hamlet and Malla bought a chunk of deer.

The third day's climb was steep, among terraced fields over an area of dying oak forest—tall and stripped bare, the gnarled trunks looked desperate, praying to the sky. Higher up the forest was still alive and more healthy, although the trees looked pathetic with most of their branches cut off. There I saw for the first time a pale-green flower with a cobra-like head which Malla called *banko*, and also a bush with clusters of dark-blue berries, the sour-sweet *jun madro*, or cherries, of the Khumba Sherpas. At Pati Banjang we had been offered *kaphul*, a dark-red fruit like a small strawberry but with a blue stone—*myrica nagi*, a relation of the sweet gale, or bayberry. We came across our first shepherds, camping under tunnel-shaped bamboo mats. One woman sat weaving while we drank our curds. Just above their tiny camp we could see the beginning of the rhododendron forest, where the white blossom was already fading. The coolies were going slowly, and we decided to camp early in the hollow of Karka Banjang. Among flowering bushes of purple rhododendron I camped on a small crest, my tent facing the Himalaya; and near by a tiny kingfisher-blue bird sat on a blood-red cluster of rhododendron—a perfect camp, especially next morning, when the snow mountains were clearly seen, not so far from our ridge.

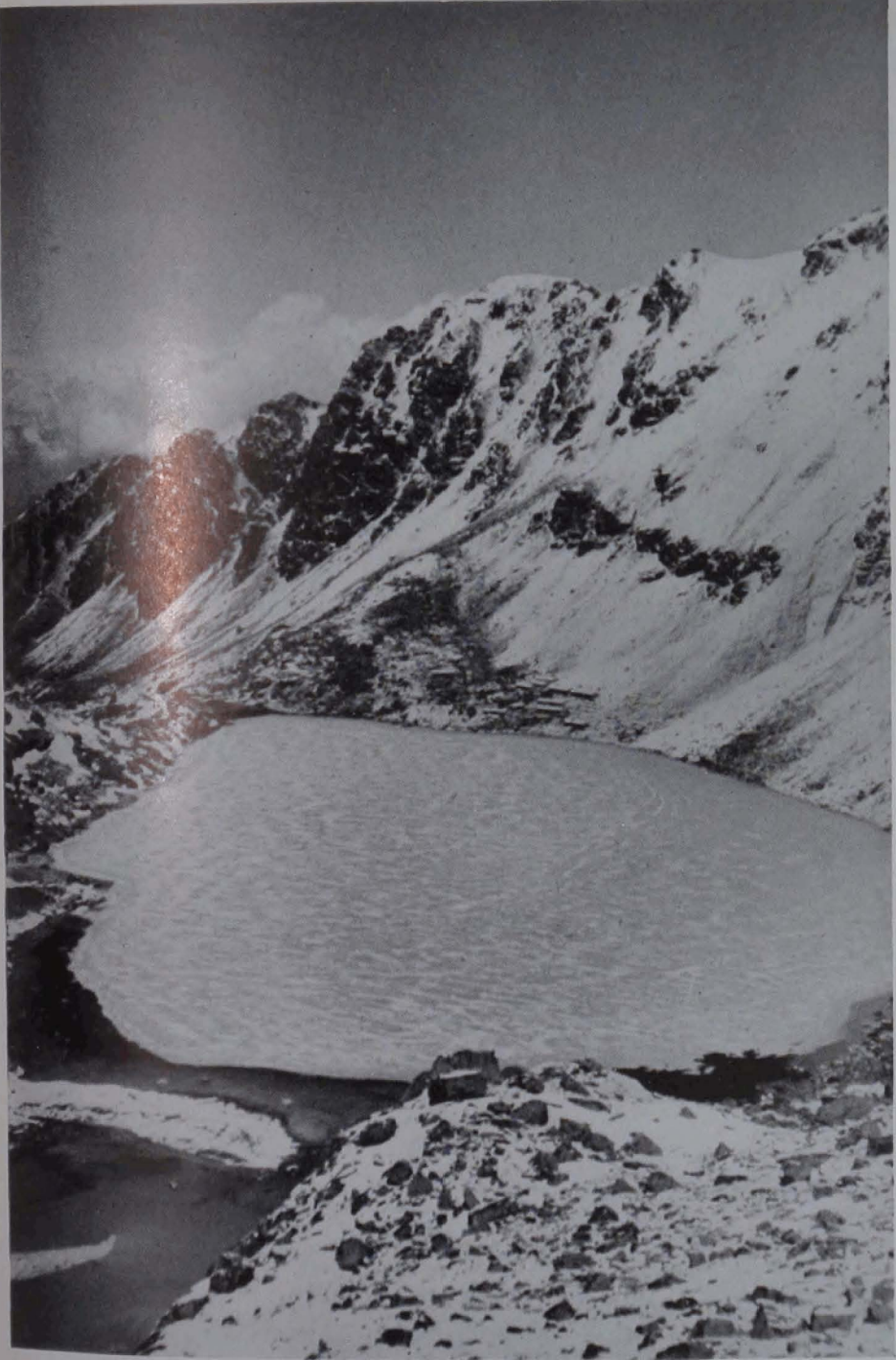
By midday on the fourth day we had reached Saone Mani, 12,000 feet, a chorten on a small, level part of our knife-edged hill, decorated with engravings of 'Om Mani Padme Hum'. It was such a magnificent spot, and the air was so bracing and the proximity of snow mountains so exhilarating that I decided to postpone our descent into the abrupt Malemchi valley, and in the afternoon, with a wild, free wind, Malla and I went higher on our ridge, following a giant's causeway leading to a pyramid of turf. A wild goat looked at us curiously, pheasants rocketed down, we found young bamboo shoots, dwarf junipers, and budding rhododendron bushes growing in sheltered places. Enchanted by our narrow mountain and its wildness, I planned to follow it to the north next day. As far as I could remember from the wall-map studies at the Embassy, the pilgrims' way to the Gosainkund followed our ridge to a pass leading into the remote valley of the marvellous lake. To the south-west, tiny among a few terraced fields, I saw Tarkhe Gyang, the only inhabited spot I could detect in the big valley at our feet. Malemchi was too directly below us to be visible. Above Tarkhe I saw the whole length of the ridge parallel to ours leading up to Tilman's Ganja La—it looked rather tiresome. Why go so far to look for the snow scenes I wanted for my film? I might find them nearer and thus avoid a wearisome climb.

Next day, leaving the cook to look after the camp, we followed a path, deserted at that season, along the top of our narrow hill while moving mist filled our valleys on both sides. Reaching a coomb facing north-west and finding a few stone shelters, we knew we had arrived at Thare Pati; on the ground, barely freed from the snow, tiny potentilla plants looked crushed and dead. We hoped the midday sun would absorb the mist and pushed on. The track was pleasant enough, though now and then it crossed snow-gullies on the north-west slope. Malla enjoyed the snow as much as I did, but Dan-mare, his orderly, had never walked on it and was most careful, even distrustful. Later the snow grew thicker, the slope more precipitous, and the track vanished; far away and below we had glimpses of a path descending to the north-west into a deep and rocky horse-shoe valley. Malla thought that might be the pilgrims' way, but in case we had left it on the other side on top of the ridge we climbed up to be sure, on all fours most of the way. There was no way to any pass up there, but rising above the snow I found the *soon-doope*, a dwarf rhododendron, still brown and dead, but full of an enchanting fragrance. It is used for making incense sticks.

We turned back, intending to explore the north-west gorge next day, but on our return to Saone Mani we found that our new coolies, four girls among them, had come without food, and perforce we had

to start at once for Malemchi. The headman had sent us Topgi, a smiling Sherpa carrying a muzzle-loader. Unlike the bare-legged mountaineers he wore Khatmandu trousers, tight below the knee and wide above, and he carried his town-shoes in his hand—no doubt he had intended to create a good impression, but a huge blister on his heel had forced him to walk barefoot as usual. In the winter Topgi was a hunter of deer, foxes, hares, pheasants. Under his guidance we visited the two villages of that upper Malemchi valley, at 8,000 feet. Even the poorest houses brighten their façades of dry stone by wood-carvings on the three traditional windows, and the shelves and panels of their living-rooms are always decorated with carvings. The Buddhist shrine occupies the main corner by the window, above the low, hard bed-alcove covered with a bright carpet from Lhasa. (This room is on the first floor, the ground-floor is always the stable.) A new guest is at once offered a bowl of the local beer, or *rakshi*, the home-made alcoholic drink, while fresh Tibetan tea is churned with butter in a large bamboo-tube; the open fire is laid on a hollow stone in one corner of the room, and above it chunks of meat hang to be smoked. Karmu, a handsome lass, is preparing an appetising potato-curry. While trying to find out how cheese was made I was surprised to find that the cattle, a cross between zebu and yak, roved the steep forest, and at night were tethered behind thorny hedges to protect them from prowling leopards. The rare pasture-grounds high on the tops of the ridges were not yet covered with grass for them. A clarified butter is produced from curds and after churning a white cheese called *siri* is made: I remembered that in Valais we call that same cheese *sere* or *serac*. Related to the Tibetan, the language of the Sherpa is full of strange sounds. The religion is also similar to the Tantric Buddhism of Tibet. In Nepal rich men can have two wives, like the kings of that country; it was the second, most matronly wife of the Bodnath Lama that I saw being carried on a man's back up and down a slippery and precipitous path.

We visited the sister of our Sherpa in the village of Tarkhe Gyang (Gyang means 'temple'), crossing the upper course of the Indravati river by a bridge of tree-trunks. Ploughing was in operation in the narrow fields where the rye had been harvested, and on a hard-trodden shelf of earth at the entrance to the village a big beam was rhythmically threshing the grain, two men standing on it to use it as a lever. We camped on the wide verandas of the temple to see as much as possible of village life, and there I slept by the side of a 10-foot high prayer-wheel where a tiny butter-lamp burned all through the night: whether to turn the wheel or to look at the first European woman in Tarkhe, most of the villagers came to fill my



Gosainkund sacred lake

room, and much reciprocal staring took place! Later I was invited to visit a number of homes and I soon found myself distributing medicines against malaria, bronchitis, dysentery, and inflamed eyes, for which I was given rice, flour, and eggs in exchange. I was surprised by the cleanliness of well-to-do families, the latrines at the end of every balcony cleansed by ashes, the homespun weaving of Lakpuri our hostess, the natural dignity of many of the women, and the fact that there were nine nuns living in the village. Lamas and necromancers being much in demand in Tibet and Nepal, religious life is part of everyday life, and the villagers often call on the few anchorites who live in their cells high above the village; one of them remained invisible, having shut himself up for three years, three months, and three days, his son bringing him his daily food.

In front of every house stands a mast with a prayer-flag on it, and many shrines and cairns are decorated with the engraved Buddhist prayers. The village headman, No Babu Lama, was unwilling to organize a devil's dance for me, but I was interested to witness the funeral rites performed for the soul of a man who had died just a year before. All day his male relations, the lamas, and the *phumbo* or magician read aloud from the prayer-books accompanied by drum, gong, and cymbal and trumpets of the temple—including the shrill sound of the human thigh-bone, supposed to have power over the demons: wife and son of the dead man were most serious—the efficacy of prayer depends on the attitude of all those who are praying. It was not until late in the evening, when many little butter-lamps were burning in the grand room, that the reading of the prayers was completed, during which time the widow had given a banquet to most of the villagers, the women being served apart. I watched the many courses with impatience—as soon as it was over the villagers had agreed to show me their ring-dance, usually performed at night, and in vain had I tried to make them start earlier so that I could film them in daylight, Topgi even adding ten rupees' worth of spirits to the general supply, but the sun was well below the western ridge when they started their complicated shuffling, accompanied by the repeated refrain '*Sseu! Phombo . . . Sseu!*' Afterwards, before leaving the village, I pushed open the doors of the dark temple-hall to see for the last time the red and gold lacquer of the carvings on the thick, square pillars, the painted banners hanging from the ceiling, moving slightly in the air scented by the burning butter-lamp, and the frescoes depicting the Buddhist pantheon on the old walls.

Filled by desire to see more of the main Himalayan range I climbed back to the 14,000-foot Thare Pati through a fairy-tale, unspoilt forest. My aim was to reach the sacred lake, where the

god Shiva had struck the rock with his trident and the water issuing from the three springs calmed the fever he had acquired from drinking the Poison of the Universe. The coolies could not come far through snow, with no fuel and no huts on the way; Topgi knew the path well—he always took that way when fetching sheep from Kyirong in Tibet. I lent him socks and snow-goggles and the orderly lent him shoes; only one coolie was needed to carry food, blankets, and my tiny tent. They would sleep under the rock at the foot of the pass.

As we left the main camp a thick mist settled down on our world and we tumbled down the side of the mountain where we had stopped before. In every gully we disturbed a couple of pheasants and we saw many traces of musk-deer. I shall never forget the nine successive ridges we had to climb and descend again before we reached the bottom of the gorge. It was then midday, and we cooked some rice, while the mist turned into rain, hail, thunder, and snow; by five o'clock I gave up and pitched my tent, while the three men crouched sadly under their rock, burning tree-trunks, too depressed to prepare supper—as I learnt next day—while my primus cooked soup, eggs, and Ovaltine in the cosy tent; to be able to sit cross-legged for hours on end is the greatest blessing in camp life!

Next morning Topgi and I took three hours to reach the pass, after leaving the small valley of Kang Zemu, starting up a steep and narrow moraine where a few bushes still grew and patches of pink primula sheltered below rocks. Soon came open ground, boulders, turf, and small ravines, and white snow melting fast on black rocks. Thare Pati could be seen high up on the ridge barring our world to the south. To start with, the blue sky had been dark and cloudless—would the mist reach us before we could enjoy the view from the pass? I could not hurry as we were already above 16,000 feet. The hot sun was so strong I took my jersey off, but a few minutes later I put it on again quickly—an icy blast from the north had hit me suddenly, freezing me as thoroughly as if I had stepped into a deep-freeze factory. That Tibetan blast was true to type, and explains why so many pilgrims die in summer when they reach the pass and encounter the two opposed winds. Sherpas call the pass '*Balmu Shissah*,' which means the 'dead Newari woman'. It is probably 16,779 feet high, and leads into a small valley running down towards the west; to the north and behind the rocky range just above the lake rises the group of white peaks surrounding the Langtang Lirung, near the Tibetan border (23,771 feet).

Our progress was impeded by thick snow—on nevé-like patches one could walk well and slide down fast—Topgi was surprised to see me 'skim the snow', as he called it later—but we were often up to our

hips when passing black rocks. After the first perfectly round lake, deep under the fresh snow of the night before, we came to a second and a third, equally round and as deep in snow, till at last, from the top of an abrupt knoll some 500 feet high, the great oval of the sacred Gosainkund appeared below us like a steel-grey shield. It filled the whole shelf of the valley and there seemed to be a vast gap beyond it where, far away, sombre clouds were lapping the peaks of Ganesh Himal. There, all alone, half-way between earth and sky, lies this sacred place, isolated, silent, and unruffled like a mind purified by perfect concentration. Down and down we tumbled, till a few tiny flags strung between bamboo poles indicated the slit in the rock that gives birth to the miraculous waters—we drank of them and washed our faces with joy and felt at peace with the world. A few marks near the mouth of the lake showed where the big shelters are that the pilgrims use in the summer: that human imprint looked strange in such a desolate world. In August the lake is probably of a rich gentian blue; in May the sheet of ice in the silent landscape is wonderfully soothing. I was told that the path going down to the west along the Trisliu Khola is even worse than the one we took.

At half-past eleven, after an hour's climb, we were back at the pass and the mist was now billowing up around us, threatening all photographic activities. If we hurried we might still join the main camp that evening at Thare Pati, so I went down south as quickly as I could, so shaken by jumping from stone to stone that I made detours to try and get turf under my feet. Reaching our camp of the night before at one o'clock, I saw the coolie trying to cheer up Topgi the Sherpa, who was sick—I also had begun to feel queer inside, though I had eaten nothing but the bread cooked by Malla according to Tilman's recipe! I am sure our sinking feelings were due to having come through the fog too fast, and an hour's rest was necessary while I shared eggs and rice with Topgi, suffering from a splitting headache—depressed and lonely, the coolie had eaten nothing so far.

By 2 p.m. we were climbing back to our main camp, negotiating once again the nine side-ridges on the route, and I had to laugh when I saw Topgi dancing with joy, his headache forgotten, when he found a hen-pheasant caught in the snare he had prepared the day before. By the time I had conquered the long pitch of round boulders below Thare Pati I was really tired; it was nearly seven o'clock, and never before had I longed so much for the mug of tea that the sergeant brought to me some 100 yards below the camp.

After the pure snow-breezes of the heights the thought of the

pre-monsoon heat in Khatmandu was detestable and we went back as slowly as we could. Once we slept near a few cows in a clearing above Gul Phu. At sunset the shepherd performed a rite for his animals, killing a chicken over a sacred diagram drawn with pinches of flour—in the middle of the night, as I was trying to sleep despite the exasperating barking of dogs, I heard him yelling over and again ‘*Shoo—ya!*’ A leopard was prowling around and had just killed a goat belonging to a shepherd some 200 yards away, just where, the evening before, I had hesitated, undecided whether to pitch camp or not. ‘Tilman never hesitates and always sticks to his first decision’, Malla had said to me. And I had remarked: ‘Shall I be like Tilman, a real leader, and remain in this clearing without changing my mind?’ Malla did not care: in the end I moved on, I don’t remember why. Had I been like Tilman I might have seen the leopard!

The last camp was pitched on the north side of the Shoepuri ridge at Chiba Danda, and soon after sunrise, after a last look at the pure beauty of the lordly Himalayas, we returned through the mutilated woods to the overpopulated valley of Khatmandu.

Those three weeks in the mountains cost me under 140 rupees:

two coolies, only for marching days	.	.	.	54 Rs.
one Sherpa guide, seven days	.	.	.	35 Rs.
Eggs, milk, flour, butter	.	.	.	10 Rs.
Tips to dancers, soldiers, guide’s family	.	.	.	40 Rs.

In Khatmandu I was told it was 12 miles to Pati Banjang, 10 miles to Gul Phu, 8 to Saone Mani, and 4 miles down to Malemchi village—all rather approximate. I could not time my stages since I stopped so often and had to wait so long for the sun before I could film. Though the mileages on the stages were small, the marches were slowed by the steepness of the track, which often looked like the course of a dried-up torrent. Coolies carrying 100 or 120 lb. probably found it easier to go straight down with little dancing steps, making a pathway this way. The track is often erratic enough to make any Swiss gape with wonder; there is no dynamite available to get rid of rocky spurs—it is also possible that these Asiatics, men and women alike, are so strong that they do not see the necessity for a rational path intended to save effort.

I have no hesitation in saying that the success of my tour, including the many interviews with villagers, was due to the intelligence and charming manners of Lieutenant Sher Bahadur Malla.

SHIWAKTE, QUNGUR,¹ AND CHAKRAGIL

SIR CLARMONT SKRINE

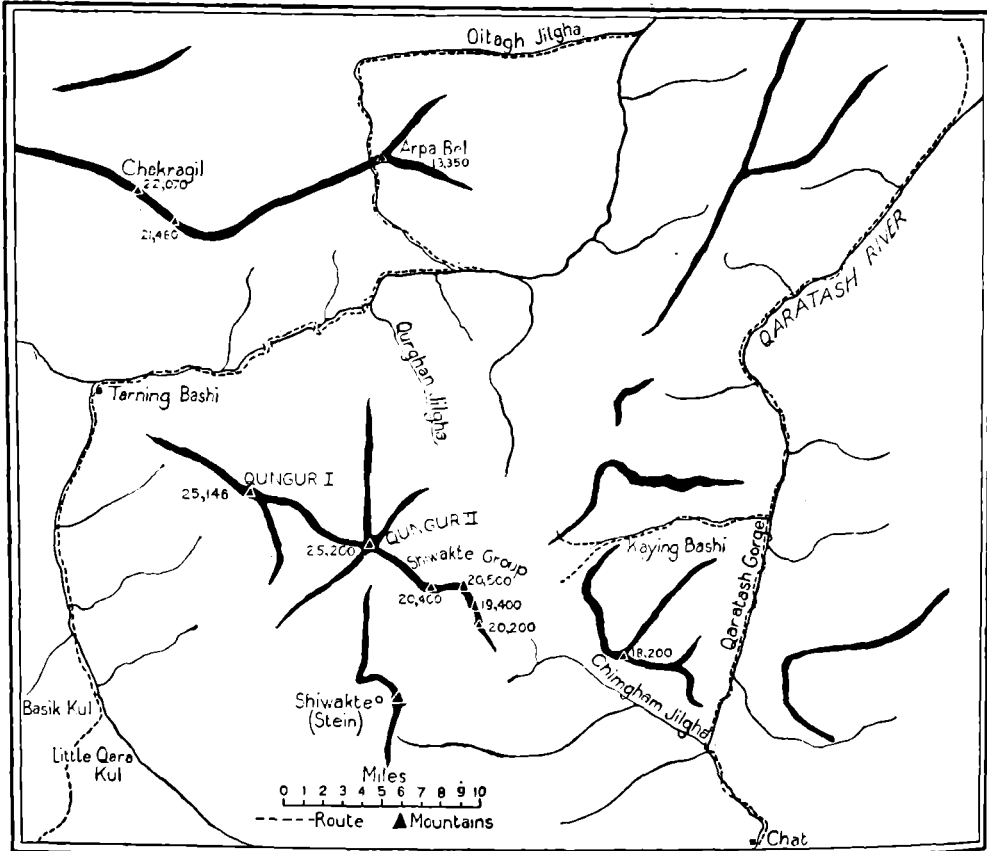
IN *Mountains of Tartary* Eric Shipton describes how in August 1947 he and Bill Tilman met at Tashkurghan in the Chinese Pamirs and discussed various climbing expeditions they intended to do together. One was 'to thread our way back to the north through the Shiwakte group, connecting up some of its unexplored valleys by passes yet to be found'. Another was 'to reconnoitre the east face of Qungur, which had not yet been seen by western eyes'; and a third 'the unexplored valley which leads up into the heart of the Mustagh Ata massif from the south'. The two climbers eventually decided to try and ascend Mustagh Ata (24,388 feet). With commendable frankness Shipton admits that the choice was an unimaginative one due, he suspects, to the 'secret hope of achieving an easy and spectacular victory'. Anyone who has seen it will agree that the 'great featureless dome', as Colonel Kenneth Mason calls it,² of Mustagh Ata was not a worthy goal for two famous climbers, even though they had only time for two high climbs in that region. Shipton gives a beautiful photograph of it in his book, mirrored in Little Lake Qaraqul; the routes up to the tops of both sections of the dome involve no difficult climbing, merely an endless slog, slog, slog up a broad and almost unbroken slope at an angle of nowhere more than 17° or 18°. In the event they were defeated, at the cost of frost-bitten feet for Shipton, by nothing but the vast extent of the dome and the mere horizontal distance they had to cover at 24,000 feet.

I have personal reasons for regretting that they did not strike northwards. All they had to do was to cross the 16,338-foot Qaratash pass, a bagatelle for such as they, and turn left up the fine Chimghan Jilgha. They would have found themselves not only within reach of the east face of Qungur but right up against that lovely group of peaks, the Shiwakte, which soar 20,000 feet into the sky. Before Shipton went to Kashgar as Consul-General in 1940 he came out to spend the day with my wife and myself at our house near Simla and we spent several happy hours discussing possible climbs and mountain explorations for him. I remember showing him the chapters on

¹ The spelling of Qungur, as of Qaratash, Qarakul, &c., was adopted by the R.G.S. in 1925 and I have retained it in this article, though later writers including Shipton and Tilman have reverted to the spelling of Stein and previous geographers, who used K instead of Q. The R.G.S. spelling is right, of course, but I refuse to spell Kirghiz 'Qirghiz'—one must draw the line somewhere!

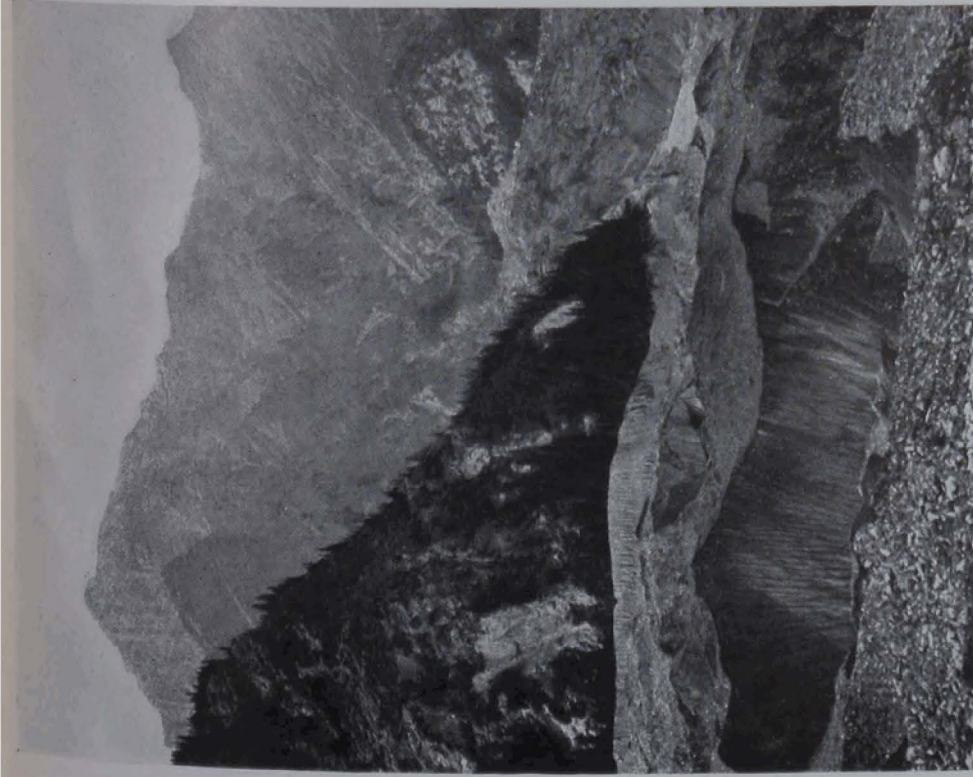
² Mustagh Ata. See Mason's note on the compilation of my topographical material in the neighbourhood of the Qungur massif, R.G.S., Nov. 1925, p. 409.

this very region in my book, *Chinese Central Asia*, and the paper I read on it to the R.G.S. in April 1925. Though he makes no reference to these sources it is certain that he had them in mind when he talked over possible alternatives to Mustagh Ata with Tilman. The only other reference to the Shiwakte region in the scanty literature of Central Asian mountain exploration is by the late Sir Aurel Stein,¹ the great explorer-archaeologist whose work, with his Indian assistants,

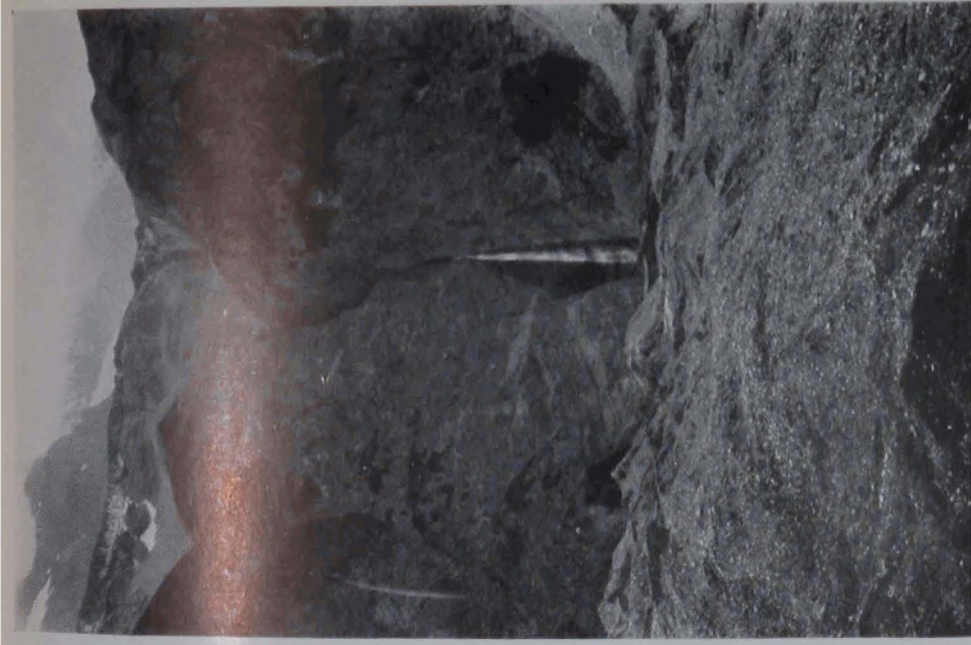


was the main source for the compilation of the Survey of India 1/500,000 map of southern Sinkiang. It was Sir Aurel who, in the spring of 1922, when I was bound for Kashgar like Shipton eighteen years later, told me about the 'Blank Patch' on the above-mentioned map. There were, and still are, many others, but this one appealed especially to me because it seemed to lie only a day's march from the route by which I planned to reach Kashgar and also seemed easily accessible from Kashgar itself. And the tremendous eastern butt-end of the Qungur massif, which no western explorer had seen, much less photographed, attracted me like a magnet. The only route by which, as far as Stein knew, ordinary travellers like my wife and myself, not equipped for high climbing, could hope to penetrate these fastnesses

¹ Stein's *Memoir on maps of Chinese Turkestan and Kansu*, p. 11.



Junction of the Bul Ush and Oi Tagh Glaciers. The Bul Ush runs parallel with the Oi Tagh Gl. in its upper course but at a much higher elevation; it then slopes steeply down and curves to the right. Though smaller, the steepness of its slope at the point of junction causes it to push the Oi Tagh Gl. out of its course, right up against the mountain on its further side



Waterfall about 700 ft. high on the left side of Oi Tagh Glacier. The bottom of the fall is hidden by the glacier. High up at the back can be seen the Bul Ush Glacier, from which the water of the fall comes. A 'spout' fall can be seen on the left of the picture



The Kaying Jilgha, Alps of Qungur

lay through the deep gorges of the Qaratash river, and westward up one of its very steep tributary glens. In 1906 he had detailed one of his admirable Indian assistant surveyors, Ram Singh, to try and reach Kashgar from the Pamirs via the Qaratash gorges but the Indian had not been able to get through owing to the great volume of water. Stein himself seven years later managed to penetrate the gorges from the south after crossing a high pass called the Buramsal, and it was then that he had heard from the Kirghiz about a high alpine region to the west called the Shiwakte. But he had no time to explore up any of the glens to the west of the gorges.

On our way to Kashgar I and my party had to give up the idea of using the Qaratash route, but I reconnoitred up to 17,000 feet a snow-bound pass which I ascertained led over to the upper Qaratash. The same October my wife and I, searching for a 'hill station' for the following summer, explored the lower Qaratash basin above Altunluk. To our joy, after crossing with our baggage and tents two exceedingly steep but not snow-bound passes, we discovered a beautiful alpine glen, the Kaying Jilgha, with flourishing woods of Tien Shan pine (*Picea schrenkiana*) not hitherto known to exist in that region, and glaciers at its head coming down from what I afterwards found to be one of the main peaks of the group to which I attributed Stein's name, Shiwakte. This and neighbouring valleys were the summer grazing-grounds of a shy tribe of Kirghiz whose confidence and eventually friendship we succeeded in gaining. Their hospitality, their quaint ways, the picturesque costumes of their womenfolk, and the immemorial antiquity of their semi-nomadic pastoral existence were a perpetual delight to us. The following summer and again in 1924 we camped for two or three weeks at a time at the edge of the forest below the snout of the Kaying glacier, 10,500 feet above the sea. By dint of much panoramic photography and primitive surveying with plane-table, sight-rule, clinometer, and boiling-point thermometer I obtained enough data to enable Major (as he then was) Kenneth Mason of the Survey of India to fill in the Blank Patch which Sir Aurel Stein had recommended to my attentions. In my efforts to get a clear view of the eastern face of Qungur II I did several stiff climbs from camp to 16,000 feet and more, unroped but aided by Kirghiz '*mergens*' (ibex-hunters), but I never succeeded, for always the knife-edge ridges and needle-peaks of the Shiwakte masked all but the top of the huge ice-clad dome.

In August 1924, just before we left Kaying Bashi for the last time, I managed to cross the formidable Kepek pass (15,230 feet) at the head of the jilgha, which I was told was seldom open for more than a few weeks in the year. This gave me access, after an uncomfortable night on the floor of a draughty Kirghiz tent at 12,000 feet, to the inner arcana of the Shiwakte whose peaks (I quote *Chinese Central Asia*,

p. 275) 'stood round the head of the Aq Tash basin in a glorious semicircle, their ice-pinnacles gleaming in the dawn, mighty glaciers hanging from their sides like frozen waterfalls thousands of feet high'. I rejoiced to be able to secure what proved to be one of my favourite mountain pictures (facing p. 78), and a number of rays to familiar landmarks which enabled me to complete my plane-table sketch; but the east face of Qungur II was even less visible from the bottom of the Aq Tash 'cwm' than from the crag-tops above Kaying Bashi.

I have never quite lost my nostalgia for the Alps of Qungur nor did I, until the Iron Curtain closed down over Kashgar a year or two ago, abandon my hope that some successor of mine would one day, preferably with his wife, follow the trail my wife and I blazed to Kaying Bashi and beyond. Alas, no subsequent Consul-General seems to have had both the urge and the freedom to take a summer holiday in the Blank Patch until the last of them, Eric Shipton, and he, as we have seen, rejected the Shiwakte idea (with some regret it is clear) and attempted Mustagh Ata instead. How emphatically I agree with him that 'to climb a mountain for its height and fame alone is infinitely less rewarding than to attempt a peak whose form has charmed, or to cast a new light upon an attractive mountain range'.

Our two climbers made amends for their Mustagh Ata mistake the following year, Shipton's last at Kashgar, when they tried conclusions with two of the loveliest and least-known mountain massifs in Sinkiang, Bogdo Ola, 750 miles east-north-east of Kashgar, and Chakragil,¹ 60 miles south-west of it. We have full accounts of these expeditions both in *Mountains of Tartary* and in Tilman's *From China to Chitral*, and fascinating reading they make. I was unable during my time at Kashgar to get nearer than a month's journey from Bogdo Ola; motor transport was unknown in my time—even a velocipede (bicycle) was a rarity—and the farthest north-east that I attained was the village of Bai on the lower slopes of the Central Tien Shan, twenty-one marches from my headquarters. But Chakragil I knew well by sight and longed to know better, for the same reason as Shipton, who says of it—'Though a mere twenty-two thousand feet, Chakragil forms one of the most beautiful sections of the tremendous panorama of snow mountains seen from Kashgar. During two years of exasperating confinement I had drawn solace from the contemplation of its fluted ice-ridges, glistening in the early morning sun, floating high above dark storm-clouds or silhouetted against the evening sky.'

During our 2½ years at Kashgar I was so preoccupied with Stein's Blank Patch and the Alps of Qungur which it contained that I neglected, to my lasting regret, the Alps of Chakragil which, when

¹ The accepted name Chakragil seems to be an adaptation of Chikir Oöghil, which means 'the shepherd station of Chikir'.

we at last found them, proved to be even grander and more beautiful, more interesting scientifically, and above all more accessible than those of Qungur. Yet they are just as little known to Western geography. They may have been seen, possibly by adventurous mountaineers on holiday at the Swedish Mission's summer camp at Boston Terek in a neighbouring valley to the north-west; but if so I have been unable to find any record of the fact.

Not until my wife and I were on our way southwards across the passes to India in September 1924 did we see Chakragil at close quarters. Making a week's detour from the Gez Dara route up on to the Pamirs, we marched for three days up the Oitagh Jilgha and camped for three more on a delectable meadow amid thickets of pine, ash, and rowan high above the lateral moraines of the Oitagh glacier, some 4 miles above the highest 'Taghlik' village, Pilal. The Arpa Bel Pass, 13,350 feet, which we had to cross with our ponies to get back to the Gez defile, was one of the stiffest we tackled without yaks in all Kashgaria, but it was well worth it. I make no excuse for quoting again from *Chinese Central Asia* on this unforgettable valley:

It did not require a trained observer to realize that the region in which we found ourselves was a perfect paradise alike for the geologist and for the naturalist. Its chief peculiarity is the relatively low elevation of the head of the Oitagh Jilgha. This forms a kind of recess or alcove in the precipitous north-east face of Chakragil, 14,000 ft. high, into which the glaciers fall and thus push their snouts to a much lower level than do those of Qungur. The snout of the Oitagh Glacier is only 8,800 ft. above the sea, as against an average of 12,000 ft. in the case of the smaller and much less steeply-pitched glaciers of the Qaratash basin. The volume of the Oitagh Glacier is really enormous, but its icefall is so steep that the whole glacier is barely 4 miles long. It has several remarkable features. One is its tributary, the Bul Ush, which butts into it from the north-west near its foot, pushing it right across the valley and jamming it against the steep south-western side. A depression about 150 ft. deep is thus formed above the bulge, and into this falls the moraine-stream which travels under the ice for a mile and reappears from a remarkable cave in the black ice of the glacier-foot. Before joining the main glacier, the Bul Ush runs parallel with but about 2,000 ft. immediately above it. A series of magnificent waterfalls descends from the upper glacier at this point; one of them is at least 500 ft. high and falls clear like the Swiss Staubbach, while another spurts from a cleft in the cliff like tea from a spout. Yet another feature of the Oitagh glacier is its three parallel lateral moraines, one of which has a double edge with a trough 2-4 ft. deep between. . . . The vegetation of the 'alcove' at the head of the Oitagh valley, though of the same Tien Shan type, is altogether richer than that of the Alps of Qungur, doubtless owing to the lower elevation and to the shelter afforded by the tremendous precipices which enclose it on every side but the north-east.

In May 1947 the Shiptons camped in this valley for three days; Mrs. Shipton describes it charmingly in *The Antique Land*, pp. 116-22. In September of the following year, after Tilman had been to Chakragil on a reconnaissance, Shipton and he marched up the Oitagh Jilgha to Pilal and thence branched right-handed up another jilgha called the At Oinak. Three nights later, having left all but one tent and one Kirghiz behind, they camped at 17,500 feet on the north ridge which, as Tilman had ascertained on his reconnaissance, afforded the best route to what seemed to be the summit of Chakragil's north-western and higher peak, marked 22,070 feet. One more camp, they thought, would complete the climb; but an acute attack of mountain sickness totally incapacitated their Kirghiz and for his sake they had to give up the attempt.

I cannot help wondering if at 17,500 feet they were in fact as near the summit as they thought. They took for granted that they had only 22,070 feet to climb and planned their assault accordingly. But the map of this whole area is very sketchy; it is based on scanty data including a little Class B triangulation by Deasy and Stein. According to Colonel Mason, Qungur I (25,146) is the only peak that can be said to be fixed for height. The heights given for the two Chakragil peaks are based, he says, on very acute—i.e. not very reliable—fixings by Deasy from Kashgar. Their distances from Kashgar, measured on the latest 1/500,000 scale map, sheet 42N, are as follows: Chakragil north-west peak, 60 miles; south-east peak, 63 miles; Qungur I, 69 miles. Now if these distances and heights are correct the Chakragil peaks, even allowing for their being 13 per cent. and 8 per cent. nearer respectively, ought to look considerably lower than Qungur I. But a glance at the two sections of my telepanorama of the Chinese Pamirs from Kashgar reproduced at page 78 will show that the difference is very slight. The north-west peak looks actually higher and the south-east peak only very slightly (2.2 per cent.) lower.¹

It is beyond my elementary trigonometry to calculate the reduction there would be in the apparent heights of the two peaks if they were exactly the same distance from Kashgar as Qungur I, but it surely would not account for their real heights being as much as 3,076 and 3,666 feet less. Either they are wrongly placed on the

¹ On an enlarged copy of the telepanorama in question I have measured the distances between the nearer horizon (the dead flat Kashgar plain) and the tops of the three peaks. They are as follows:

Chakragil N.W. peak	.	.	.	.	57.50 mm.
Chakragil S.E. peak	.	.	.	.	54.75 mm.
Qungur I	.	.	.	.	56.00 mm.

Allowing for, say, 25 per cent. of the total height of the mountains being hidden by



*Shiwakte Peak III (20,400 ft.) from south side of Kepek Pass
with Aqlash Glacier*



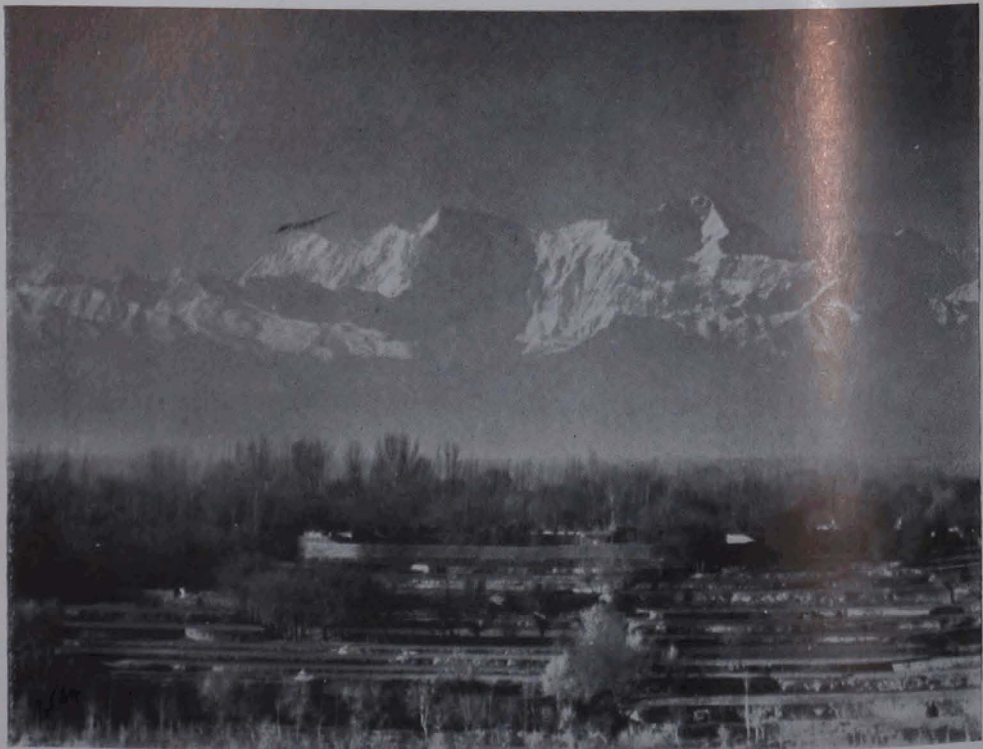
Hollow 200 ft. deep formed by the Bul Ush Glacier pushing the Oi Tagh across the valley against the mountain on the opposite side. The water has made a tunnel for itself, the lower end of which can be seen in another picture



Snout of combined Oi Tagh and Bul Ush glaciers



*Qungur Range with Peak II (25,200 ft.) and Peak I (25,146 ft.)
from Kashgar (69 m.)*



*Chakragil Massif from Kashgar (60-63 m.) with Peak II (21,480 ft.)
and Peak I (22,070 ft.)*

map, or they were wrongly identified from the Pamirs (south) side, or both. Anyway, until refuted, I adhere to the opinion I formed when first I saw the magnificent panorama of snows from the roof of the Consulate-General, that both Chakragil peaks are over 23,000 feet and the north-west one at least 23,500 feet. If so, Shipton and Tilman were considerably farther from the summit than they thought when they sadly gave up their gallant attempt on 'that lovely mountain, Chakragil'.

the curvature of the earth's surface, the percentage differences between the apparent heights of the two Chakragil peaks and that of Qungur I come to:

Chakragil N.W. peak	3.0%	higher than Qungur I
Chakragil S.E. peak	2.2%	lower than Qungur I.

In other words, from Kashgar the north-west peak of Chakragil rises 3 per cent. higher above the horizon than Qungur I, though it is only 9 miles nearer, while the S.E. peak, 6 miles nearer, has an apparent height above the horizon only 2.2 per cent. less than that of Qungur I. Yet the former is shown on the map as 22,070 ft. and the latter as 21,480 ft., i.e. 3,076 and 3,666 ft. less than Qungur I respectively.

ABI GAMIN, 1950

KENNETH BERRILL

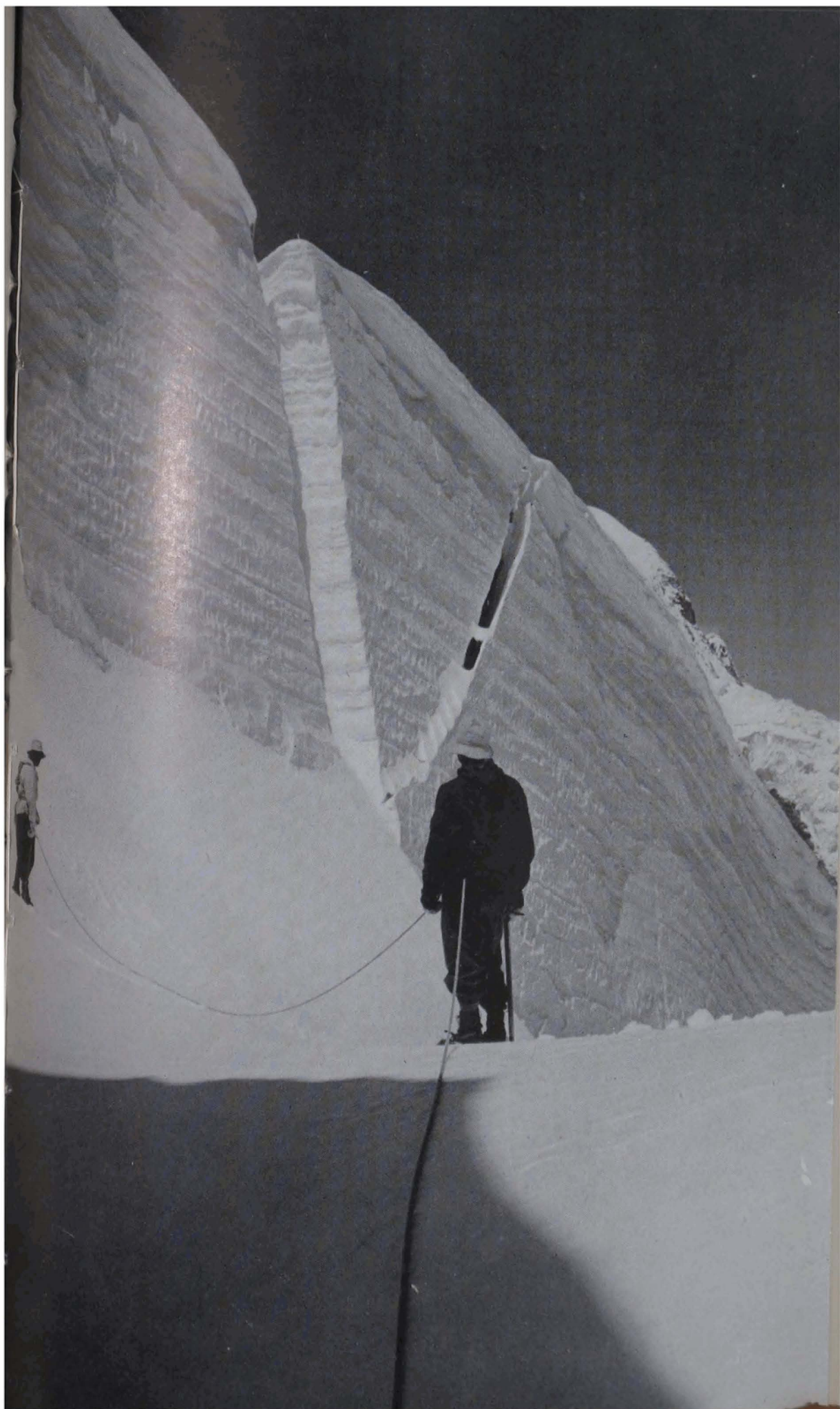
We have to thank the Climbers' Club for their permission to use this material and for their willing co-operation. And we also thank very warmly the Swiss Foundation for Alpine Research for generously supplying illustrations and for their assistance. It will be noted that the heights on the Swiss map are shown in metres, but other maps covering much the same area have recently been published in the Journal.—ED.

THIS is a brief account of a small expedition which was lucky enough to climb a 24,000-foot peak in the summer of 1950. It began with no such pretentious ambitions, when two of us in Cambridge, Alfred Tissières and I, casually agreed to spend a holiday in the Himalayas. From the start we tried to keep our plans modest, for the limitations were severe. We could only take our holidays in the University Long Vacation, which meant climbing in the months of July, August, or September; we were limited by the shallowness of our pockets to an outside figure of £400 each; and we were restricted most of all by our complete lack of experience of India and the Himalayas. So we agreed, firmly, that our first visit was to be a kind of reconnaissance trip, to see the country, travel in the hills, and (perhaps) attempt an easy peak of moderate size.

As the months went past the scheme seemed to gather a momentum of its own, and we began to gather help. Eric Shipton appeared in Cambridge for a few days and we were able to ask him a mass of detailed questions about travelling and camping in that part of the world. Then Michal Vyvyan, also in Cambridge, agreed to join the party and that meant one great headache was cured. He had been out twice before, knew the ropes and the people, and was able to conduct all those dreaded negotiations for permits, passes, and maps. Finally, our party was made up to four by the addition of Gabriel Chevalley, a doctor then working for the International Red Cross in East Pakistan, who had climbed in the Alps with Alfred Tissières ever since they were at school together. Then we felt our party was complete, two Swiss and two English.

On 23rd July we assembled in Delhi, Tissières and I by boat from England, with half a ton of food and equipment; Chevalley by air from Dakar. At the last minute, however, the fourth member of our party had changed. Michal Vyvyan could not leave England and his place was taken by René Dittert. Fortunately, this meant that our expedition remained 25 per cent. experienced, for Dittert had been out in India twice already since the war.

As the map accompanying the New Zealand Expedition, pp. 42-59, covers practically the same area, a separate one is not published for this Expedition.—ED.





When Tissières and I arrived in Delhi on 23rd July we found that Dittert's experience was already bearing fruit. He had arrived by air from Geneva only a day or so before we came up by train from Bombay. In that short time he had done a host of essential jobs, from checking the equipment which our four Sherpas had brought with them, to buying another half ton of food in the Delhi bazaars. From the start we could see that Dittert was going to be the hustler of the party.

Our four Sherpas were the first that the rest of us had ever seen. In their appearance and in their hard-working cheerfulness they were so exactly what we had been led to expect that we seemed to get to know them well in a very short time. Dawa Thondup and little Ang Dawa had both just come back from the French Expedition to Annapurna; the Sirdar, Ang Dawa, a first-class cook, had been with Tilman on Rakaposhi; and Penuri, the biggest, the youngest and the least experienced, had been out with Dittert the year before.

Of our stay in Delhi I need say little, except to record our sincere thanks for the hospitality we received at the Cecil Hotel. Major Hotz was kindness itself, and our demands were heavy. We borrowed everything from him, his car to go shopping, part of his flat to repack our loads, and even ready cash when we found ourselves short. His advice was invaluable. He told us where to buy food of all kinds, where to get permits for inland customs, and even how to get a large sum of money from the bank an hour after it was officially closed. Indeed he must have been glad when, 36 hours after Tissières and I had arrived, the expedition was ready to start.

It was 25th July, 3.30 a.m., and we borrowed Major Hotz's car for the last time to get our loads to the station, the local porters having decided to go on strike. They all seemed to be sleeping on the station platform as we loaded our ton of baggage on to the train in the unflattering light of dawn and tried to get a little sleep to add to the hour and a half which was all we had achieved so far that night. We certainly felt a far from fit party of mountaineers. Our whirlwind stay in Delhi had culminated in being entertained to dinner by M. Aubaret and other members of the Swiss Legation. After they had wined and dined us royally until midnight we had to complete our personal packing in something of an alcoholic haze. As I lay in the train looking at the dawn, the pouring rain, and my companions, I was sure that my sleeping bag was still under the bed in the hotel. It took the afternoon's sunlight, the nearness to the foot-hills, and the celebration of each change of trains with some of our last present from Delhi, a bottle of whisky, before the expedition again took on a rosy hue.

At this stage it seems appropriate to say something of the plans

which we were discussing that day as the train took us north. We were going into Garhwal, and up to Badrinath, to climb in the Kamet Massif and the Badrinath range. This choice of area had been made almost by a process of elimination. We had to climb in August, and we had no time for a long approach march. It seemed that the pilgrim route, with its newly opened motor road stretching 150 miles from the railhead at Kotdwara to Chamoli, offered a quick means of transport to within 50 miles of Badrinath. We had been told, too, that the monsoon in August was likely to be as moderate in the Badrinath region as anywhere. So much for our choice of area, that was rational enough, but our choice of mountain needs rather more explanation, for our original modest plans had changed considerably. Marcel Kurtz and Professor Dyrenfurth had both suggested that we try something rather grandiose, Abi Gamin, a peak not as high, of course, as Nanda Devi or Kamet, but still the highest unclimbed mountain in Garhwal. This was very much beyond our hopes, but it had two arguments in its favour which made it sound almost reasonable. First, since it lies right to the north of Garhwal on the border of India and Tibet it might be getting less of the monsoons than peaks nearer the plains. Secondly, and much more romantically, there was an ancient traveller's report that described it as a very easy mountain from the north.

Several parties had looked at Abi Gamin from the south, usually from Meade's Col which divides it from Kamet, and opinions differed as to how easy it would be to climb it from there. But only one party had ever reported approaching it from the north, and that was nearly a century ago. In August 1855 two famous Austrian travellers, the brothers Adolphe and Robert Schlagintweit, journeying west from Lhasa, made an attempt on the mountain from the north. In a letter home to their Emperor they reported having climbed to over 22,000 feet and to have been robbed of the summit only by lack of food and the fears of their porters. This was a most remarkable height record for the middle of the nineteenth century and must have meant that the mountain was not difficult from that side. There was the danger, of course, that glacial changes in the succeeding hundred years had turned it into a difficult mountain by 1950. Anyhow, our plan was to take half our food forward from Badrinath and have a look at this northern side of Abi Gamin. We would, at least, be going well to the north in the early part of our holiday, when the monsoon might be expected to be heaviest. We then hoped to come back to Badrinath, pick up the remainder of the food, and move west towards Nilkanta and Chaukhamba early in September.

It took us a full day to get from Delhi to the railhead at Kotdwara with three changes of trains which became quite an event with our

ton of assorted packets. Most of these were army-surplus kit-bags inside waterproof navy-surplus signal rocket bags—a cheap combination which we were to find most effective. At Kotdwara our experiences were mixed. We were worried at the news that landslips and a missing bridge would make the 150 miles journey along the road to Chamoli longer than we had thought. The fact that no one could say just how long it would take was what worried us most. But we did have the pleasant experience of meeting the manager of the co-operative transport company which operates along the road, and he did everything possible to speed our trip. He sent a relay of traffic superintendents along with us, telegraphed ahead to all points where we might expect trouble, and refused to take any payment for us, our Sherpas, or our baggage. Mr. Uma Nand Barthwal completed his hospitality by asking about our equipment and presenting us with a jerrycan and a flit-gun which he said we lacked. Over breakfast he told us of his own travels in the Nanda Devi area long ago, with Ruttledge and Longstaff. This was a hospitable beginning indeed. On the boat coming over I had often wondered how Indians now felt towards the British and it was always a nice feeling to come upon instances of this kind of friendliness.

The trip from Kotdwara to Chamoli took three days, fascinating days to a newcomer like myself, as the bus lurched past groups of pilgrims in the costumes of every province and caste in India. Those who rode in the buses with us were a source of continual interest, especially the frightened women who bandaged their eyes whenever the bus started and chanted religious songs to save them from the drop below. But these days were not without their difficulty for the traveller. The monsoon caused many slips, more than the hard-working coolie gangs and engineers with dynamite could quickly repair, and we had to change buses many times. 'Change bus' is a euphemism. It meant getting our loads carried anything from 50 yards to a mile past the landslips. This was trying, time consuming, and expensive. The pilgrim season was in full swing, which meant that about 10,000 a month were trying to travel along this road. The effect on the price level can be imagined. Coolies were asking (and getting) 1 rupee a mile to carry loads around the slips. This was our first experience of the local inflation, but it was far from being our last. We had begun to realize that getting into the Himalayas along the pilgrim route might be a quick method, but it was not going to be the cheapest.

At Chamoli we were glad to leave the bus after three days of dust and noise and we faced with pleasure the prospect of walking gently uphill out of the heat. Badrinath, 50 miles away, at 10,000 feet, seemed a very pleasant prospect. We had wired ahead to the Tahsildar

at Chamoli asking for porters, but we were staggered when he told us of the daily rate of pay. So high was the price asked that we found it cheaper to take ponies at Rs. 7 a day, and we engaged thirteen of them to carry our food and baggage. Only our resentment at this expense dimmed the pleasures of our five days' walk to Badrinath. The statutory 10-mile stages could easily be covered in the mornings, the weather was fine, and the bungalows were pleasant. We pushed on up from village to village, breaking in our new boots, watching, as we got higher, the vegetation change and the thermometer fall. Chamoli at 4,000 feet was decidedly hot and humid, Badrinath at 10,000 was cool enough for sweaters. Indeed, we found the Alaknanda valley up there very much like North Wales, especially as we arrived in mist and drizzle. However, early next morning the famous view of Nilkanta framed between two shoulders of hill-side soon put the mountains back into perspective.

Any remarks I make about our experiences of Badrinath are bound to be derogatory so they had best be short. We found it a dirty squalid boom town. The pilgrim traffic had doubled in recent years and a spate of jerry-building was in progress; rough dormitories, small houses, one-room shops, and mud everywhere. Only the Temple had any pretence of interest. But what really jaundiced our view of Badrinath was the effect of all this on the local labour supply. We had been sure that when we got this far our transport trouble would be over, for all previous expeditions seemed to agree that at Mana, 3 miles farther up the valley, we should find the best porters in all Garhwal. Sure enough, the morning after we had arrived Mana coolies came along to the bungalow with tattered letters from previous expeditions. But the building boom in Badrinath meant that they could earn Rs. 4 a day digging ditches three miles from their home, and they wanted at least Rs. 5 plus food to come north with us. This was much more than we were paying our Sherpas and seemed to us completely outrageous. We spent two days trying to bargain them down into reasonableness, but it was no use, they really were not at all keen to go. Eventually we abandoned the idea of porters in favour of the only other means of transport offered by Mana. We agreed to take ponies instead. These were not the valley ponies which had carried our loads from Chamoli to Badrinath but tough little Mana hill-ponies. They were normally used on the trade routes into Tibet, and grazed most of the summer at 13,000 feet. Their owners, the Mana ponymen, assured us that they were quite capable of carrying loads across our first objective, the 18,400-foot Mana pass. We had our doubts. Even ponies were far from cheap. We could not get them for less than Rs. 12 a day (plus the usual half-rate for the return journey), but that included one ponyman for each pony

and food and fuel for both horse and master. After our two days' inactivity our impatience was becoming extreme and we finally agreed to pay this high figure in order to get away from Badrinath.

On Sunday, 5th August, we left Badrinath for the Mana pass, but not before we had received one more demonstration of the change in Mana. Dittert and Chevalley were loading the ponies and ponymen when a local agitator, who had been haranguing a crowd in the street of Badrinath the night before, decided to lend his advice. Although he had no connexion with the party, he began volubly to criticize the loads, picking them up, and gesticulating. Our Sherpas had been viewing the attitude of the locals with increasing disgust for some days and suddenly a most threatening scene developed. Dittert tried to persuade a Mana ponyman to pick up a load, the man objected, a Sherpa thought his sahib was threatened, one swift right cross to the jaw and the ponyman was on the ground. All the loads joined him on the floor, every man's hand held a club, and it took apologies, backsheesh, and lighter loads to heal the breach.

Having made these criticisms of Mana porters, I must hurry to confirm that once away from the village they proved excellent carriers. One man became so keen that he stayed with us throughout our expedition, accepted the same rate of pay as the Sherpas, crossed a large snowfield without boots, and sat on a rock and cried when we had to leave him behind for the final attack on Abi Gamin. Yes, Mana men are still very good porters, but they are no longer cheap ones, and no longer uncorrupted by the ways of civilization.

It took our caravan of sixteen men and eight ponies four days to get from Badrinath at 10,500 feet to the Mana pass at about 18,500. Each day the deep valley up which we moved became more and more desolate until the scene was limited to the greys and yellows of moraine and scree. Every side valley had its glacier sending down fast streams across our path. But looking up from the main valley, all we could see of these side glaciers was their terminal moraines sending down stones, dust, and rubble. It was cloudy and rainy a good deal of the time, but when the mist cleared we could see behind us, and to the south sharp clusters of aiguilles reminiscent of the Chamonix valley, and ahead the more rounded border peaks of the Indian frontier. On these four days from Badrinath to the Mana pass we did not cover a great distance. Partly this was because of the ponies. They meant that we had to cross the larger side streams in the forenoon before the melting glaciers made them too deep and camps had to be pitched by early afternoon on one of the scanty patches of grass so that the ponies could be let loose to get their fill for the day. Next morning at dawn came the job of rounding them up from wherever they might have wandered, perhaps a mile or two

down the valley and far away up on the hill-side. But they went very well and carried their loads over piles of horrible large scree and across wide steep slabs. At times the track was so poor that it was hard for us to credit that this was a regular trade route between India and Tibet, but we saw several caravans making their way towards the pass. Some of these caravans were of yaks, some of ponies, and some of flocks of sturdy mountain sheep each carrying a tiny saddle pack with a 4 lb. load.

As we got higher most of us began to feel the altitude. Dittert went best: he had been on the summit of Mont Blanc only a few weeks before. I was the worst by a long way. The day after leaving Badrinath my stomach became upset and it was not getting any better. I did not know it at the time, but this trouble was to last throughout the trip and cost me a couple of stone in weight. I was already finding that shortage of food and sleep was becoming quite a trial as the altitude increased.

For the present we concentrated entirely on getting over the pass into Tibet. To try to conserve my strength I was put on the back of a pony for the last stretch, a painful process as I was seated on a local wooden carrying saddle. This pattern has two bars on which the loads are normally tied. Anyone who tries to ride such a saddle finds these bars running right under the buttocks. After an hour every jolt is like an extra whack from a schoolmaster's cane. To go riding at over 18,000 feet was quite an experience but I was more than pleased to be sitting at last with Dittert and the Sherpas by the prayer wall on the frontier pass. At our backs was India, in front of us Tibet, but even this romantic thought could not disguise the bleakness of the spot. The path ran round the side of a hill which seemed to be completely composed of shale scree. Below us the flat Abijugan glacier filled the valley and formed the watershed. Across the other side of this glacier was the rounded back of Balbala, 21,400 feet (which Dittert had climbed in 1947). The only bright spots were the gaily coloured prayer flags above the wall and a tiny blue lake a little way back on the Indian side. Our Sherpas had already added their prayer flag brought from Darjeeling to the fluttering mass on the pole and were chattering with the Mana men, with whom they were now good friends. Everybody seemed to have a headache, and the local remedy, home-brewed rice spirit and garlic, was pressed upon me! I try anything once.

A long way behind, still toiling up towards the pass, were Tissières and Chevalley, two very tired men. More than once Tissières sat down on a rock and fell asleep sitting up. Chevalley went back to wake him. To the three of us who had had no experience of this altitude the whole business was very worrying. If we felt like this at

less than 19,000 feet it seemed stupid to be looking for a mountain at over 24,000. Dittert seemed to have no such worries, perhaps because he knew that we would acclimatize. He was right—three weeks later we came back over this pass and marched slowly over it in a tight Indian file without any real discomfort.

Within an hour or so we had come down from the pass, had left the glacier snout behind us, and were walking on the level plains of a wide shallow valley running north into Tibet. I have never seen a frontier which marked the difference between two countries so dramatically. On the Indian side the valley had been deep and stony, the mountains sharp and spiky, and wild life conspicuous by its absence. Here in Tibet the mountains, though quite high (about 20,000 feet), were rounded and soft; the colours had turned from dull yellows and greys to rich green and purple; all around was wild life, groups of wild asses (*kiang*) grazing in the valley, hares starting from near the path, eagles above cruising on air currents, and, occasionally against the far hill-side, wild deer (*burhel*) galloping into the distance. Naturally, we all looked away north across the plains of Tibet hoping to see something unusual. About a hundred miles away could be seen the snow-capped peaks of a far mountain range. Before us was a vast plateau eroded by many streams into valleys and sharp cliffs. The scene was unreal, largely because of the ever-changing colours, which shifted through every shade of yellow, brown, and purple.

We never ceased to be surprised at these colours, at the variety of the wild life, and at the ability of the local people to earn a living grazing their flocks along the scattered grass of the valleys. The first Tibetan family we met after crossing the border provided an amusing contrast in dress. For the most part the herdswomen wore the colourful traditional costumes, and had the unwashed faces we had been led to expect. But there was a pair of shoes on the smallest boy which might well have been made in Northampton. It was interesting to speculate on the series of transactions by which they could have come from Europe to here.

Once in Tibet our troubles were largely concerned with the maps of the district. Throughout our journey on the Indian side of the frontier the maps had been excellent; accurate both in general and in particular. This had bred a dangerous confidence in cartographers which was to lead us badly astray in the days to come. According to our map of the Tibetan side of the range, the method of getting from the Mana pass to the north side of Abi Gamin was simple. Between the valley running north from the Mana pass in which we were now camped and the valley running north from the Abi Gamin group from which we hoped to attempt the peak, the map showed only a

simple ridge. This Abi Gamin valley contained a glacier which soon became a substantial river, the Mungnung Pani. Our ponymen claimed to know the Mungnung Pani and were willing to take us to it. They said it involved a journey of a day and a half north along the valley from the Mana pass, crossing the ridge on the right by an easy pass, the Ghorī La, and on the far side we should find ourselves on the river. This story tied up with the map, all seemed to be well, so we followed them and did exactly that.

Two days after crossing the Mana pass we were on the far side of the ridge on the right and had pitched camp on a pleasant acre of grass beside a small stream. This seemed too small a flow of water to be coming from a mountain as large as Abi Gamin, but we thought we could not be far away from the peak. It was perhaps a little east, certainly a little south, but anyhow quite near. So we called this plot the Base Camp (17,600 feet), and sent the ponies and the men back to Mana with instructions to come to collect us in a fortnight's time. Only one Mana porter, Bouang Singh, stayed with us. He seemed desperately keen to do so and agreed to take a much less daily rate of pay, so, a very much smaller party, we sat in this 'base camp' and watched the rain and snow fall outside for the best part of the next twenty-four hours. Less than three weeks before Tissières and I had been on the high seas. We had reached this Tibetan base camp with only a little loss of time in Badrinath, but now frustration and delay was to start in earnest. For a glance at the map which accompanies this article will show how badly wrong we were in calling this camp 'Base Camp', and how wrong was our assumption that it was only a short distance to the north face of Abi Gamin.

For most of the next few days the whole of the mountain range to the south was covered in monsoon cloud, which brought with it a quantity of new snow every night. We were never allowed that clear view of the peaks which would have enabled us immediately to identify the high points of the Kamet massif. The only way in which we were able to discover the inadequacies of the map, and eventually to identify the mountain we were after, was by slowly working our way east and pushing our noses near enough to the face of each group of mountains to see that they were too small to be our goal.

All this took time. We went a short way up the near side of the first glacier we came to, which was unmarked on the official map. The peaks at the head of this glacier were ruled out as being probably too small. As far as we could judge, the highest was under 23,000 feet.

After this rebuff, ten days' food was carried forward across the glacier, which was quite hard to board from the side moraine and was a maze of large boulders and frozen pinnacles. The next problem

was to get the loads up the steep high moraine on the far side of the glacier. This moraine was probably over 1,000 feet in height and surmounting it with the heavy loads of food and tents meant prodigious feats of load-carrying by the porters. Dawa Thondup especially was magnificent. We camped over the top at a little over 19,000 feet. This camp was on a pile of stones in a huge snowfield, which seemed almost flat except for a gentle rise towards the south. Most of the time the mist was down and we could see little. At night it snowed and by day the sun glared through the haze and burnt the face. Once or twice the mist cleared somewhat and some large easy peaks showed themselves to the south at the head of the snowfield. If this was the Kamet massif the easy ridge running towards us would explain why the Schlagentweits got so high in 1855.

Dittert and Tissières set off on a reconnaissance through the mist south-east across the snowfield. In a few hours they had convinced themselves that these easy peaks were only about 22,000 feet high and were not what we were looking for. However, when they were at about 20,000 feet the clouds to the east cleared for a little while and they found they were looking down on a glacier bigger than anything we had seen so far. The glacier was shaped like a Y with, at the head of its eastern branch, a group of three big mountains which were clearly the ones we sought. On the left was Abi Gamin, on the right Mukut Parbat, and in the middle and a little behind the others, Kamet. This huge throne seemed so impressive that neither of them was at all hopeful as they told the story to Chevalley and me back in the camp on the snowfield, but they were tired and sunburned from their long tiring slog through the snow and we soon agreed to push forward to the base of the mountain group and have another look.

A day later we had a camp established across the snowfield down on the large glacier at the junction of the two arms of the Y (Camp I, 18,300 feet), and were having our first real look at the mountain. It was rather a tired look. Some prodigious carrying feats had been undertaken by the Sherpas to get the bulk of our food and equipment relayed over the 20,000-foot snow hummock. The Mana man, too, had done a fine job of load-carrying. At the end he had crossed the snowfield without complaint in his sandals with waterproof bags roped round his feet.

The glacier was long, flat, and tiring to trudge up, but Camp II (just over 19,000 feet) was pitched on the moraine on the true right bank of the glacier. This was to be the real base for any climbing attempts on Abi Gamin, and, at that moment, the prospects of success did not seem high. The Mana ponymen had instructions to return to the 'Base Camp' after two weeks. Already we had used one of those weeks and consumed nearly half our food in finding the mountain

and getting to its foot. If we did not succeed at the first attempt we should probably be forced to retreat through lack of supplies. Under these conditions we examined the view with some care, and the magnificent cirque of peaks around us fully paid for inspection.

The huge glacier swept down in a graceful curve from the head of the valley where stood Abi Gamin, its north face a sheet of white with just a little rock showing near the summit. From Abi Gamin's flat summit a long north-east ridge curved down left to form the rim of the valley. At the top of this ridge there was a short steep rock passage, but then it fell away quite gently with two snow shoulders between the rock and the lowest part of the basin rim. The general angle of this north-east ridge was quite moderate, but it seemed very long and at least two camps would be needed. To the right of the flat Abi Gamin summit was a steep rock and ice-wall which fell to Slingsby's Col which separated our mountain from its twin, Mukut Parbat. This peak, which was far grander looking in every way than Abi Gamin although some 200 feet lower, used to be known as Western Abi Gamin. To the right of the Abi Gamin summit there also fell sharply away a south ridge leading down to Meade's Col and Kamet. The route of Smythe's 1931 Kamet expedition was in sharp profile from our camp.

It was quite clear that the route up Abi Gamin lay along the left-hand, north-east ridge to the summit. There were, however, two possible ways of getting to this ridge. It might be possible to climb to Slingsby's col to the right of Abi Gamin and then traverse across the north face to gain the north-east ridge. Through binoculars there seemed to be a balcony running under the head of the mountain which would make this possible. However, also through the glasses, we could see the tracks of avalanches down this face which made such a traverse an unpleasant prospect. It was agreed that we much preferred to try to get straight on to the north-east ridge by climbing up the ice-fall at the head of the valley and working our way up to the basin rim at its lowest point.

To make such a choice after a binocular survey from Camp II was easy enough, but to find a way through the ice-fall at the head of the valley proved much more difficult. Here the ice craft and physical fitness of Dittert came fully into its own. Well away from Abi Gamin, on the left of the valley as we looked at the mountain, a natural ramp ran from the head of the snowfield up towards the centre of the ice-fall. This provided a technically easy, if physically tiring, method of climbing to 21,000 feet. It was exhausting plodding up steep snow in crampons in the fierce glare of the sun. Then, at about 21,000 feet, the ramp ended at the foot of a sheer ice-wall. The only prospect of turning it seemed to be to work across through the mass of broken ice

and crevasses on the right. It took two days of searching to find a route through this ice-wall, and when a crossing point was eventually found it was rather a rickety affair. An avalanche had poured over from the snowfield above and built up a mushroom of snow some 25 feet high on a ledge below. This mushroom formed a temporary bridge by which the ice-fall could be crossed at a low point. Once on the snowfield above it seemed as though the way was clear to the ridge. With the route discovered we made preparations back at Camp II on the glacier, and at 9.30 a.m. on 19th August the real attack on the mountain began. The first day was very short. By 12.30 the party was at the top of the ramp at the foot of the ice-fall. We could go no farther that day for our snow mushroom was too soft in the afternoon for laden porters to use with safety, and Camp III was set up at 21,000 feet. The night was terribly cold, particularly for those in the nylon tent, and it was quite late in the morning before the sun crept over the ridge above us to bring a little warmth. At 9.30 on the 20th we set out in crampons in three ropes. After working slowly up and down through the maze of the ice-fall for about $\frac{1}{4}$ mile we arrived at the mushroom, and with careful belays from above and below the porters were shepherded on to the top snowfield.

From there the way to the route was straightforward, if tiring. Again, it was a slow trudge in crampons with always the worry lest the snow might avalanche. All around we could see where thin wind-slab avalanches had slid off into space and ahead were long cracks running across our path. But by early afternoon we had gained the basin rim and Camp IV was established on a small platform hacked out of the snow a few feet below the ridge at about 22,000 feet. The evening was fine and the view quite magnificent. For the first time we could look over the ridge which forms the Indian frontier down on the Raikane glacier. The drop was precipitous, and the valley looked much colder and less attractive than that from which we had just climbed. Below us on the Tibetan side was the long smooth curve of the Gantug glacier with a network of unnamed peaks on either side of it, most of them easy rounded mountains from 21,000 to 22,000 feet. Kamet was hidden from us by Abi Gamin, but still towering above us was Mukut Parbat with its thin east ridge running straight down towards us like a knife.

Four Europeans crowded into one small tent to hold a council of war. We knew we were at the bottom of the second shoulder on the north-east ridge of Abi Gamin, but foreshortening made it difficult to calculate the distance and the gradients which lay between us and the summit. The choice lay between the fittest of us making a dash for the top on the morrow, or of putting up another camp a short distance below the summit and hoping that the fine weather would

persist for another two days. Although we had already been very lucky to experience such a long spell of fine weather in the middle of the monsoon we decided on the second course. We went to bed that night believing that only bad weather or very deep snow would prevent some of the party from making the top, but knowing that both of these obstacles were very possible.

Again the night was cold, with light snowfall outside the tent and just about as much inside, as moisture from our breath froze to the roof and was shaken down by the wind.

The weather on the 21st was not so accommodating. We hoped that day to reach the short rocky section of the ridge just below the summit plateau and there establish Camp V, but soon after midday clouds and mist began to blow over the route and it was difficult to see whether there was going to be a camp site near the beginning of the rocks. By early afternoon we had reached one likely site at the foot of the second shoulder. I waited there with the Sherpas in case there was no reasonable place farther on. Tissières and Dittert went ahead, but just as they reached the foot of the rocks, mist obscured them from view. The Sherpas and I pushed on hoping that they had in fact found a suitable site. That last 500 feet took a great deal out of me and also greatly affected the smallest Sherpa, Ang Dawa II, who was sick for the last hour of the climb.

At last we rejoined the others in the mist and a platform was hacked out of the snow for the two light tents which were to form Camp V (23,500 feet). As always, Dawa Thondup proved excellent at this exhausting job. He was the only Sherpa who stayed up at this camp to continue the attempt on the summit, the others returned at once to Camp IV. That night was not too cold and we wondered whether the higher temperature meant fine or foul weather for the last section on the morrow.

August 22nd proved fine indeed and the view for the first few hours was wonderful, especially of Nanda Devi to the left of the ridge, and of Mukut Parbat, much nearer on the right. Before eight in the morning we were off, struggling through snow towards the rocks, snow which even at this early hour was soft and deep. The rock ridge was quite steep and snow covered and one short chimney required careful negotiation as there seemed to be no belays. At the end of the rocks 200 or 300 feet of snow sloped gently up to the summit plateau. By this time I was going very badly indeed and probably ought never to have left Camp V. Chevalley stopped for half an hour to massage my feet back to life and feed me a selection of tablets. Then he left me sitting in the snow in the sunshine and set off up the line of tracks to rejoin the others. By 10.15 a.m. they had reached the highest point on Abi Gamin on the far side of the summit plateau

nearest to Kamet. The weather was fine and sunny, the wind was light, and for three-quarters of an hour they stayed on the summit enjoying the view and taking photographs, a rare pleasure indeed in the Himalayas. On the way down they met me plodding very slowly on up, hoping to catch them before they left the top, but that was not to be. As clouds were already gathering in the valleys below we all turned to go down. The descent of the rock passage proved difficult as the snow covering was now very soft. By the time Camp V was reached and dismantled mist was once again blowing over the ridge, but we pushed on down to Camp IV to rejoin the other Sherpas and the bulk of our provisions.

That night as we lay in the tent on the ridge the storm seemed heavy. We were on the windward side and it was very noisy. By next morning there was over a foot of new snow, the mist was still down, and the wind still blowing hard. The snow no longer fell so heavily but our tracks were completely covered. It was not going to be easy to find a way down to our snow mushroom across the ice-fall; on the other hand, the new snow had already made the face dangerous for avalanches and more snow would make it even worse. So it was decided to get off the mountain at once, if that were possible.

Dittert led the descent, and used his mountain craft to the full. He found a way down through the snowfields although visibility was only a few yards; a route which minimized the avalanche dangers and came out to within 10 yards of our snow mushroom. By early afternoon we were through the maze of the ice-fall and had staggered down the snow ramp on to the glacier. Now that we were safe the mist cleared and the sun shone. Back at Camp II we lay in the sunshine and took photographs, and that night the party slept better than at any time on the trip. We all found that coming back to 19,000 feet after 24,000 was almost like returning to sea-level.

To our surprise the weather remained fine for the next three or four days. We would have liked to have explored some of the passes in the district and perhaps tried a minor peak or two but our food was almost gone. We built a little cairn on the site of Camp II and hurried back in two days to the Base Camp to the waiting Mana men and their ponies. They had brought a sheep with them for us to eat and it was a change to eat solid lamb after days of pemmican hash. The weather was still kind as we crossed the Ghori La and looked back for our last sight of Abi Gamin. It was misty but not raining as we crossed the Mana pass back into India, but it started to rain two days short of Badrinath, then settled down firmly and rained for the next six days.

At the end of four of those days we were very bored with the bungalow at Badrinath, with the mist, with the rain on the tin roof,

and even with the wonderful meals which Ang Dawa constantly produced for us now that we had recovered the other half of our food supply. At times the mist did clear for half an hour and we could see two-thirds of the way up the east wall of Nilkanta, framed between two shoulders of hillside. That two-thirds was completely plastered with new snow and we concluded sadly that high climbing would not be possible until at least a week of fine weather had passed, a view which later events were fully to justify.

On 3rd September we left Badrinath with ten Mana porters for the Satopanth valley and north side of Nilkanta, a journey which we estimated would take only a couple of days. After a long wait in Mana while the porters said good-bye to their families, we turned west up the Alaknanda valley. By early afternoon it was again raining and we had the melancholy job of making camp, cutting wood, and cooking, with visibility down to 40 yards. The porters seemed happy enough. Our camp site was near one of their shepherd bothies under a large rock and they seemed to have carried with them from Mana a good supply of home-brewed rice spirit.

The next morning, 4th September, was one of the pleasantest I have ever spent in the mountains. For the first time for many days the clouds cleared and the sun shone. Rapidly the grass and the dwarf juniper steamed and dried out. On either side high steep rock walls streamed with small glistening waterfalls. Ahead was the snout of the glacier and the trickle of the stream at its base which was the start of the Alaknanda and one major source of the Ganges. Beyond the glacier, far up the valley, we could see the sun shining on Satopanth and the south face of Chaukamba. What a contrast with the drab open valleys on the Tibetan side of the border. The porters chattered along happily and we looked for flowers and took photographs. It was a day for walking alone but we all met for a rest where a flock of several hundred sheep were being grazed by a Mana shepherd. Some of the sheep seemed most interested in our party and casually performed the most outrageous feats of rock balancing in order to get a better view. Bouang Singh, the Mana man who had come with us to Abi Gamin, sorted out forty sheep which belonged to him and inspected them carefully. They included two magnificent shaggy white rams. It seemed that he was quite a well-to-do Indian and came with us for pleasure, not profit. He spent some time trying to persuade Dittert to take him back to Switzerland where he wanted to drive a bus.

At the junction of two glaciers we turned left, taking the southern or Satopanth glacier; there is a shepherd's path running along the top of the moraine which makes the going very easy. On our left a series of waterfalls streamed down over a series of boiler-plate slabs from the

slopes of Narayan Parbat (20,000 feet) and Nilkanta (21,800 feet). Behind us, on the north of the main valley, rose a most impressive series of spiky pinnacles dominated by Bagneu (19,000 feet). By early afternoon we had reached a wonderful spot for a camp. The 200-foot-high moraine made a curve and enclosed between itself and the side of Nilkanta a grassy amphitheatre about a mile long and a quarter of that at its widest part. It felt like camping in the middle of the pitch at Wembley. This was Magna (14,000 feet), an important local summer grazing alp and a good base from which to look at the north side of Nilkanta. By 2 p.m. the rain and mist were down again and there was little to do except eat and sleep.

It was with mixed feelings next morning that we took our three remaining Mana porters and the four Sherpas and set off up the steep grass of Nilkanta's lower slopes. We all hoped to be allowed an attempt on the mountain, but opinions varied about the weather. It was now 5th September and theoretically we could hope for the end of the monsoon, but the last ten days had seen such steady rain that it seemed as if it would go on for weeks yet. Also, every glance upwards at the surrounding peaks showed them thick with new snow and in a very unfriendly condition.

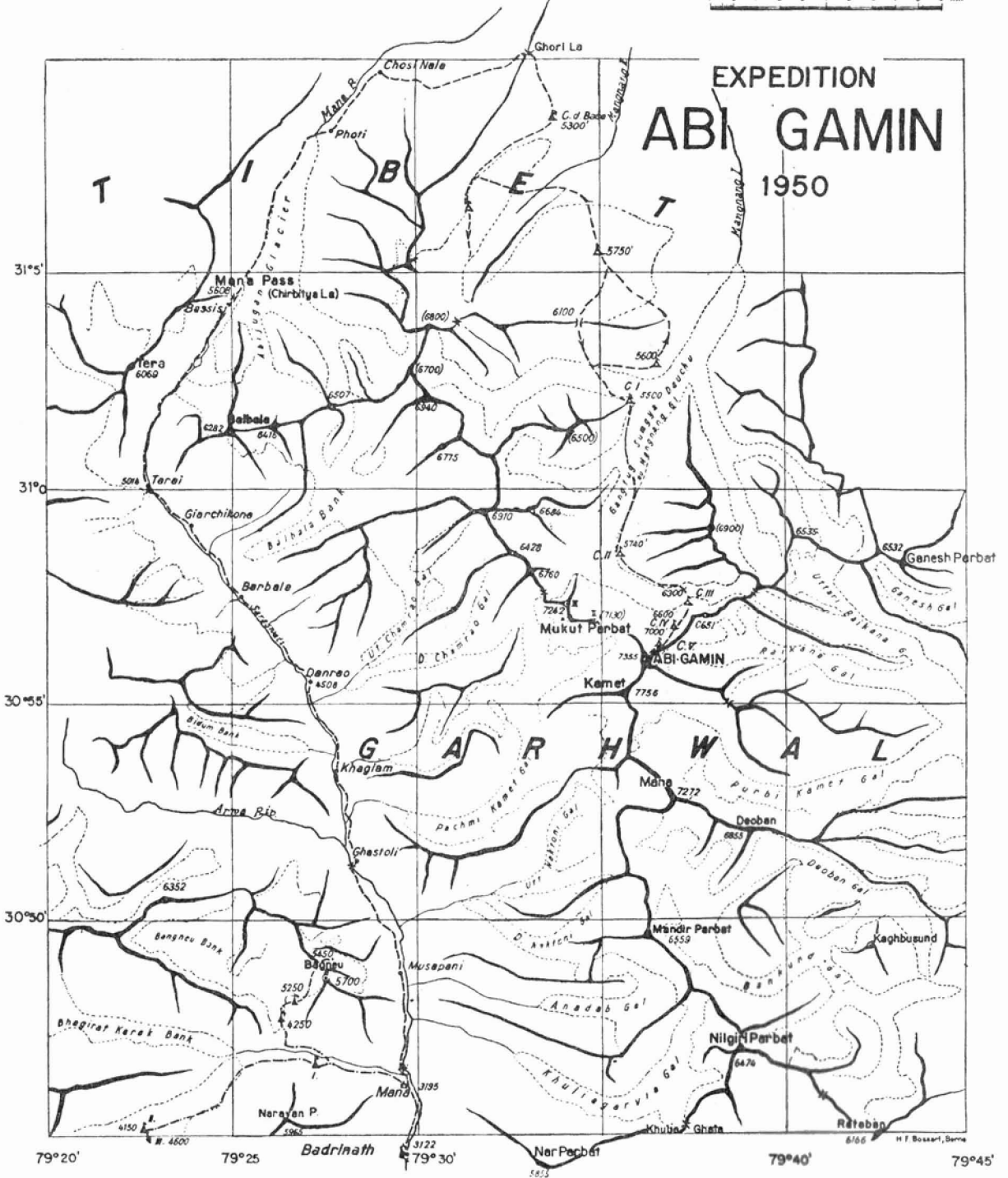
Inside a couple of hours we had climbed up the steep valley side, the angle had relented, and we were standing on a moraine beside a small hanging glacier looking across at the north face of Nilkanta. It was not an attractive sight because it was snow-plastered and partly obscured by drifting mist. The route to the col at the foot of the west ridge was swept by the tracks of new stonefalls and the deep drifts at the foot of the face were peppered with large boulders. Above the col the ridge swept 3,500 feet to the summit. It looked quite steep all the way and at the bottom very steep. The first rock section of some 1,500 feet had a series of large gendarmes which promised interesting climbing even when free of new snow. Nilkanta by the west ridge would be an excellent climb for a good party in fine weather, and even then they might not succeed. For the rest of this season it was clearly out of the question.

At this stage Tissières and I made a snap decision to hurry back to Bombay and try to get a boat home and save on the air fare. Dittert and Chevalley stayed on for a few days to take photographs. They went back to the beginning of the Satopanth glacier and the source of the Alaknanda and climbed to an 18,000-foot col to the west of Bagneu. From here they had a wonderful view to the north and east, a view which included the whole Garhwal chain. In the middle was the Kamet massif with Kamet and Makut Parbat (Abi Gamin was hidden in cloud); to the left of the Kamet massif was Balbala; to the right was Mana Peak, Ghori Parbat, and Hathi Parbat; farther right

and a long way off was Nanda Devi, and last of all Trisul. Turning their backs on the panorama they looked across at Narayan Parbat and Nilkanta and took telephotos of the latter's west ridge which should prove useful to any expedition which hopes to use that route.

Then they, too, came quickly back to Delhi, where we all met on 17th September. It had not, after all, proved possible for Tissières and I to get a place on a boat home. We had had a really first-class holiday. True, we had our share of monsoon rain, but at least we had the good fortune to have it all concentrated in the latter part of the trip, which meant that way we were able to get some good climbing done.

EXPEDITION ABI GAMIN 1950



THE PANCH CHULI AND THE DARMAGANGA

KENNETH SNELSON

IT was the delightful vagueness of the Darmaganga as shown on the old edition of the quarter-inch sheet 62B and my inability to find any account of an attempt to climb the Panch Chuli that made me decide on this district for my first Himalayan venture. While my companion, J. de V. Graaf, and I were planning, we were not aware that these peaks were also on the programme of the Scottish Himalayan Expedition, and it was not until we read of their doings that we realized that we had wasted valuable days on a route that they had already found impracticable. But I anticipate.

Circumstances ruled that for both Graaf and myself climbing must be during and at the end of the monsoon; and some monsoon that of 1950 proved to be. I left Ranikhet by bus on 17th August with our sirdar Pasang Lama, Nima, and seventeen Dotiali coolies. Graaf was to follow with our third Sherpa, Namgyal. From Almora the march to Duktu at the foot of the Panch Chuli, via Askot, the Kali river to Khela, and then up the Darmaganga took ten days. I found out later that I had just missed the returning Scots at Dindihat.

The Panch Chuli group from Duktu is a most impressive sight. The five main peaks from south to north measure, respectively, 21,120 (Telkot), 20,780, 20,710, 22,650, and 21,030 (Ngalaphu) feet in height. The last-named masks a sixth 'Chuli', Rajramba, 21,446 feet. The Sona glacier, which is dying, descends from between peaks 21,030 and 22,650, and merges with the Meola glacier about 5 miles above Duktu. Between the two glaciers are tiers of cliffs, above which is a sloping grass and scree shelf and then the broken ridge leading up to the final pyramid of the highest of the Panch Chuli. On 31st August we established our base camp at about 12,400 feet on a lateral moraine of the Meola where Graaf joined me next day. A well-defined sheep-track ran up to the ledge immediately above camp, bore left and then half-right across a gully to a shelf at about 14,700 feet. We placed our Camp II there and found empty oatmeal tins to show we had been preceded. We hoped to gain the north-east summit ridge from here, but after three days' work realized, as Murray had already done, that this was impracticable. On the 8th we tried immediately above Camp I and after passing the Scots' Camp III pitched our Camp IIa on a rocky ledge at about 16,800 feet. On the 9th I was laid low with tummy-trouble but Graaf and two Sherpas managed to get on to the upper Sona where they found that at its head was a cradle of 600-foot cliffs offering no route to the north-east summit ridge. We considered the possibilities of Ngalaphu

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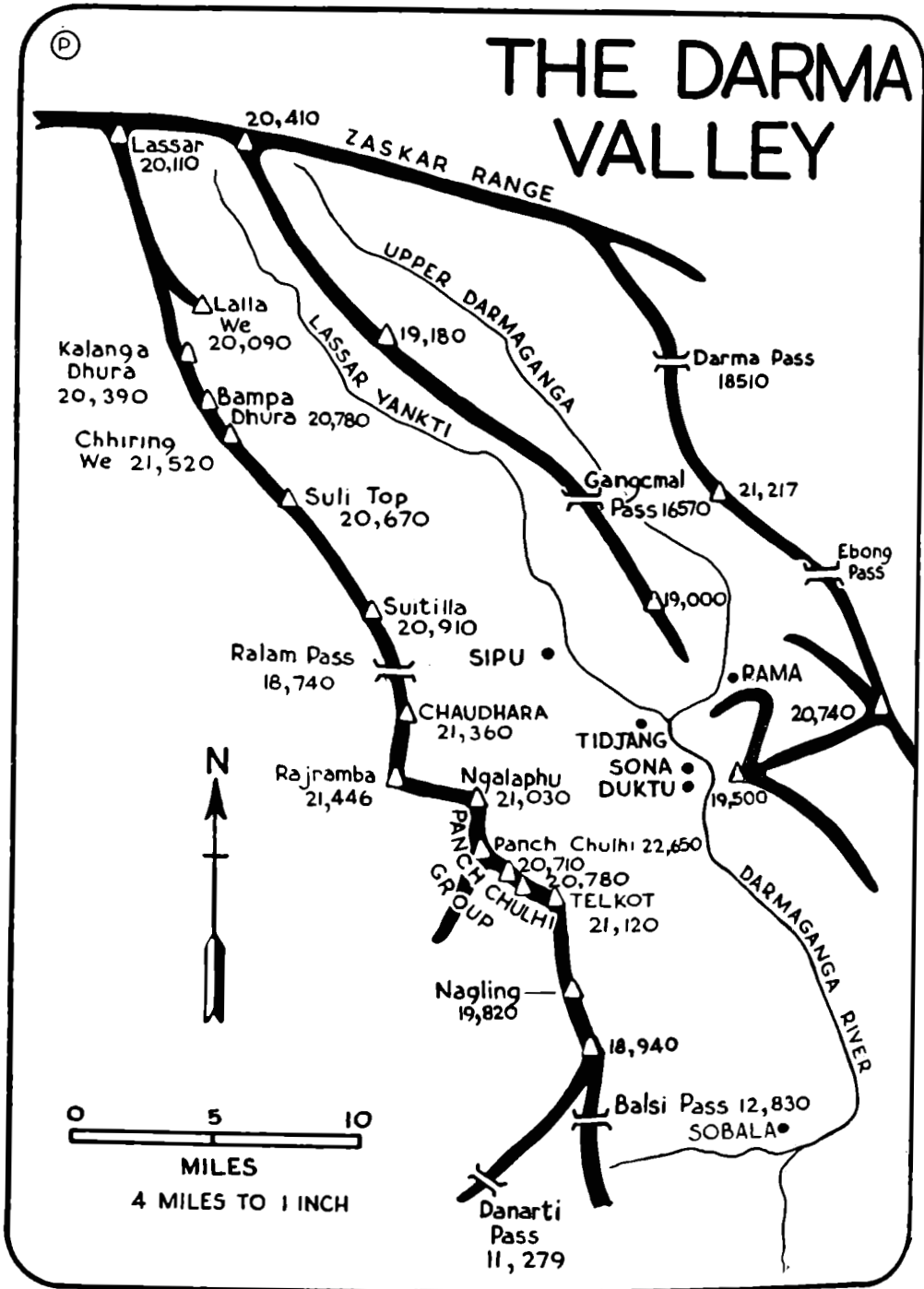
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but agreed to try our luck with the Meola and the south col. On the 11th we found an easy way from Murray's Camp III to the upper



Meola and pitched our final Camp II at 16,000 feet, about 400 feet below the main icefall. Two days later we got up to the top of the icefall and optimistically decided to install our Camp IV there next day, but the monsoon, which was overdue to abate, decided other-

wise and enforced on us a stalemate which lasted nearly a fortnight. Not till 27th September were we able to get to the foot of the icefall again and on 28th we placed our Camp IV above it at about 17,500 feet. That night we had 37 degrees of frost, our coldest so far. On the 29th the sun hit us early and we ploughed our way upwards through thigh-deep snow. We could now see the whole eastern face (at close quarters) from the summit down to the glacier. The average slope is at an average of 55° but is much steeper at the top. The ridge towards the south col has a rather easier gradient but is very broken and heavily corniced. We now hoped to find a better approach from the Goriganga (west) side and placed Camp V at about 19,700 feet and pushed on round the corner.

What we saw blasted our hopes: the Goriganga side of the col falls precipitously to the Panch Chuli glacier and the almost vertical face rises another thousand feet above the col, making the lower part of the summit ridge a razor edge. Hardly a route! After a most uncomfortable night Pasang and I went on to see the actual condition of the snow on the south-east face, but had to give up before we had made 400 feet. That evening we agreed to admit defeat. One day perhaps an ice-ace will don crampons and make the top from a bivouac near the col, like ours, but not in similar conditions.

The other 'Chulis' seemed to offer no practicable routes, so after a long day of withdrawal to base we allayed our feeling of frustration, in warmth, with mutton instead of pemmican. Days later we had imposing views of the mountain from 12 miles to the north-north-east and from 25 miles to the south-west. It is exceptionally steep. On the Goriganga side the rise is 17,000 feet in 18 miles. From the Darma side the rise is 12,500 feet in 8 miles. The final pyramid is tilted towards the Darma and the Gori side of it is the less steep—2,000 ft. at 40° compared with 3,500 feet at 55° above the Meola. On the Gori side the cliffs containing the Panch Chuli glacier offer no hope of a route and the Daccani Balati is a death-trap. We could not see the Uttari Balati.

Panch Chuli was to have been the late Frank Smythe's next mountain after his last Sikkim trip. It is comparable in loveliness with Siniolchu, considered by many mountaineers to be the most beautiful peak in the world.

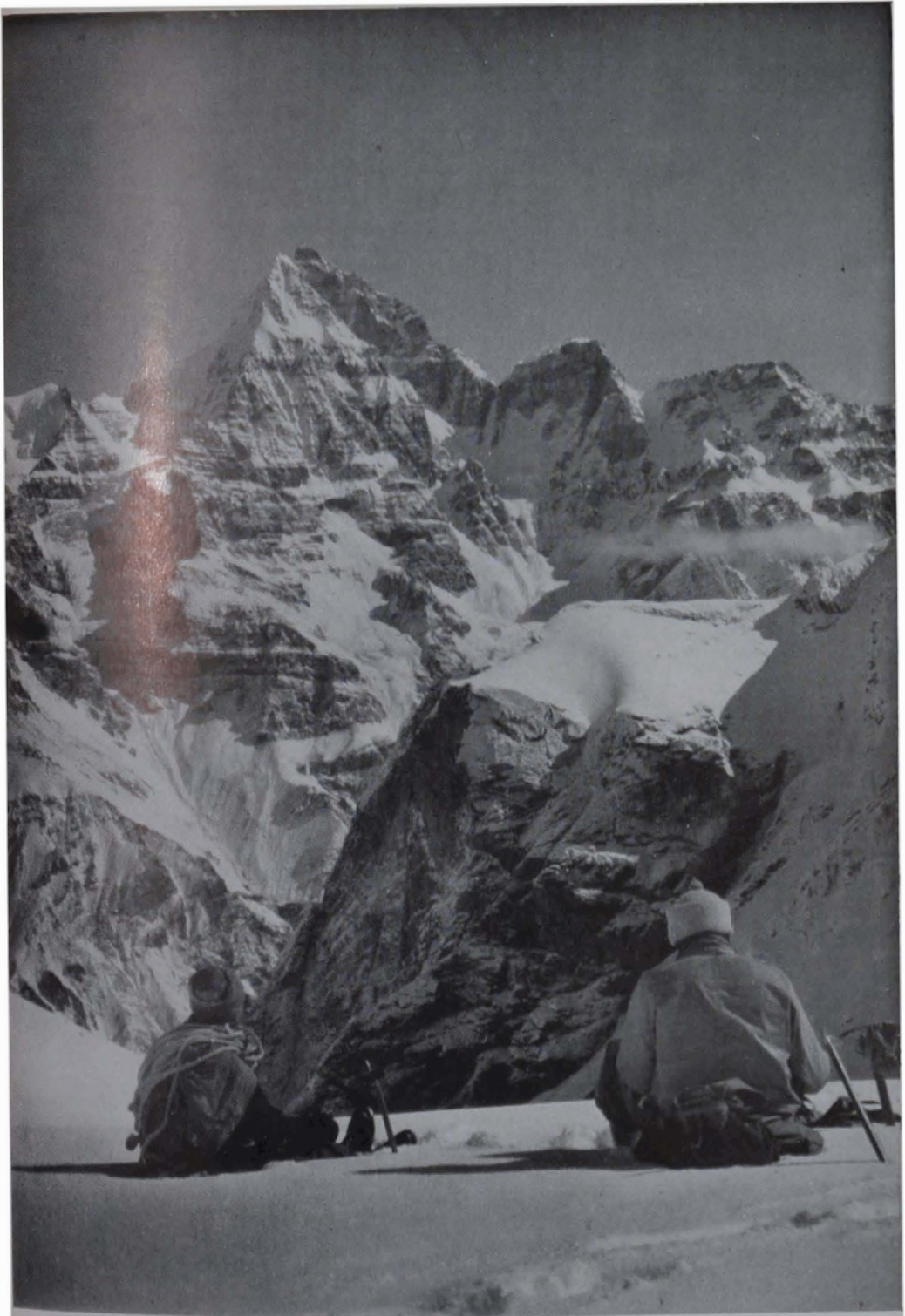
After our failure we decided to have a look at the Lassar Yankte, a tributary of the Darma, and if practicable to have a shot at Chiring We, 21,520 feet. Starting up the Lassar we passed several glaciers descending from the Gori watershed and had fine views of Suitilla, 20,910, and Suli Top, 20,670. We thought that these two would probably be more approachable from the Gori watershed. Anyhow Chiring We, the 'hill of long life', had excited our interest as had

also an unnamed peak of 21,217 feet which the Survey map showed between the Yankte and Darma valleys. So, 7th October found us scrambling up the Chiring We moraine. We had hoped that being farther north and behind the main Himalayan range we would escape the end-monsoon snows, but on the 8th we only got up a few hundred feet before finding ourselves wallowing in powdery avalanche-prone snow. It was not good enough so we decided to look for peaks with rock routes and scanned Lalla We which seemed to be a feasible proposition until further examination showed us we were wrong. After a brief visit to the head of the valley we returned to Duktu to reprovision and then set off up the Darma in search of peak 21,217. From the Lassar–Darma divide we had a magnificent view of the Gori–Lassar watershed as far as the Panch Chuli, but of peak 21,217, which was clearly shown on sheet 62, there was not a sign, till, scrambling up a small top of 18,000 feet, we found that it was the fine peak we could see across east of the Darma. Though winter was approaching we decided to have a shot at it. From the Darma side it looked too fierce, but a glacier winding round its back seemed to offer a less difficult route, so we worked up through an icfall of about 600 feet and camped at some 18,500 feet. The next day dawned bright but very cold. We plodded on through deep soft snow, getting colder and colder—conditions were getting steadily worse, both where we were and higher up. Prudence dictated withdrawal and we obeyed. We started our homeward march on 23rd October, crossing the Gorijanga at Mawani and reaching Baijnath on 4th November.

Since writing we have learnt from Brigadier Osmaston of the Survey of India that he also had been unable to identify Peak 21,217.

Mr. Snelson ends his story with grateful acknowledgements to the Himalayan Club for their indispensable assistance and with thanks to Mr. Hugh Rutledge and Mr. Charlton Thomas for advice and help.

We have been unable to obtain any account of a previous attempt on Panch Chuli by Herr Heinrich Harrer—Peter Aufschneider's companion on his escape journey to Lhasa—with the above Mr. Charlton Thomas.



Pasang and Graaf on the Lassar-Darma watershed peak looking over the Darmaganga to the magnificent peak we thought to be peak 21,217 ft. on the Darma-Kuthi watershed



The south ridge, very foreshortened, and the south-east face of Panch Chulhi from near the south col. Note the heavy cornices and windslab avalanche marks on the snow.

Panch Chulhi

<i>Telkot</i>
21,120
20,780
20,710
22,650
<i>Ngalapho</i>
21,030

Rajramba
21,447

Chaudhara
21,360

Ralam Pass
18,740

20,480

Suitilla
20,910

19,620

Nanda Devi

Trigal
19,630

Suli Top
20,670

Chiring We

21,520

Bampa Dhura

20,780

19,410

Lalla We

20,090

Lassar Peak

20,110



Photo by Kenneth Snelson

The Eastern Aspect of the Gori-Lassar Watershed

This six-shot panorama was taken on 18th October 1950 at about 10 a.m. after a light snowfall. The view-point is situated at 30° 21' N., 80° 31' E. at an altitude of about 18,000 feet on the Lassar-Darma divide, overlooking the village of Sepu (which is not in the photograph) to the SSW, and above whose pastures is the fine group of rock peaks seen in front of Rajramba. Neither the Sona nor Meola Glaciers of Panch Chulhi are visible from this point. The clouds below Suitilla conceal another group of rock peaks above the shepherds' shelter at Danggang in the Lassar. Nanda Devi is 34 miles away and is, of course, not on this divide. The source of the Lassar Yankti is immediately to the right of Lassar Peak which is on the Zaskar Range.

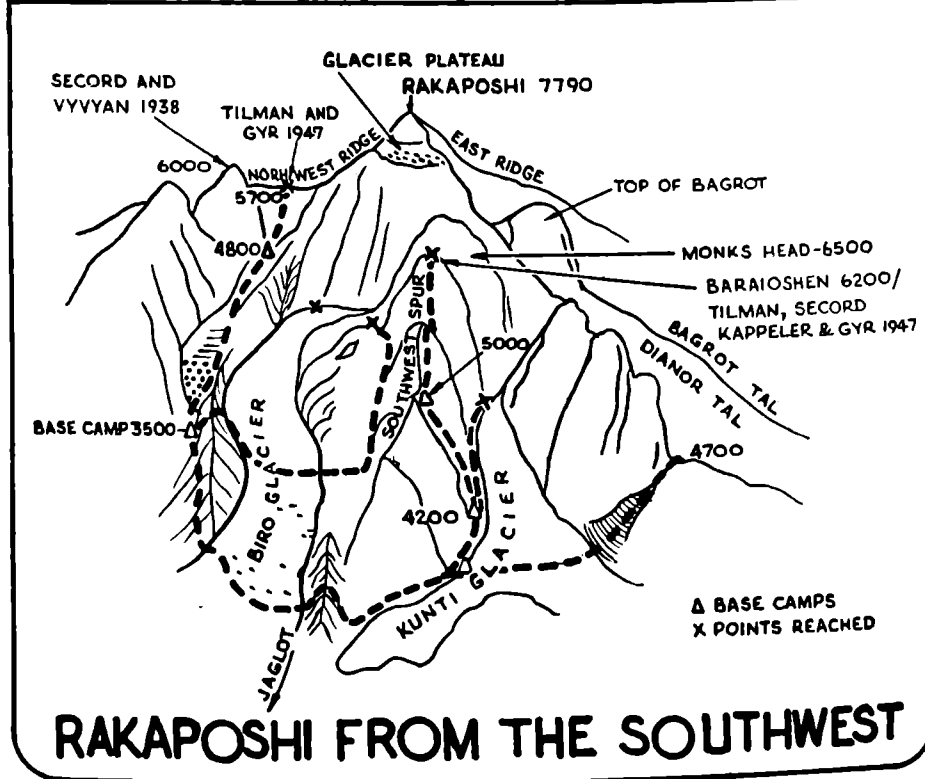
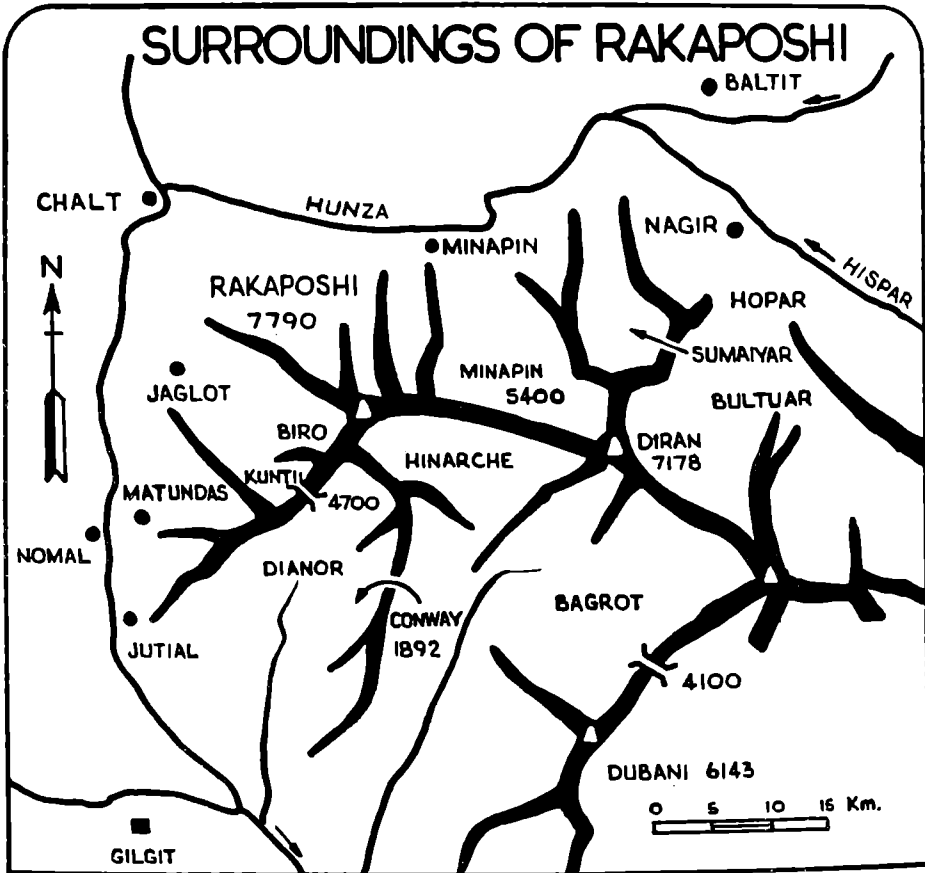
KARAKORAM EXPEDITION, 1947

HANS GYR

Although some of this story has been published elsewhere, full material was not available for recent issues of our Journal, and we are indebted to the Schweizerische Stiftung für Alpine Forschungen for permission to publish this article in English, and for the photographs they generously supplied. The translation has been made by Willi Rickmers, who led the successful German Expedition to Pic Kaufmann—now styled Pic Lenin—in 1928. For our own purposes the narrative has been a good deal abridged.—ED.

THE party consisted of R. Kappeler, Campbell Secord, H. W. Tilman, and myself. We left Abbotabad by car on 21st May together with our four Sherpas, and as interpreter, Naib Tahsildar Ahmed Sultan Khan, whose services the Deputy Commissioner had most kindly placed at our disposal. On the Babusar pass we were welcomed to Gilgit by the Assistant Political Officer, Captain Hamilton, and on 30th May reached Chilas. After crossing the Indus by the Rakhiot Bridge we got our first glorious view of Rakaposhi and also, to the south of us, of Nanga Parbat. At the Gilgit Agency we were royally welcomed by the Resident, Colonel Bacon, and his wife.

The meaning of the name Rakaposhi is wrapped in legend; one version is that when the head of the Raki family of the Bagrot valley dies, clouds—'poshi'—veil the mountain, but according to Dr. Longstaff, Raka (dragon) with poshi (tail) is the interpretation. The Hunzas call the mountain Domani. The upper part of Rakaposhi rises as an isosceles triangle above a glacier plateau; the legs are formed by the western and south-western ridges between which is the steep icy flank traversed by horizontal bands of rock. The narrow rocky north-west ridge forms a knoll on the ice plateau and then continues up. A long horizontal arête at about 19,000 feet connects the summit ridge with the lower peak, climbed by Secord and Vyvyan in 1938. The south-west ridge descends evenly to about 20,000 feet and then divides into a fork to contain the Kunti Glacier—broad and snow-covered above the fork, the branching spurs, below it, turn to knife-edges studded with fantastic gendarmes. A depression leads to the Dianor valley and beyond, the ridge rises towards the Badishish group and turns sharply west. This part of the spur forms the southern flank of the Jaglot valley. Another subsidiary ridge, the south-west spur, divides the Biro from the Kunti Glacier; near the branching-off point of this ridge is a snowy eminence which we named the 'Monk's Head'. The near peak on the



south-west spur—which is heavily corniced—is named Baraioshen. The northern flank of the mountain is an ice wall close on 20,000 feet high, facing the Hunza valley. The eastern face of the summit pyramid is also nearly vertical. Towards the north it is bounded by the gently inclined east ridge, whose flanks are, however, steep. The lowest notch, about 18,000 feet, is above the upper end of the Minapin glacier. The Dianor valley does not quite reach the east ridge but ends in a col abutting on the eastern wall of Rakaposhi. It leads to a snowy dome whence the ridge separating the Bagrot and Dianor valleys descends; Conway crossed this ridge in 1892.

Our base camp was established on the right bank of the Biro glacier on 7th June at a spot named Daru Kush, at about 10,500 feet in a high meadow. We assumed the possibility of reaching the top of Rakaposhi from the glacier plateau by the south-west ridge. The choice lay between four routes to the plateau:

1. Direct ascent to the north-west ridge, then continuing along it. We called it the 'short cut'—Secord's route being too long.

2. By way of the Biro glacier to the south-west ridge, the 'corridor route'.

3. Traverse over the south-western spur to the 'Monk's Head', then following the south-west ridge.

4. Ascent from the Kunti glacier to the south-west ridge.

All very steep, the glaciers flowing in deep and narrow furrows.

On 11th June Kappeler, Secord, and Tilman investigated the labyrinth of the Biro glacier which proved troublesome. Next day Tilman and a Sherpa advanced over the slopes of the south-western spur and reached a flattish place acceptable for a camp. On their way back that afternoon they were nearly swept down by avalanches from the south-western spur. That same day, Keppeler and Secord tried to circumvent the ice-fall on its left bank; it was steep and they did not even get as far as Tilman, and they narrowly escaped death from an avalanche during the crossing of a gully—luckily they had jumped so far apart that the jumble of ice and rock passed over the rope between them. This damped our optimism and we resolved to explore a route from the Kunti glacier to the Monk's Head. Next day, loaded with provisions for four days, we traversed the Biro glacier and reached the snout of the Kunti glacier, followed the lateral moraine as far as the Mano glacier, and then scrambled northerly over screes until we found a place safe from stones where we could pitch our tents. We awoke in deep snow through which we plodded up the Kunti. Disappointment again! The nullah ended in a vertical wall. A last chance seemed to be offered by a saddle on the south-western spur; the couloir leading to it looked possible so we decided to camp in the Kunti valley and sorrowfully moved from

delightful Dara Kush to a desert of stone. Next day three hours through fresh snow brought us to the foot of the couloir; there was often ice under the snow. Five hours of hard work and we were on the saddle at about 16,500 feet, but would loaded men be able to get up?

In the meantime the Scouts had brought our kit up to the camp. Their commander supplied us regularly with fruit and vegetables from his own garden, and Angdawa, who had been cook in a Darjeeling hotel, served us delicious meals. The other three Sherpas, excellent fellows all, were Phurbo, Angtingit, and Neina. When the weather cleared up we transported three tents, climbing gear, primus, paraffin, and pemmican to the saddle and found the ascent much less toilsome than we had feared. The view was superb; in the far distance Haramosh stabbed the sky with its spearhead of ice. In spite of heavy clouds we sallied forth next day to seek a higher camp site, but a blizzard drove us back to base again. Finally, we assembled stores for two weeks at the saddle and, the weather turning fine, we tackled the long slope above us—in spite of deep snow and heavy loads, we were able to manage the normal 1,000 feet per hour. After about three hours' going we came to the main ridge, garnished with enormous cornices, and snaked cautiously towards a pinnacle known to the natives as Bareioshen, from where the going looked less simple than we had hoped. The ridge became steeper and the overhanging bulges more threatening—while negotiating a delicate piece of work I heard a cracking noise and felt the ground giving way—I threw myself over to the other side just as the cornice broke off exactly along my track and thundered down to the Biro glacier. After a series of difficulties the highest point of the south-western spur rose 600 feet above us, and tackling it, we reached a shoulder from where we could look over a precipice of ice and rock down to the Biro glacier, 9,000 feet below. Tilman worked his way through deep snow to the top of the pinnacle; when he called to me to follow up his face already showed evil news, as did an ugly grin on the face of the Monk's Head; the threatening wall might have tempted us in the Alps, but we were in the Karakoram—we had to foresee a descent almost impossible with heavy loads in uncertain weather. Again, it was brought home to us that on these mountains retreat was not merely wisdom but a stern command. On the way down we considered the north-west ridge which held out some hope. At the advanced camp we were met by Angdawa and Neina, but we found that ice and avalanche had made the couloir too dangerous for a descent under heavy loads, so we lowered these on the rope stage by stage.

After a long discussion in the Kunti camp we decided that Tilman and I should attempt a direct climb from Biro base camp to the

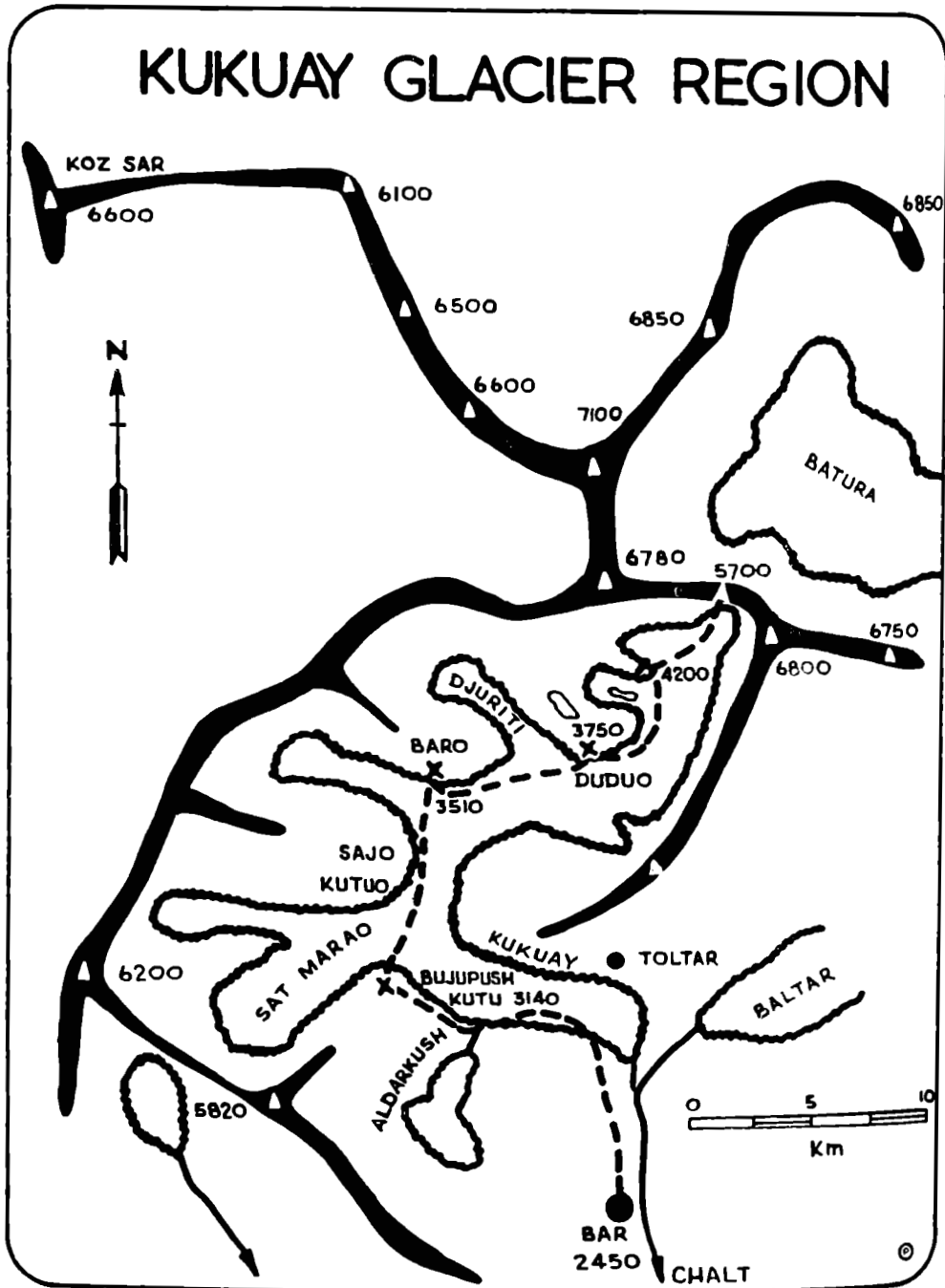
north-west ridge, circumventing the peak reached by Secord and Vyvyan in 1938. Meanwhile Kappeler and Secord would try to cross the south-west ridge into the Dianor valley. At Dara Kush we found shelter from rain under the overhanging rock till the arrival of the tents. Two Sherpas returned to join Kappeler and Secord, and when the weather cleared somewhat, Tilman and I went up to a small camp site about 15,000 feet high where we dismissed the Sherpas, warning them to keep in our tracks, for on the way up we had narrowly missed a big avalanche. Next morning we awoke in a tent crushed down by new snow; so back to base we went and found Kappeler and Secord there. They had reached a saddle whence a descent into the Dianor valley appeared feasible.

Later Tilman and I managed the 'short cut', reaching a point about 19,000 feet on the main ridge after seven hours of the usual difficulties. But when the mist lifted elation gave way again to despair—the ridge to the plateau was a ferocious array of white-helmeted policemen. 'Hopeless! Hopeless!' muttered Tilman. Approach from this side was barred. On the way down we caught a glimpse of the upper recesses of the Biro glacier where avalanches guarded the 'corridor route' efficiently; they also swept across our track to Dara Kush and made it advisable to wait until the sun had dropped behind the ridge. Then their growls stopped suddenly.

We returned to Gilgit by devious ways. Meanwhile the new Indian government had taken over and the Bacon family were preparing to leave; in spite of that they made our stay as comfortable as they possibly could. It was quite evident that the people of Hunza honestly regretted the departure of the English under whom they had enjoyed so many years of peace.

Our destination was the region north of Chalt, marked 'unexplored' on the map. By way of Nomal we reached the Chalt bungalow where we found Azail Khan, the tahsildar of Gilgit, in heated discussion with the lambardar who had brought our porters. They wanted to extort higher wages. Finally the tahsildar threw a bag of flour at the lambardar's head, thereby causing great merriment all round, and that settled the dispute. We slept at Bar and next day camped at the hamlet of Pujupushkutu on the bank of the Kukuay glacier. From here a local hunter guided us past the magnificent Sat Maraog glacier and through some jungle to Baro Daru Kush, and finally to Tuduo Daru Kush where the last scrub offered fuel for the camp. It seemed that it might be possible to reach the pass, a little less than 17,000 feet high at the head of the glacier. It might lead to the Koz Sar (*sar* = glacier), to the Yashkuk Sar, or to the Batura glacier explored by Visser in 1925. It took us six hours to reach it through an irritating maze of crevasses and seracs, and lastly through

a gully in rotten rock. A forbidding ice-wall of 6,000 feet fell away to what could only be the Batura glacier which is 30 miles long. In



the east we saw the Karun Pir and in the north the mountains around the Kilik and Mintaka passes; in front of us we had the imposing half-circle of the Batura peaks. Then back to the Tuduo Dara Kush and over the Chillinjhi pass to the Chapursan river. This time impassable crevasses beat us back and falling chunks of ice nearly killed

Tilman and Secord, the latter getting a blow on his arm. Even the return to Chalt proved ticklish as an enormous landslide had carried away the path and the river now gurgled at the foot of the high sandstone cliff. We sat down perplexed. Then the last of our porters seized an ice-axe and cut a line of excellent steps in the soft sandy soil with the rapidity of a Swiss guide, and by this path, which clung miraculously to the cliff, we regained our track and pushed on through Bar to the hot springs of Shotun and Chalt where we were greeted by our friend the Lambardar. Secord's leave was up and Tilman wanted to join Shipton at Tashkurgan on 5th August: the former left for Gilgit and a man with a donkey came to fetch our revered teacher; we accompanied his modest caravan to the end of the village. Sad as we were to lose our English comrades, we drew consolation from the fact that now we must show what we had learnt from a great Himalayan expert.

On 28th July we started our journey through Nagar and Hunza; just below Chalt we met the Wazir of Nagir on his way to Gilgit, where he said he had prepared everything for us. At Minapin we were welcomed by Abbas Ali Khan, the Rajah's son, who, hearing that we wanted to examine the north-eastern side of Rakaposhi, begged to be allowed to join us. Naturally we were glad of such agreeable and useful company, and next day he duly arrived, with several servants, a modern rifle, and an alpenstock. Three hours' march over the rubble of the Minapin glacier brought us to a small settlement where children were making ghee in a high churn. The milk is so poor in fat that the ghee has to be replenished day after day until it inevitably becomes rancid.

We plodded on through pines to where the Minapin glacier bends to the east; on our right rose the east ridge of Rakaposhi bristling with weird pinnacles. We left Abbas Ali Khan here and two hours later discovered a flat place for our sleeping bags—it was a wonderful moonlight night. We left at 5 a.m. with the intention of traversing into the Bagrot valley over the lowest depression in the east ridge, but an endless succession of seracs and crevasses and knee-deep snow made gruelling work so that at noon the pass was still far away, and after a grind of eleven hours we gave up as we could not reach our pass before dark. After another night in these beautiful surroundings we rejoined Abbas Ali who suggested descending to Minapin by a parallel valley. From a saddle in the dividing ridge we obtained a good view of the northern flank of Rakaposhi and especially of the three conspicuous ribs of the east ridge from which the summit pyramid rises almost vertically. We thoroughly enjoyed this excursion with that very nice young fellow. Next day, the blackest of our wanderings, we left for Nagir, 22 miles away. At Miacher, 4 miles away, the

porters laid down their loads according to custom and we promised to pay them on arrival of the new batch of porters. At the next hamlet, Talshot, it was 'all change' again after fifteen minutes' march, and the place was deserted as everyone was in the fields. Finally a head-man turned up, promised to find porters, and disappeared forever. In despair Kappeler rode to the next village for help, and, five hours later, three men arrived with donkeys, impertinently shouting the exorbitant prices which the 'other sahibs' were supposed to have agreed to, and what else could we do in the absence of lambardar and tahsildar? At Phikar, too, we wrestled with exorbitant prices for fruit and vegetables, and the late afternoon still found us 12 miles short of Nagar. A comparatively decent man offered to accompany us and a fine evening made us forget our worries. On the opposite side of the gorge we could see the gardens of Hunza and the peaks of Bolochabaring towering above the white castle of the Mir; up a valley glistened the dome of Sumaiyar. A long stumble through the dark then brought us to the outskirts of Nagir where news, travelling mysteriously, took the shape of a man with a lantern who led us to the castle, where next day we breakfasted in the sun as guests of the Mir (represented by his brother-in-law), for, like all the princes around here, the Mir had gone to Kashmir for a conference with the Maharajah. The Maharani sent her son, aged three, to greet us with due ceremony. He bore himself sedately, already conscious of his rank, and his servants treated him with great respect. The Munshi who had met us at Minapin was also present and he sent for, and dressed down, the insolent porters, making them repay what they had charged in excess.

We left at nine for Hopar, a view-point on the Barpu glacier. The flat roofs everywhere were golden with drying apricots that scented the air; flour and apricots seem to form the only winter store of the population. In the fertile basin below Hopar wheat was being reaped and the maize stood high. The Barpu glacier cuts clean through the fields without a moraine. From Hopar we saw the grandiose icy flank of the Bagrot group; the track to Hispar runs straight across the glacier. On the way back we faced the mighty Bolochabaring rearing its head, 15,000 feet over the plain, but the wide expanse of the Hunza and Hispar valleys makes it difficult to realize the height of the mountains that seem to take up so little room in the great hollow. At night they gave us a big supper in the palace, and on the following day the whole retinue from the Mir's brother-in-law down to the last scullery-boy conducted us to the boundary on our way to Baltit. The suspension bridge over the Hispar river was decrepit and dangerous and the locals extorted money for repairs and levied a toll of one rupee per head. At Baltit

children were splashing about in the swimming-pool, 600 feet above the bottom of the valley, and in the garden two gorgeous tents awaited our pleasure. Our host was Mohammed Nazim Khan, the Mir's brother. The laws of hospitality allowed him to sit at table with us although it was the feast of Ramadan; in the afternoon young Hari Tham Khan (the Mir's uncle, in spite of his fifteen years) showed us the sights of Baltit, being particularly proud of an irrigation ditch cut through solid rock. We heard of the big landslide that had buried many of the Mir's yaks, camels, and horses, and in the visitors' book we read the names of famous travellers, among them that of our countrywoman Ella Maillart—during the night ripe apples dropped on our tent but could not disturb our slumbers.

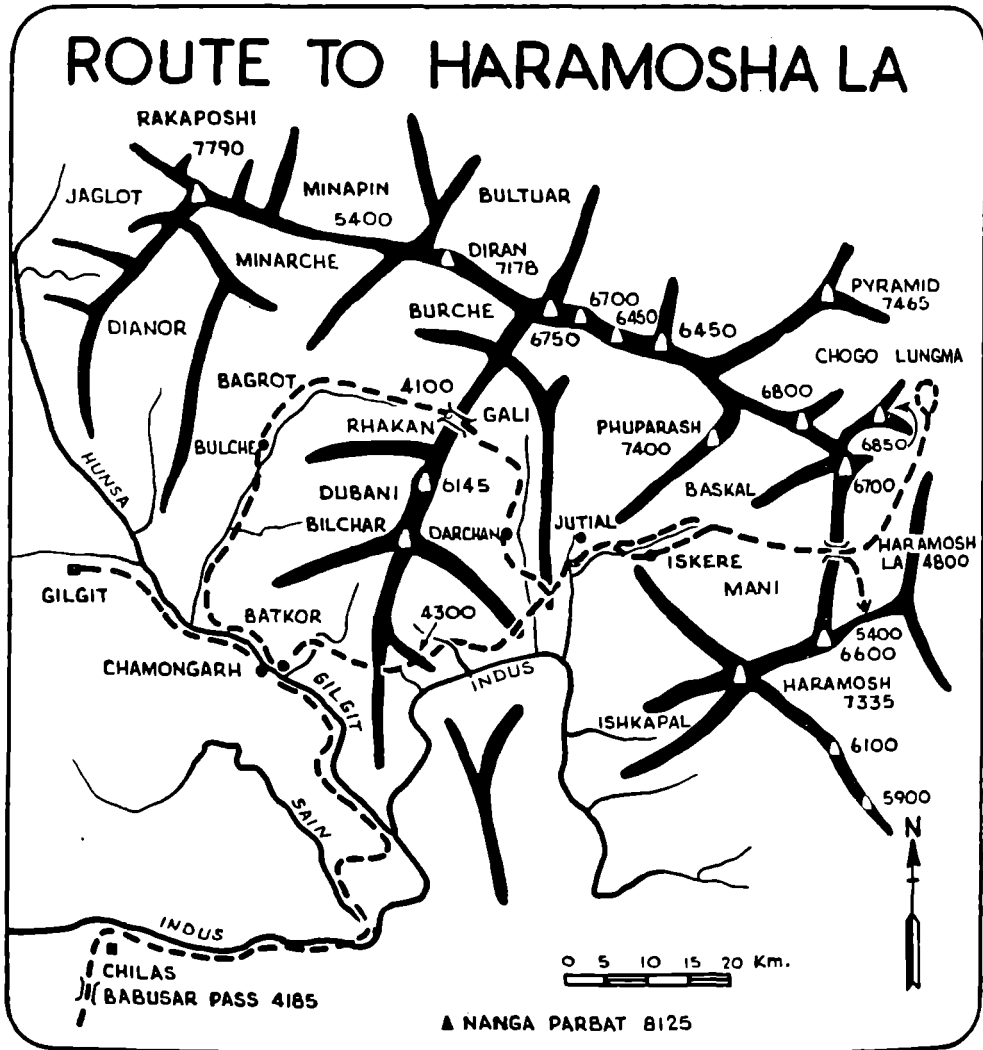
Next day we strolled through Baltit alone—terraced fields with miles of irrigation channels testify to the diligence of the peasants, and neat, pleasant houses show the skill of their builders. The people are very fair; legend has it that their ancestors came with the armies of Alexander the Great. In the shady garden the life of the court had no secrets: no door is locked; the humblest of petitioners is received personally by the Mir. Hunza pays tribute to China and to India in order to stand well with both. In the cool of the evening we walked leisurely through the lanes followed by a man playing 'Annie Laurie' and 'The Bluebells of Scotland' on the bagpipes, while the workers in the fields listened enraptured.

After our last night in our princely tents we left with the lambardar of Aliabad, two men and two donkeys, and tramped on through Murtazabad to the rest-house at Mayun on the Hunza frontier. On reaching Gilgit for the third time we were invited to stay with Major Brown, the Commander of the famous Gilgit Scouts, and join in two big festivals—Independence Day on 15th August and the end of Ramadan on 17th August.

Our next base was to be Chamongarh whence we planned to visit the Haramosh La and Chogo Lungma. We engaged an excellent interpreter, Mahomed Nazim, and camped next day at Batkor under a mighty apricot tree. On the 20th the view from Batkor Gali, a pass of some 15,300 feet, was superb. Eastward towers the icy pyramid of Haramosh with the Baskal and Pupurash mountains close by on the north. Nanga Parbat is visible to the south. From near Khaltoro, the next hamlet, we could look into the recesses of the Purpurash glacier. At the tiny settlement of Barche, late in the evening, we were roused by the astounding news that three lambardars had arrived with eleven men—the local wireless had functioned again!

To our surprise the lambardars were able to give us exact information about the route to be followed to the Haramosh La, which we had believed to be far from easy to reach from this side. We followed

their instructions and were rewarded at daybreak with brilliant sunshine, from our bivouac 150 feet below the crest. Another splendid panorama: south-west rose Haramosh with its three peaks, to the north-east Chogo Lungma, beyond the chain forming the south boundary of the Hispar glacier. We descended, partly over crumb-

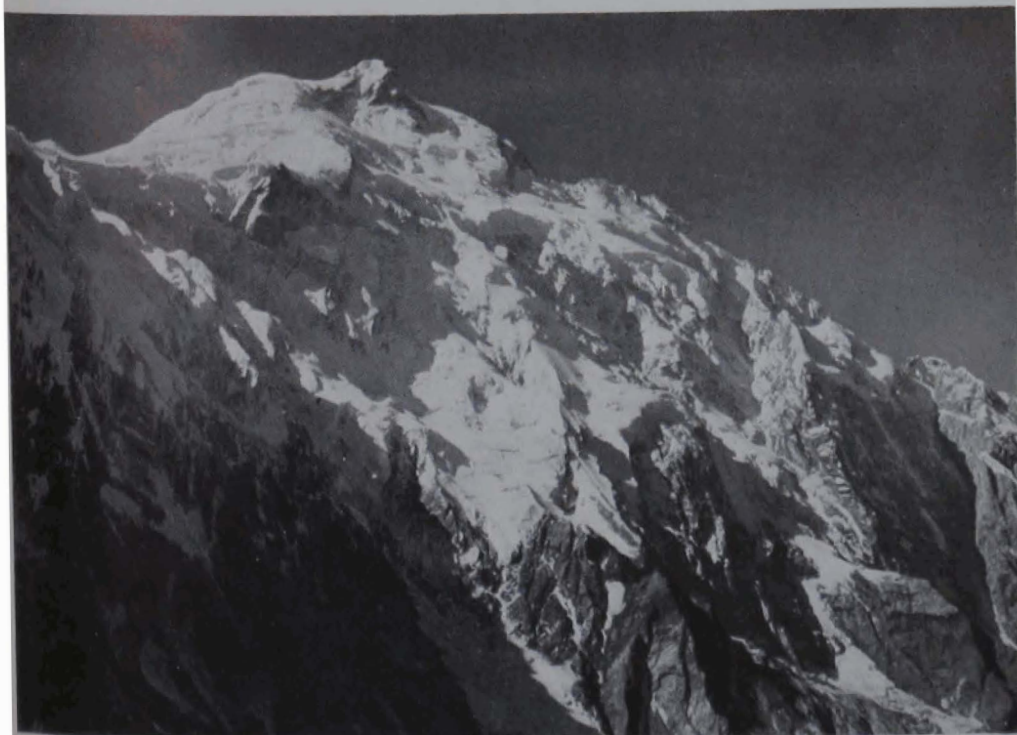


ling rocks and partly by glissade, at which the hillmen were not adept, to the Mani glacier. In the night we were awakened by the roar of an avalanche which swept across the whole width of the glacier and stopped close to our bivouac on the far side of the moraine; we were marooned for a few days by the weather, which had broken, but villagers from Iskere and Daru lower down kept us supplied with food.

At last, on 4th September we started up the Haramosh glacier with our remaining Sherpas and four porters. The air was often full of whizzing stones, but the natives were either believers in Kismet



On the Kukuay Glacier



Haramosh, from the Haramosh La

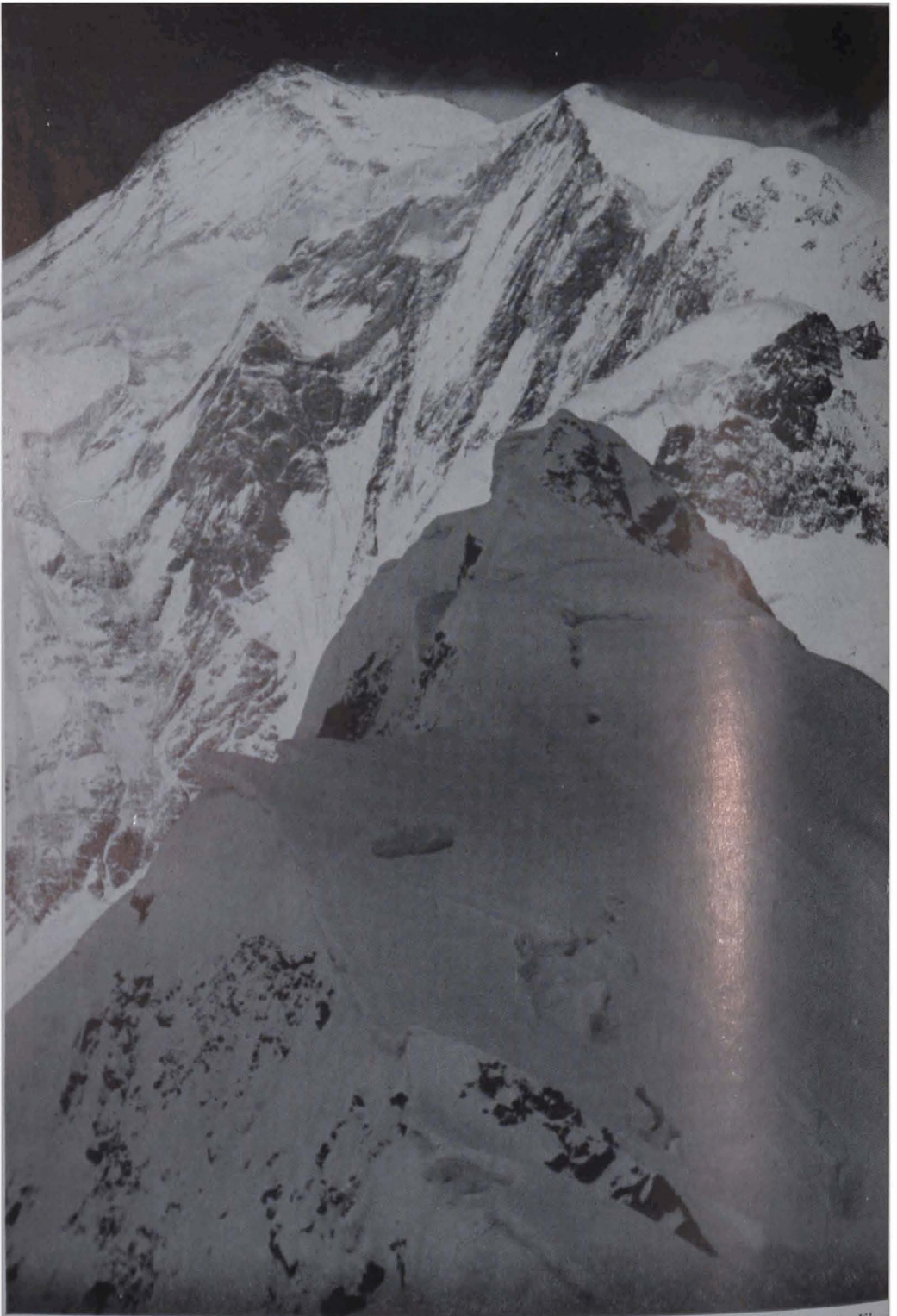


Photo by Klaus

Rakaposhi. South-west spur with 'Monk's Head'

or did not realize the danger. We reached the La late in the afternoon, and found next day that the knife-edges of the pinnacles preclude attack from this side. Next day we got down to the Congo Lungma glacier, in a couple of hours—rather heavy going. Here we found marks of a bear which, according to the Sherpas, were actually those of a *yeti* or Abominable Snow Man! We pitched our tents on a glorious autumnal meadow covered with red and yellow leeks. From here the Chogo Lungma glacier, which is one of the longest in the Karakoram, loses itself in the distance. Kappeler and I climbed up to a small notch from which we could see the Bullock-Workman's white Pyramid Peak and also the three glaciers flowing from the Pupurash and Baskal group. In this impressive solitude we took our leave of the Karakoram.

TRISUL, 1951

R. D. GREENWOOD

TRISUL seemed, from the accounts of Dr. Longstaff and of his successor (26 years later) Peter Oliver, to be a mountain second in interest only to Nanda Devi and, moreover, not necessitating climbing standards unduly high for the novice, so Gurdial Singh and I decided to make an attempt on it.

From the first time we got together we had no doubt but that should Trisul prove so ungracious as to deny to us the tip of the trident of Shiva we would at least have had a month of happy companionship in the high hills. Beside our two selves we had Flight-Lieut. Nalini Javal, Surendra Lal, Gyaljen Mykji, Dawa Thondup, and Lhakpa Tsering, and, complete with equipment collected from sundry places and foodstuffs purchased and tabulated by Gurdial Singh, we assembled on the platform at Dehra Dun. We had to abandon the more lovely introduction via Ranikhet, the Kuari pass, and Tapoban for the shorter pilgrim-route involving the rail journey to Kotdwara with a change of gauge at Najibabad in the small hours. The transfer of 1,300 pounds of kit and seven members into an already filled-to-capacity third-class compartment demanded some unavoidable pushing aside of other intending passengers! At Kotdwara we soon had the baggage loaded on a waiting bus in which we bumped our way to Srinagar and Chamoli. Here we had the usual trouble over muleteers' charges and effected a not very satisfactory compromise. A young French diplomat, who was joining his compatriots for part of their Nanda Devi venture, joined us at dinner.

We found Lata denuded of coolies and remarked: 'Why do the French take so MANY for their Expedition?!' and then (I quote Nalini Jayal) 'Kesar Singh,¹ a Garhwali veteran of Kamet and Trisul, appeared like a prophet and, thrilled by the prospect of scaling a familiar peak with a fellow Indian, not only volunteered, despite his age, to join us, but emphasized his own indispensability and swore to move Heaven and Earth to obtain from other villages the fifteen porters we so desperately needed.' He proved as good as his word and eventually, after scrapping and rebagging, we set off with eight of our porters for the coolness of Lata Kharak. We delighted in the luxuriant grass, the galaxy of flowers, and the visions of Bethartoli

¹ *H.J.*, vol. vi, p. 103. 'Kesar Singh, theatrical, keen, determined, whose prestige among the men made him virtual Sirdar—by far the most capable mountaineer of them all above the snow-line.' Peter Oliver.

Himal and Nanda Ghunti, clear and glittering in the south. We spent a day scrambling on the lesser peaks near by while we waited for the other seven porters, and next day, after a night of discomfort owing to pouring rain, the porters responded to blandishment and carried well on the marches to Durashi and Dibrugheta. Dibrugheta was, I think, first found by Graham and is one of the gems of creation. Descending, we met Roger Duplat and Louis Payan with Tenzing, my companion on Bandar Punch. We all spent a happy evening together.

We crossed the Rishi by a sturdily constructed bridge built a few days earlier by another Frenchman, Robert Walter, also bound for Trisul. We had several hundred feet of rhododendron scrambling and came to realize to the full that those exquisite and delicate blooms conceal tangles of gnarled branches, truly devilish to force a way through. When we emerged, on a high vantage point above the Trisul nala, we had a splendid view of the upper Rishi gorge and of the eastern face of Nanda Devi.

We were now in austere country, but nevertheless we found a delectable site about 15,000 feet, at a spot called Tridang on the survey map. The poetically minded Nalini Jayal writes: 'The grass on which we camped was like a cushion, sprinkled with tiny mauve primula (*minimissima*) and the gentle lapping of the water brought to mind the Beethoven Pastoral Symphony. Indeed, the serene atmosphere with the snowy Devistan peaks overlooking us from the east, the deep blue sky and the brilliant moon in the clear mountain air gave us probably the keenest joy of our expedition.'

While the five porters we had kept with us went down to Longstaff's 'Juniper Camp', Gurdial Singh and I went up with loads to find a site for Camp I which we established at about 17,800 feet, opposite an ice-fall at the upper limit of bare rock, and occupied next day, 21st June. The local porters, having no boots, were only able to carry to a point some 400 feet lower down. Gurdial Singh, Dawa, Gyalgen, and I went up another 500 feet to dump tents and food for Camp II. In Camp I that evening appetites began to flag and Nalini and Surendra were suffering from severe headaches. On the 22nd, in brilliant weather, Gurdial Singh and I, with our two Sherpas, climbed to about 19,500 feet. This was in a westerly direction towards the summit of the north ridge. The summit itself was not yet visible and at about noon mist came down and compelled camping.

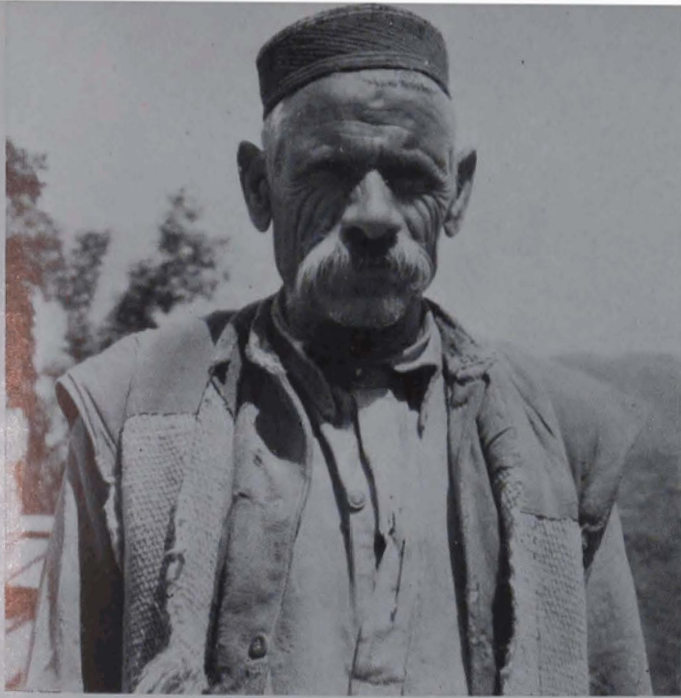
The morning of the 23rd June dawned clear but with a cold wind and we could not leave until 8.45. Luckily the wind dropped soon after we left camp. We began with an oblique traverse across the north-north-east ridge but soon altered our course to one parallel with the north ridge. At 600 feet above camp we roped on account

of crevasses but the slope was consistently easy on fairly hard snow. It was a grand day. Nanda Devi displayed her double-turreted splendour and to the north the triangle peak of Kamet stood out clear. We plodded on slowly up the seemingly endless slope. At mid-day little wisps of mist began to appear in the valleys, gradually rising to mingle and form a cloud-sea. A short halt for food and a look around—Nilkanta thrust her spire upwards to the east of the three pinnacles of otherwise level Chaukhamba—next to the right came Dunagiri and Changabang merging with Kalanka. The Nanda Devi west peak and the connecting arête were very clearly defined, and we wondered how the French were faring on their daring venture. Farther east was the Devistan ridge (western wall of the Sanctuary) with Nanda Kot.

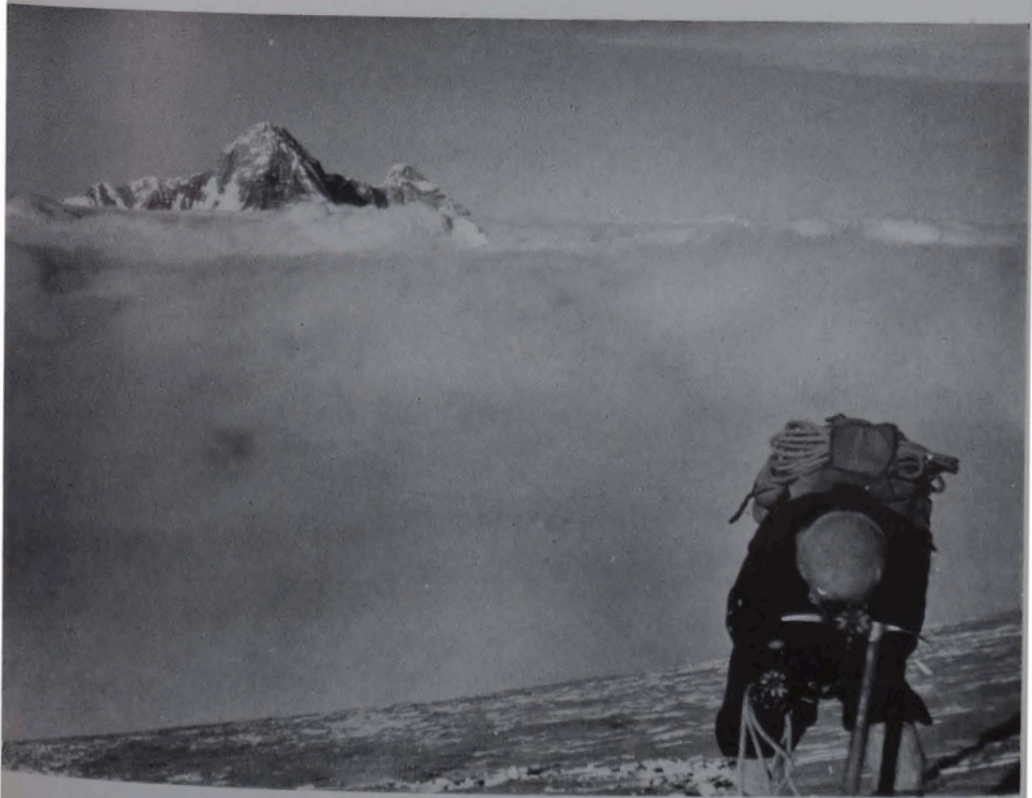
The climbers were tiring. Dewa alone strode on, determined to reach the top. We followed slowly and painfully. Gyalgen's headache got worse and he could go no farther, but the summit was close at hand and, as he had ample clothing, it was quite safe to leave him for the short time we needed. We actually reached the summit at 4.20. Though the hour was late we were loath to leave the indescribably beautiful view—no words are adequate to tell of these peaks of Garhwal, of Nepal, and of Tibet, rising like islands out of the 22,000-foot-high sea of cloud.

We reached Camp II at 7 p.m., to be greeted by a superb sunset, worthy of so glorious a day.

Note.—Roy Greenwood and Gurdial Singh were at the time on the staff of the Indian Military Academy at Dehra Dun. This was the first time that an Indian member of the Himalayan Club had ascended one of the greater Himalayan peaks, and it is to be regretted that we are not able to record his own observations and reactions; but we take this opportunity of congratulating him on a very gallant effort.—ED.



Subadar Kesar Singh, veteran of Kamet and Trisul

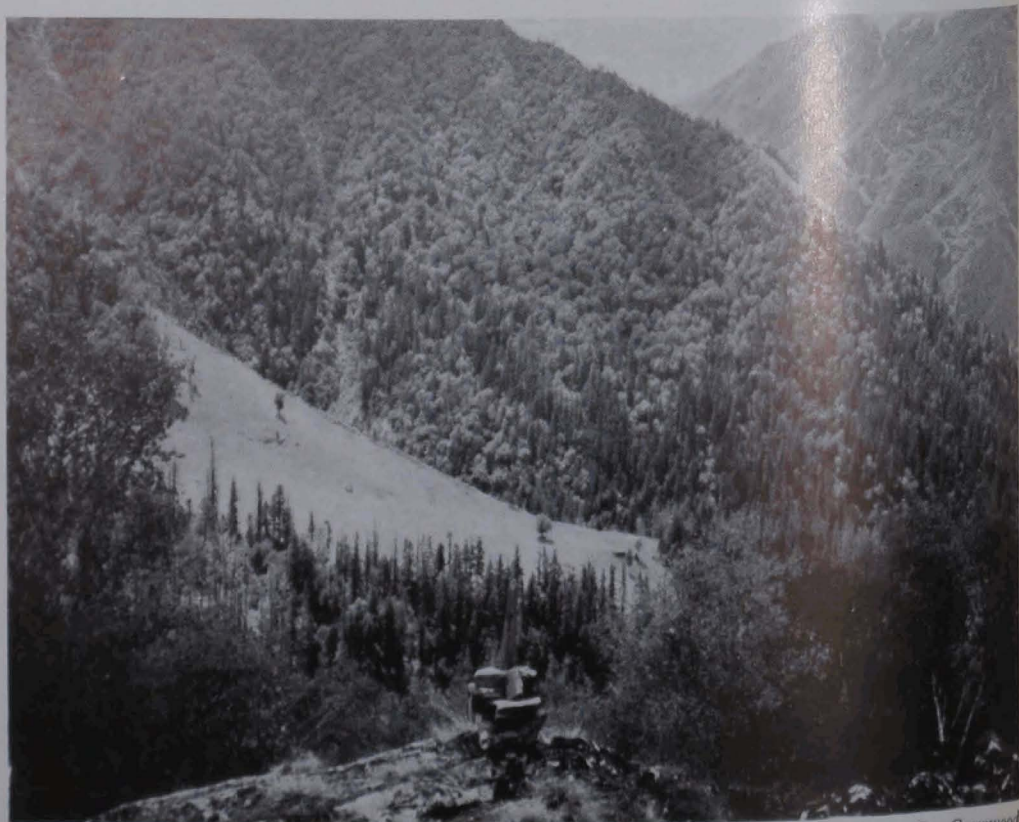


Nanda Devi from summit of Trisul with Dawa Thondup in foreground

Photos by Gurdial Singh



Trisul from the east, taken from 19,000 ft. on Mrigthuni, 22,490 ft.



Photos by Roy Greenwood

Dibrugheta from the Curtain ridge

HINDU KUSH, 1938

J. R. G. FINCH

IN 1938, when serving as a member of the Chitral Garrison, I managed to obtain leave for the months of June and July. My objective was to explore a practicable route for a serious attempt on Tirich Mir, 25,230 feet, to be made the following year. I was unfortunate in that both my intended companions failed me: one to go with the Germans to Nanga Parbat, the other, Greenwood, to be 'frozen' pending possible operations in Waziristan. About the latter I did not hear until I was on Tirich Mir.

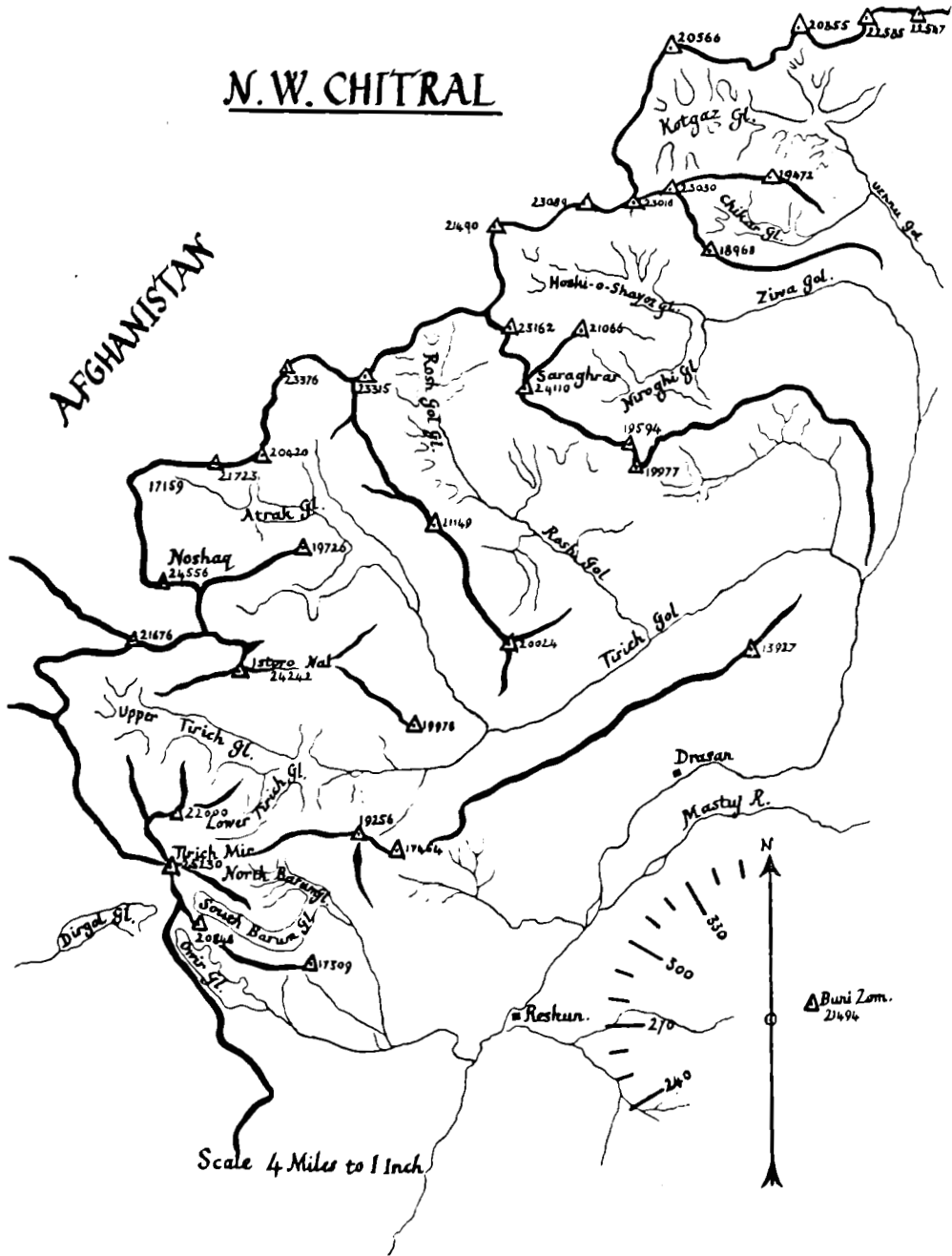
June 9th found me in camp on the Owir glacier plateau just above its final ice-fall at 15,500 feet. Between then and 24th I inspected the head of the Owir, crossed on to the South Barum, which I descended, and then ascended some distance up the North Barum glacier. The North Barum was a maze of crevasses and access to the great ridge (background in Fig. 1) looked exceedingly difficult.

On 24th June I camped at the head of the Owir glacier at 18,000 feet and the following day climbed to the ridge between that glacier and the Dirgol. I had with me two Chitralis, Pinan Jan, who was with Hunt on Istoro Nal a few years previously, and Soufi, lent me by H.H. the Mehtar. From where I was the south ridge looked hopeful. However, Greenwood had not materialized, and with the support I had I did not feel justified in going on. This route was followed up the following year by the Miles-Smeatons and Orgill to about 22,500 feet, whilst I, alas, was sent back to England on a course.

On descending, I got the news that I would have to do my climbing with Chitrali assistance alone. I therefore decided to cross the Mastuj river to some mountains that had attracted me much, whilst on Tirich Mir (Fig. 2). They looked easier and smaller. The central Pyramid, Buni Zom, 21,494 feet (Fig. 3), still remains unclimbed, although the following year the Chitral Scouts officers attempted it. The difficulty is a tough ice wall something over 2,000 feet high. They were forced away from the main peak by the ice but, I believe, one of them succeeded in scaling an outlying peak. The other, Edelman, feeling ill, turned back and fell 600 feet to the glacier. He survived the fall to die fighting at Keren in Eritrea.

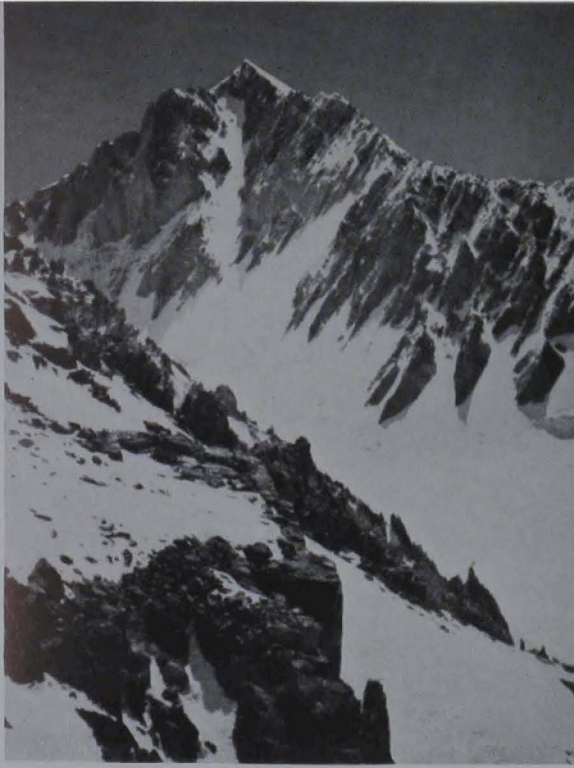
A first reconnaissance of Buni Zom from the west, following the valley that leads up from Reshun, showed that I would have to cross the Phargam An and try from the east. However, toothache, which had been threatening for some time, forced a return to Chitral for doctor's attention, leaving my coolies with the gear at the foot of the

Phargam. In hurrying to return before the coolies and gear disappeared, I did not apparently allow enough time for the drugs administered by the doctors and alcohol administered by myself to

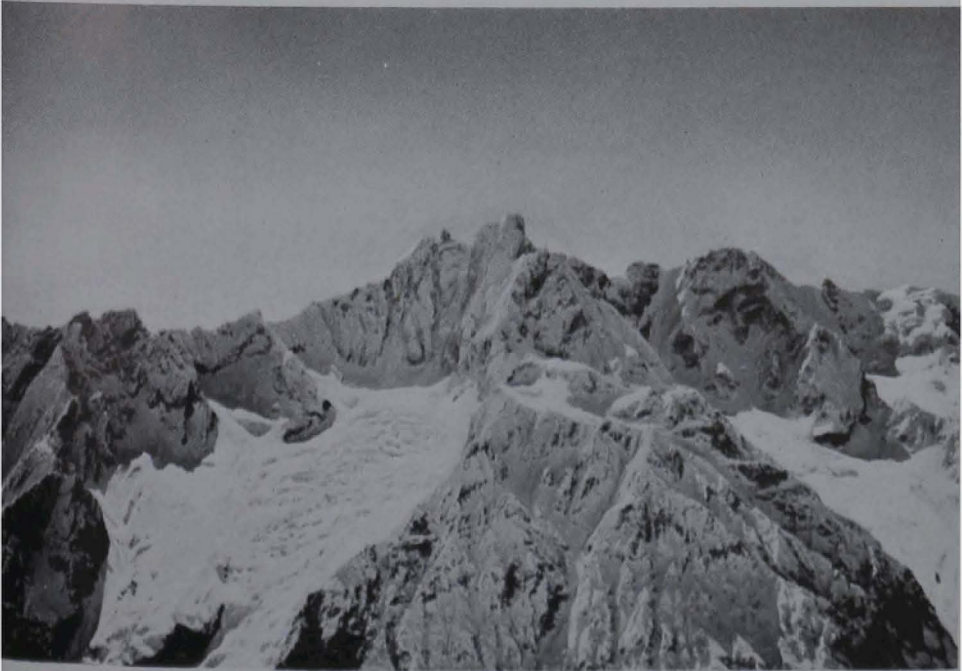


work out of my system. When I came to cross the Phargam, I was in very poor shape.

On 13th July I was camped at the head of the Khorabohrt glacier at about 18,500 feet, and the following day made a weak



Summit of Buni Zom, 21,494 ft.



Pushkari at head of Madaglasht Valley, 19,000 ft.

—— Unidentified
—— Dwir Gl.

—— Pt. 20,848

—— Tirich Mir

—— Pt. 22,000

—— Istor-o-Nal

—— Nushaq

—— Pt. 23,376

—— Pt. 20,204

—— Saraghrar?

—— Saraghrar?

—— Pt. 23,030

—— Pt. 22,547



Looking North-west from Buni Zom

attempt at the ice wall. Not feeling strong enough to persevere I turned my attention to photography and managed to get the panorama reproduced here. There are some points about this panorama which require mention.

I have sketched out a map of the area that it covers and also a key. Only the southern end of this region is well known. There is one peak of over 25,000 feet, Tirich Mir, climbed in 1950 by the Norwegians. There are three peaks of over 24,000 feet, only one of which, Istor Nal, has been attempted, and there are six peaks of over 23,000 feet, none of which have been looked at except by the Survey of India. Here is a vast area deserving in every way the attention of climbers when the political instabilities of our time do not prevent it. I am of the opinion that during June and July the area enjoys settled weather conditions unique among mountains of such altitude. In two months I only had to weather out two storms and I think my experience tallies with that of others who have been there.

Saraghrar I have not been able to fix with certainty. It lies either behind the low peak on the map bearing or is the pointed peak to the south of this bearing.

The peak showing to the south of Tirich Mir, above the head of the Owir glacier and obviously well inside Afghanistan, I have failed to identify. From the maps I have seen there is nothing approaching its apparent altitude in that area. From comparisons between the height from which I took the photographs and known heights on Tirich Mir I would place it at something over 22,000 feet.

Apart from the high snows there is any amount of good rock climbing, on peaks such as Pushkari, 19,000 feet, at the head of the Madaglasht valley, south-east from Buni Zom. It is shown in the photograph in its winter covering of snow. It stands above where the Garrison Ski Hut and Summer Camp used to be. From all directions it looks a first-class proposition with no obvious easy line.

Before returning to duty I started a reconnaissance of this peak with another officer of the garrison. This was brought to an abrupt end by Pinan Jan and another coolie falling down a slope of old snow and sustaining some bad cuts.

DEO TIBBA

R. C. EVANS, E. H. PECK, AND THE LATE
CAPTAIN L. C. LIND

We have to thank the two first named for their respective typescripts, which, for obvious reasons, have been printed separately, and for the trouble they have taken to provide the photographs and to make up the panorama. Captain L. C. Lind of the 50th Kumaonis was, as stated in H. J. xv, killed fighting against the Japanese.

We have also to thank Major Banon, who is still at Manali, for his co-operation in procuring relevant details.—ED.

ATTEMPTS ON DEO TIBBA

R. C. EVANS

ONCE they have succumbed to the lure of the Himalaya, climbers from Britain naturally enough do not pay much attention to such comparatively insignificant hills as those of Kulu. But the quest for the biggest game is only one of many reasons for going to the Himalaya, and the Simla hills have their own rewards for those who are content to go there.

Kulu is rapidly accessible, and its highest mountain, Deo Tibba, is possibly still unclimbed; most of its peaks are unnamed and unexplored, first-rate climbing is to be had on mountains of 18,000 to 21,000 feet, dwarfed by no giant neighbours, and the upland valleys and hillsides, below the snowline, are most lovely. I make this last statement with confidence because one of us said that the country looked like Scotland, another that it was almost as fine as Wales, and the third, who was hard pressed, that there was nothing like it outside of Hertfordshire.

The first reconnaissance of Deo Tibba was made by General Bruce's guide, Furrer, who reported that one of its ridges looked climbable from the Hamta nala. J. O. M. Roberts and, later, E. Peck, whose account accompanies this article, also examined the approaches from the Hamta, and concluded that they were difficult and dangerous. These two also went round, at different times, and looked at the mountain from the head of the Jagat Sukh nala, and both thought that here was a practicable route.

The late Captain Lind, accompanied by one shikari, made an attempt on the mountain in 1940, and left with Major Banon, at Manali, some notes about his route, which are reproduced below. He refers, in an accompanying sketch-map, to a 'proposed route', and does not say in so many words that he reached the top. It is not possible, from his notes, to form a clear picture of where he went.

Last year, E. Ker, A. G. Trower, and I wanted to fit a Himalayan

holiday into an absence from England of less than six weeks. With a day and a half in Delhi, where we were very kindly looked after by the High Commissioner's staff, we reached Manali in five days from London airport. Our return journey was equally quick, but we were lucky in having no minor delays, and six weeks, we now think, is cutting it a bit fine, if one is to have a reasonable stay actually in the mountains.

At first we had no intention of going to Deo Tibba, but when, at the last moment, we were refused permission to cross the Rohtang pass into Lahul, we had to look round for somewhere in Kulu itself, and chose the Jagat Sukh nala. We had no occasion later to regret our choice.

Three Sherpas, Dawa Thundup, Pasang Dawa, and Da Namgyal, joined us at Pathankot. I knew the last two from a previous expedition, and with Dawa Thundup, who is something of a veteran, they made a hard-working and pleasant trio.

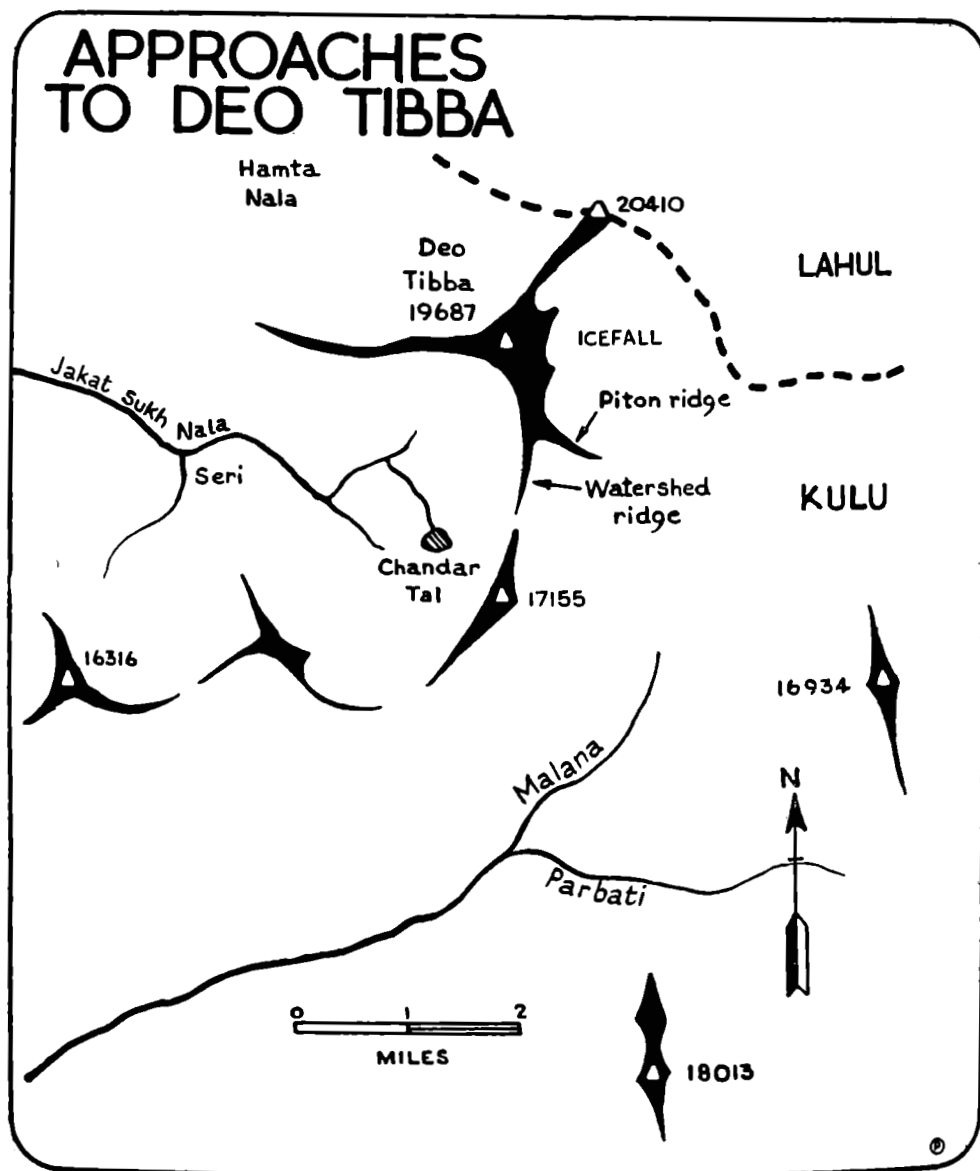
With local coolies from Manali, where Major Banon took us under his wing, we walked for $2\frac{1}{2}$ very wet days up the Jagat Sukh nala, and reached Seri, at 12,500 feet, on 14th September, the last day of the monsoon. We had come a little too early from England to be certain of the weather, but for the rest of our stay we had clear nights and fine mornings, although the late afternoons were cloudy, and rain or snow fell each day at about 4 p.m. At Seri we established a permanent camp, and the local coolies were dismissed.

Deo Tibba consists of an extensive ice-cap, the actual summit (19,687 feet) being a snow hump which is probably accessible once the edge of the ice plateau is reached. There lies the difficulty, because the slopes which fall away from the plateau are steep, and crowned in most places by ice cliffs which look unstable.

We thought there were two weaknesses worth exploring. First, a snow-and-rock ridge running down into the Malana basin, and second, the ridge which encloses the head of the Jagat Sukh nala, and forms the watershed between it and the Malana nala. (See map and photo.) The first of these we called the 'Piton' ridge, because at the foot of it we found an old piton; the second we called the 'Watershed' ridge. North of the Piton ridge, running into the head of the Malana basin, is a huge ice-fall. We did not have time to look at it thoroughly, but what we saw of it from the Piton ridge was not encouraging. For the most part it is crowned by massive cliffs of ice.

Trower and I, with Dawa Thundup and Da Namgyal, first tackled the Piton ridge, but after camping on it at about 16,500 feet we were stopped by a gendarme which we could neither climb nor turn. Eight days later, when I had another go at this route with Dawa Thundup, snow conditions having changed very much in the

interval, we did manage to get round this gendarme on its south side, but were stopped, after surmounting another pinnacle, by the very last step of the ridge, a smooth, slabby rise of about 150 feet, which we could not climb.



That, as far as I was concerned, seemed to dispose of the Piton ridge, though there is, immediately to the north of it, an uninviting couloir which, under certain conditions of snow, might be worth a trial.

Now the Watershed ridge. After our first rebuff on the Piton ridge, and a short visit to Seri to enjoy, rather prematurely, the rewards of the faithful, we went up once more to the col at the head of the valley, and put a camp on the Watershed ridge where it steepens

and begins to run up against the side of Deo Tibba, at about 17,000 feet.

Our camp on this ridge was very exposed, and after one anxious night of high wind, we moved down to a more sheltered spot. Part of the morning was spent in excavating a camp site, and the rest of the day in prospecting a route through the rock band at the foot of the ridge above us. The rocks were steep enough, very loose, and covered with recent snow, but after one false cast which brought us on to a particularly insecure slope, we found a route that was unpleasant, but nowhere hard.

Trower and I, with Dawa Thundup, started out soon after dawn next day, climbed the lower rocks as on the previous day, and bore well away to the right to reach the foot of a series of snow ridges, which gave a thousand feet of wonderful climbing. The ridges stand out a little from the face, there is a great ice cliff on the right hand, and on the left there is a tremendous drop into the head of the Jagat Sukh nala. By about ten-thirty I was incautious enough to say that with snow like this we were sure of the top.

We were now at the foot of the final curve that leads on to the dome of the ice-cap, and so far we had been cutting steps through a little soft snow into good hard stuff. A few minutes after my rash remark Trower began to find ice under the surface snow. As we went on the slope got worse, and soon we found ourselves on top of four different layers; soft snow, a thin ice crust, 6 inches or so of slushy snow, and under that, ice. Progress was very slow indeed, and it became clear that we were not going to reach the top this way today. Now that we were on it, the shoulder of the ice-cap turned out to be bigger and steeper than we had thought, and the last straw was a muffled 'crack' emitted by the slope itself. 'What was that?' said Trower, and Dawa Thundup, who hasn't much English, and uses it economically, replied 'C-rack, Sahib'. Under those conditions the Watershed ridge is not a good route, and we decided unanimously to retreat.

We now tried the Piton ridge a second time, as already described, and returned to Seri. This last descent was most unpleasant. The slopes below the col had been deteriorating fast since the end of the monsoon, and we now found them long slopes of thin ice, overlaid with slush and new-fallen snow. It was late afternoon, snow was falling, there had been a sharp drop in temperature, and our sacks seemed unreasonably heavy. It was a relief to reach the level glacier, a thousand feet down; this slope, which on our first ascent of it had been merely a fatiguing plod, had now produced the trickiest climbing of our holiday.

At Seri we still had five days in hand. One or two sheep were

quickly slaughtered, and Ker and I traversed a double summit of 16,500 feet to the south-east, where Da Namgyal found some *yeti* tracks which had indisputably been made by a bear.

Next day we camped up a grassy valley to the south, and, joined by Trower, climbed a sharp little peak of 16,316 feet, which stands at the head of this valley.

On 5th October, full of good mutton and good memories, we started for home.

CAPTAIN LIND'S NOTES

- 1st route Suggest trying via Malana. It looked very straightforward from the mountain, but I've not tried it.
- 2nd route Via the Jagat Sukh nala.
- 1st day. At Chika (not on map) about 2 miles before one gets to Dudu. Big rocks, room enough to sleep under, and wood.
- 2nd day. Up above the final waterfalls but below Chandar Tal some thousand feet. No wood, but good rocks for shelter.
- 3rd day. Keeping well to left of Chandar Tal mound, near the main river bank, make for lowest point of rock-snow wall—quite easy, in July, anyway. Then across snowfield towards ice and snow blocks in far distance. Either camp at bottom or go on up. I suggest the former, never having climbed by that route, but it looks O.K.
- 4th day. Up by one of the routes and across snowfield. Camp under mountain.
- 5th day. Up extreme left-hand rock ridge. In my opinion only possible route and safe. L. LIND. 3.8.40

RECONNAISSANCE OF DEO TIBBA

E. H. PECK

In June 1950 Mr. E. H. Peck and Mr. C. R. Patterson, in the course of a stay at Manali in the Kulu valley, prospected the Piangneru nala, the principal easterly tributary of the Hamta nala, to see if any route were possible on the west face of Deo Tibba. Camp was pitched on the Piangneru Alp at about 12,000 feet and a route taken along the right-hand (N.) lateral moraine of the Piangneru glacier to where it abuts on the flat surface of the lower section of the glacier. The upper end of this section terminates under a 400-foot cliff which is in turn surmounted by some 1,000 feet of extremely

Deo Tibba 19,637 ft.

Top of Watershed Ridge

Top of Piton Ridge

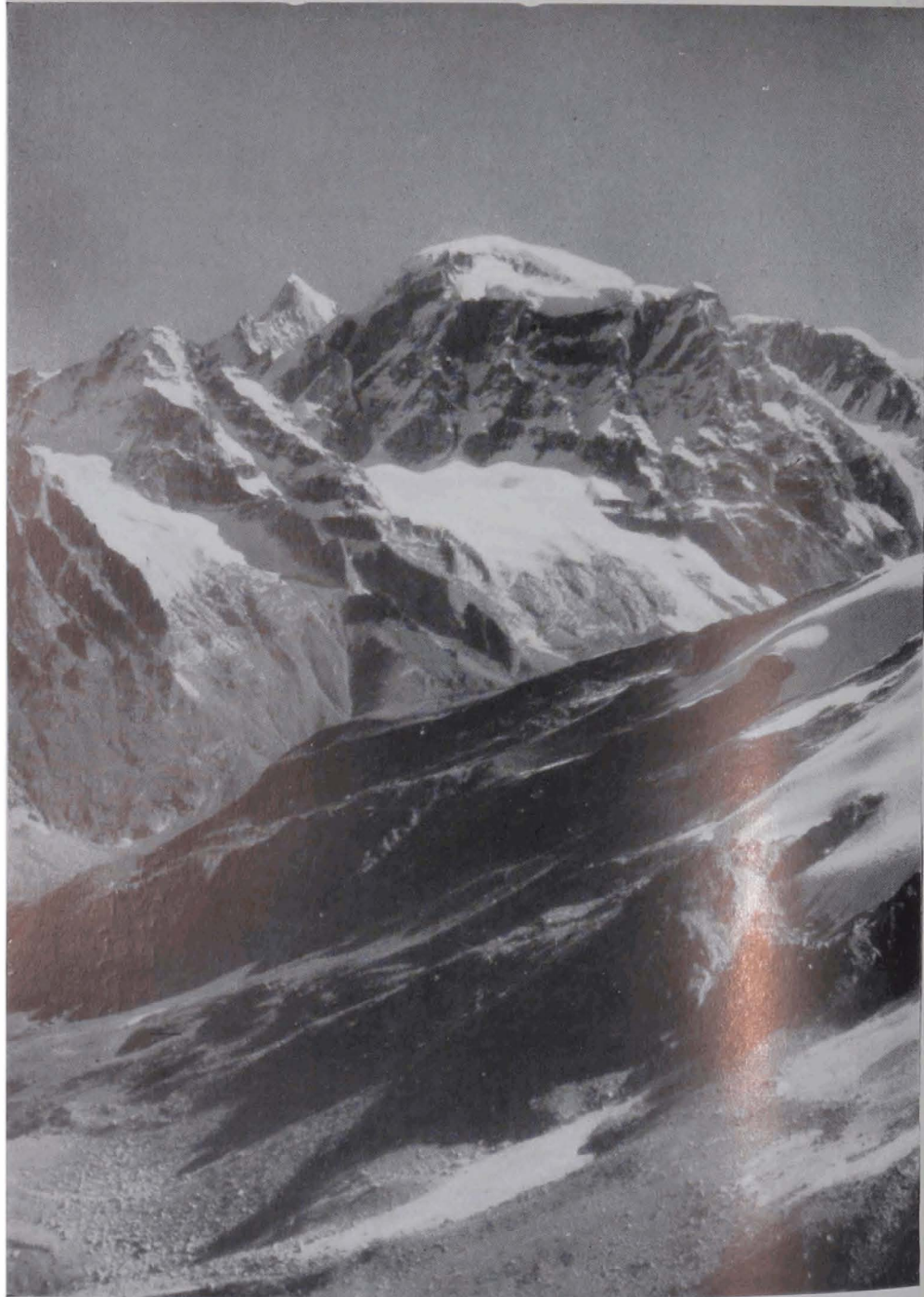


*Panoramic view of Deo Tibba, from camp on col at
head of Jagat Surh nala (approx. 16,500 ft.) →*



Peak 20,410 ft.

Deo Tibba



Deo Tibba from the south-west



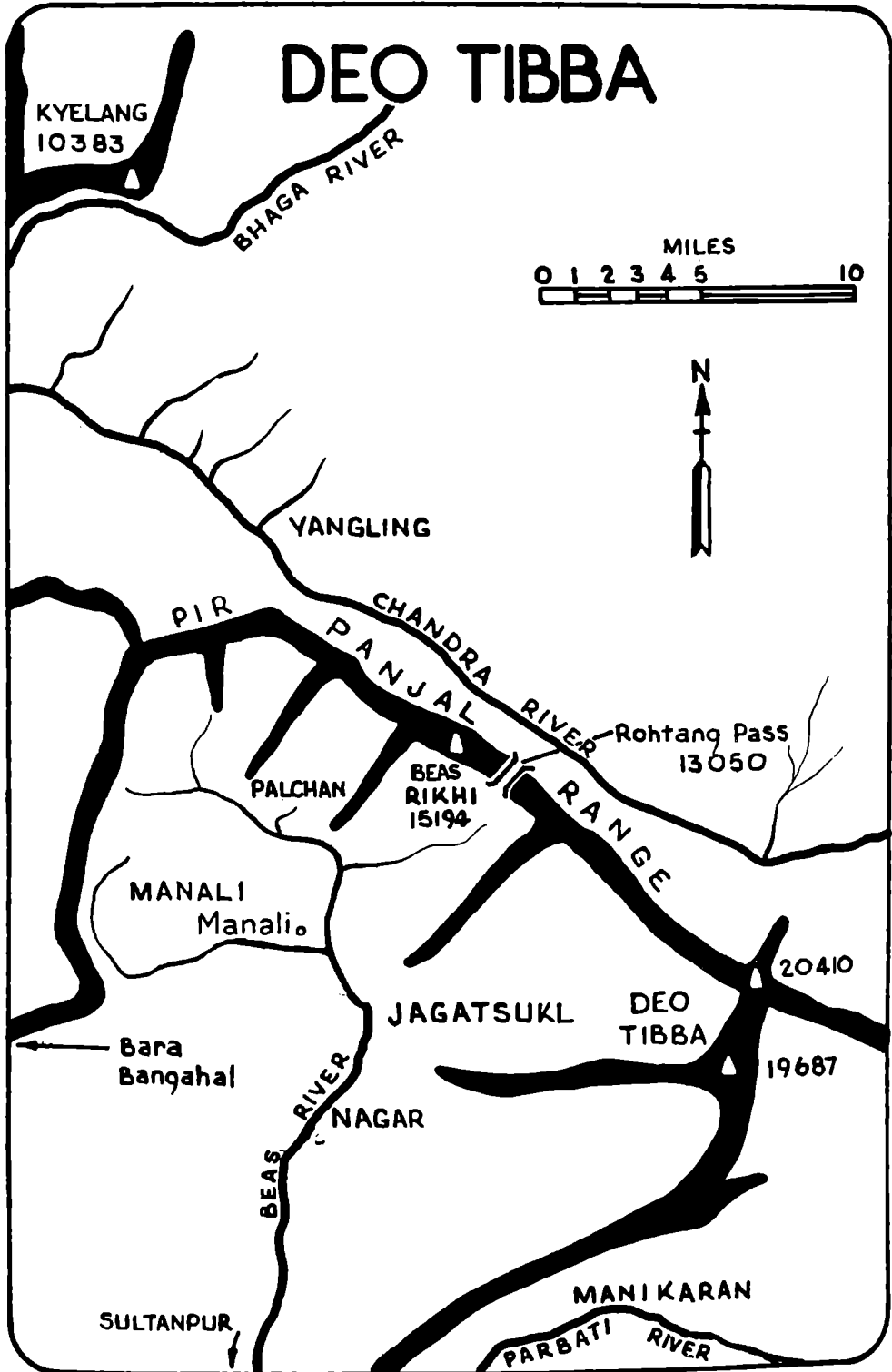
On the Piton ridge, Deo Tibba. The distant peaks are those grouped at the head of the Tos nala



Unnamed peaks of 18,000 ft. south-east of the Malana nala

broken ice-fall; above this a snow-plateau apparently runs below both the jagged north (20,410) and the dome-like south (19,687) summits of Deo Tibba, but access to either summit or to the saddle between them seems barred by ice-walls. A direct attack on the west face was thus out of the question, but the opportunity was taken to explore the hidden north-east bay of the lower Piangneru glacier. Steep snow couloirs lead up to the north towards point 17,356 but are exposed to stone-fall; a snow-ledge might then lead across the cliff to the plateau above the ice-fall. From here access to the south summit might be possible by a devious traverse across the south-west face to the south ridge. This possible route was confirmed by observations made the following day from a point above Tikru Tapri south of Piangneru Alp, but it would be difficult, devious, and dangerous.

In May 1951 an approach to the south ridge, following the directions of the late Captain Lind, was reconnoitred by Mr. and Mrs. E. H. Peck by way of the Jagat Sukh nala. Leaving Manali early on 22nd May by the left bank of the Beas, they followed a path rising behind Shuru hamlet above Jagat Sukh village to the wooden temple of Banhara and from there a steep but well-defined path led up and along the north side of the Jagat Sukh nala, re-joining the track up the steep valley bottom at about 8,500 feet. After a long day for the porters, camp was pitched at the lowest point of the Chika Alp, at about 9,000 feet, and on the following day (23rd May) porters made easy progress to Seri, 12,000 feet, the broad alp at the head of the nala. Continuous snow-beds began soon after the Dudu Alp and the Seri meadow was completely under snow. The shepherd's cave under the large rock was a bed of ice and unusable by porters, who huddled together on the only small spit of exposed earth. Two herds of ibex (about twelve head) were noted on the cliffs to the north and a *pika* made its appearance to forage for scraps. On 24th May camp was carried up on to the snow-covered moraines at the south foot of Deo Tibba. The route taken climbed the slopes to the south of the waterfall before dipping into the moraine basin past two overhanging rocks which would, in less snowy conditions, provide shelter for porters. Camp was eventually pitched at 14,500 feet on the open snow-slopes near the small crag which supports the Chandra Tal basin. Snow conditions were good up to midday but track-breaking became laborious in the afternoon. The porters were persuaded only with difficulty to bring camp up to 14,500 feet, and since no shelter could be provided for them they had to return to Dudu for the night. A thunderstorm and a shower of hail brought doubtful weather on the morning of 25th May and a start was postponed until after 6 a.m. The snow was, however, in



excellent condition and good progress was made up the steep 1,000-foot snow-wall to the saddle at 16,600 feet, reached at 9 a.m. The weather had improved but it was clearly too late to attempt the long ascent of the south ridge of Deo Tibba without a further camp, which time and lack of shelter for the porters did not permit. Snow conditions would, however, have probably been favourable for reaching the 18,000-foot preliminary dome. The party contented itself with turning southwards and ascending the sharp snow edge to the summit of point 17,155. In spite of mists rising from the Malana nala to the south, the view was perfectly clear across the broad glacier plateau to the row of 21,000-foot peaks on the other side of the Tos nala; these stretched eastwards to the junction of the Pir Panjal range with the Great Himalayan range north of the Pin Parbati pass (see panorama). The prominent rocky peak of Ali Ratni Tibba presented a severe challenge to climbers approaching from the Malana or Parbati valleys. The route from the 16,600-foot saddle to the preliminary dome (18,000 feet) of Deo Tibba by way of the south ridge did not appear to present any serious obstacles if snow conditions remained constant. The route from the 18,000-foot dome to the south summit might have entailed some step-cutting but did not appear to be threatened by ice-falls. A glimpse was obtained of the rocky spires of the north summit, presenting an inviting bare red-rock surface in contrast to the icy gullies of the Piangneru (W.) and Hamta (N.) faces. On the descent the snow was in soft but not dangerous condition and the party returned to Dudu for the night without difficulty, and to Manali on 26th May.

FIFTY YEARS IN KULU

MAJOR H. M. BANON

HAVING definitely promised the Honorary Editor a short article on Kulu and about my own lifelong association with this remote corner of the Punjab, I must endeavour to fulfil my commitment.

My father, an officer of the Munster Fusiliers and, later, of the Bengal Staff Corps, made his acquaintance with Kulu about 1875. His penchant for exploring out-of-the-way places (and Kulu was very far from a beaten track those days) first attracted him to the valley. His friend, Captain Lee of the Sussex Regiment, was of a similar disposition and, after retirement from military service, both purchased land and settled in Kulu, Captain Lee at Bundrole, my father at Manali. Their respective orchard estates are still owned by Lees and Banons.

Although one of the older members of the Himalayan Club and having spent most of my life within the shadow of the Himalayan mountains, I cannot claim to have done any real climbing simply for the sake of climbing, or even attempted to scale one of the many peaks by which I am surrounded unless it happened to be for some utilitarian purpose of my particular occupation at the time. But one cannot live an active life in Kulu without climbing. In quest of game and of minerals I have travelled some thousands of miles on and over the mountains and ridges which encircle this valley and, on occasions, farther afield. But such wanderings have been, more or less, all in the day's work—or play—and cannot be identified with climbing in the sense of scaling a particular peak or reaching any specified altitude. Clambering up, down, or across these steep hill-sides and craggy nalas, after both big or small game, can provide some very strenuous exercise and occasional risk, but one does not, in the stricter sense, think of it as climbing. For me, alas, those days are ended. Isolated *thaches* bordering the snow-line, precipitous grassy clefts, and upland forest glades still provide sustenance and habitation for numerous regional fauna; at lower altitudes sheep-killing bear and panther are still the bane of grazing flocks, but unless they happen to stray into the vicinity of my desmesne—as a snow leopard did last winter—all such game and vermin are perfectly safe from my personal shikar.

According to the local Gazetteer the mineral wealth of Kulu is believed to be potentially very great. Mountains, valleys, and riverbeds of this area have for centuries past been known to contain precious stones and minerals: silver in Kulu; sapphires in Padam; turquoise, gold and other precious metals in Tibet. Within my own recollection silver was mined in the Parbatti valley. Previous to my

day, but within the personal knowledge of my father, sapphires in abundance were excavated from the banks of the Kado Gokpo, a stream which rises in Zangskar and joins the Bhaga near Darcha, in Lahoul. For centuries and up to recent years Lahoulas have crossed into Tibet to dig for gold. Although there may not have been many spectacular strikes in this digging area the practice would not have continued over so long a period unless it was a paying proposition. Placer mining for gold in the rivers of Mandi State used to be a common feature but is now discontinued.

An imaginative mind, fostered perhaps by garbled stories of locally rich finds, as well as by tales of fortune-finding prospectors in other parts of the world, induced me, as a youth, to try my luck in a hurried scramble for wealth. Rumours of a fabulous nala in Tibet, with platinum as the lode-star, provided zest for the venture. Accompanied by a relative, an American-trained mining engineer, we left Kulu on the 17th May 1905. Travelling light and living on the country through which we passed, our route led us through Mandi, Suket, Bilaspur to Sabathu and Simla; thence to Dehra Dun, Mussoorie, Tehri-Garwhal, up the Ganges valley to Gangotri, and over the Nelang pass to the border of Tibet. We crossed the border without much difficulty and the farther we penetrated into this 'forbidden land' the more we congratulated ourselves on the ease with which we had surmounted the obstacles of travel and border regulations. But our vainglorious assumption of success was short-lived. Frontier guards, who must have received information of our trespass from the inhabitants of the border village where we spent a night, caught up with us. We were escorted back to the frontier and given dire warning of evil consequences if we were again caught trespassing without an entry permit. Helpless, we had perforce to obey. We travelled back from Tibet via the Shipki pass to Pooh where we met the reverend Peters of the Moravian Mission who, later, became Bishop, at Leh, of this far-flung diocese. From Pooh we went to Ropa, then over the Manirang pass to Mani, in 'Spiti, where we crossed the river by jhula to Dhankar, up the 'Spiti river to Kyibar and Losar, then via the Kunzam and Hampta passes back into Kulu, reaching Manali on the 15th of August. Our treasure hunt had failed. The only rewards of our three months' trek were contacts with new species of Himalayan fauna, including ovis ammon and kiang, and a lasting remembrance of the majestic grandeur of range upon range of Himalayan mountain scenery, perhaps the finest in the world.

Later in life, for a Delhi firm, I supervised the extraction of stibnite on the Shigri glacier (Lahoul). Climatic conditions and excessive altitude limited the duration of work on the glacier to three or four summer months and these conditions, together with the difficulties

of extraction, smelting, and transport made the project, from a commercial point of view, uneconomical. Intensive geological survey may still unearth, in more accessible places, the legendary riches of our mountains and valleys.

Five years after my Tibetan venture, at my father's behest, I left for Canada and British Columbia. Orchard practice in other countries and a more intensive training in fruit culture were the main objectives of my journey overseas. During about a year's absence from this country I travelled from Calcutta, via England, to Montreal; then right across Canada to British Columbia and Vancouver Island. Coming back to India I travelled via Japan, China, Penang, and Singapore to Calcutta, the whole voyage comprising a trip almost round the world. Again, during the First World War, I had experience of several other countries including France, Egypt, Aden, Iraq (Mespot.), Kurdistan, and Waziristan, but never, in all my travels, did I come across scenery to match the sublime splendour of the Himalayas; the richness and brilliance of the seasonal colourings of Kulu; nor did I discover more serene environment than is available in my own home valley.

Even during my lifetime Kulu has not changed to any appreciable extent. Away from the one and only motor road life is carried on with the same placid regularity as it was when, as a boy, I roamed the hillsides and valleys and visited many of the highland villages. The older villages are mostly at an altitude of over 7,000 feet. This is in harmony with the persisting legend that the upper Kulu valley was, at some distant period, a series of lakes at different levels; that these villages were just above the then water level; and that the alluvial soil of the Manali basin is a legacy of this period of submergence.

Since the advent of the motor road twenty odd years ago, inhabitants of the lower part of the valley and of Kulu proper have gradually accepted the motor-bus as the ordinary form of travel and very few riding ponies are now to be seen on or near the main road. Yet, as I recently experienced, it is anything but a pleasant journey to travel by bus from Pathankote to Kulu. I may be old-fashioned, but I still think that for would-be climbers—and even for other visitors with time to spare—the old route of pre-motor days, via the Bhubu pass, has many advantages. The distance from Ghatasni (or Guma village) to Kulu is 30-odd miles. Three rest-houses—Jatingri, Badwani, and Karaon—are available *en route*. The Bhubu pass, between Badwani and Karaon, is over 10,000 feet so, for prospective climbers direct from a hot and enervating climate it provides good 'limbering-up' exercise and a fair measure of acclimatization. The only drawback under present conditions is the lack of pack or coolie transport. When this road was in general use pack transport was

provided at several places by the Mandi State authorities, and providing the rates are made sufficiently attractive it might not be difficult to arrange pack transport from Guma, a village on the main road 2 or 3 miles below the point where the Bhubu pass route diverges. If approached by Himalayan Club officials—or even in the interests of tourist traffic—the Himachal authorities would, no doubt, provide active assistance, not only in regard to transport, but also for comfortable lodging in the Jatingri and Badwani staging bungalows at the Mandi side of the pass. For the same reasons the approach to Kulu from Simla, via the Jalori pass, should, by climbers, be preferred to the uninteresting and wearisome bus journey from Pathankote.

Even experienced climbers do not always realize the necessity for gradual acclimatization and, not infrequently, suffer for this neglect. They rush to Kulu from the plains as fast as train and motor will carry them and think they can continue to rush, on foot, up the sides of steep mountains. I have known several cases where even the comparatively easy road up the Rohtang pass has been too much for these enthusiastic but enervated mountaineers.

In recent years, for climbers of proved experience, Deo Tibba, in this area, appears to be the favourite objective. With such a variety of unclimbed peaks between 15 and 19,000 from which to make a selection I do not exactly realize the attraction of this particular peak—or peaks (vide E. H. Peck's 'Reconnaissance' published elsewhere in this *Journal*). Several reasons may perhaps be adduced: approachability; the rumour that it has been climbed in a day from Manali (which I certainly cannot credit); or that it is, as its name implies, and as the Malana people earnestly believe, the habitation of their locally very important *deota*, Jamlu. Under the latter supposition it might not be out of place for future climbing parties to pay a preliminary and propitiatory visit to Malana to secure, at least, the goodwill of Jamlu's main adherents!

As Deo Tibba appeals to the more spectacular climbing enthusiast, so does the Rohtang pass to the less ambitious. It is, in a sense, a 'fashionable' trek and very few long-term visitors to Manali escape its implication. A government rest-house at Kothi, from whence the ascent and return can be made in a day, obviates the use of tents and this, undoubtedly, is the main consideration. Personally, I wish that other passes leading out of the valley (some of which afford infinitely better scenic effects than the Rohtang) attracted more attention: Chandra-Khanni and Hampta on the east; Ghora-Lotnu, Kali-Haini, and the paths which lead over to Bara-Bangahal from the Dorni Thach (Manalsu Nala) and the Dhundi Thach (Solang Nala) on the west. Many of the lesser peaks on both sides of the valley

also deserve more consideration than they have received up to the present. Only a few are named on the Survey maps. Some have local names but these, usually, are the names of nearby *thaches*; grazing grounds are of much more importance to local *zamindars* and shepherds than a mass of bare rock!

Within a radius of 10 to 15 miles of Manali there is almost unlimited scope for short exploratory treks, and I would be delighted to see visitors to Kulu take an interest in these hitherto neglected areas and, more important, write short descriptions of their respective journeyings. These areas, of course, are not entirely unknown. Wherever any grazing is available, however difficult of access, local and visiting *gaddis* seldom omit it from their annual migratory marches. *Gaddis* generally, as befits their strenuous all-weather outdoor existence, are a hardy race, expert mountaineers with an almost uncanny sense of direction, and in the minds of would-be climbers there need be no feeling of inferiority in following their footsteps over such ridges and mountains. Mostly uneducated, however, they cannot, for the benefit of visitors and tourists, transmit a written account of their wanderings in these out-of-the-way localities.

Prospective visitors frequently ask me to quote the cost of trekking in Kulu. So many considerations are, however, involved that it is difficult to furnish definite quotations. Under ordinary conditions the cost of trekking depends largely upon the amount of transport and service required—pack ponies, coolies, guides, and camp servants; what might be considered luxury to some may be regarded by others as unconditional austerity. As a general rule the use of light and easily erected tents, lightest of folding camp furniture and toilet equipment, light but warm clothing and suitable footwear, sleeping bags in preference to awkward bedding rolls, compact cooking, eating, and drinking utensils, and concentrated foodstuffs, all tend to provide a maximum of comfort with a minimum of weight, thereby reducing the cost of transport. But few, if any, of these articles are available in Kulu and must be brought from the plains.

For ordinary trekking routes where no difficult or dangerous climbing is involved coolies will carry a load of about 50 lb., and a pack pony, of compact loads, about 2 maunds. The average rate per day for a load-carrying coolie is Rs. 2/8/-; and for a pack pony Rs. 5/-. During harvesting periods (15th May to 30th June and 1st October to 15th November) these may be enhanced by 15 to 50 per cent. For a sirdar in charge of coolies and camping arrangements the average rate is Rs. 5/- per day.

Prospective trekkers—individuals or parties—should endeavour to make all arrangements well in advance of the actual starting date as it is not always possible to obtain coolies and pack animals at short notice.

MOUNT EVEREST—ITS NAME AND HEIGHT

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FOR nearly a century now Mount Everest, which is situated on the Nepal-Tibet border in latitude $27^{\circ} 59' 16''$ and longitude $86^{\circ} 55' 40''$, has been regarded as the highest point on the earth. Ever since then, due to its unique position, it has been the centre of controversies both as regards its name and its height and there still exist misunderstandings regarding it in more than one respect. Its name has been objected to, as Sir George Everest was not immediately associated with its discovery. The exact significance of its adopted height of 29,002 feet is not even understood by most surveyors, not to speak of the layman. Quite a number of other heights have been quoted for it and have even been put on the maps, which makes for confusion. For instance, the value adopted for the Survey of India maps is 29,002 feet but American air maps and certain other maps use the figure 29,149 feet. Such a standard publication as the *Times Survey Atlas of the World*, prepared in 1920 under the direction of J. G. Bartholomew, Cartographer to the King, gives its name wrongly as Gauri Sankar on Plates 55 and 57, and so do quite a number of German maps.

Mount Everest has featured during question time in the Indian Parliament. It has been asked whether the Government had any information that the original name of Mount Everest was Gauri Sankar. When was the height calculated and should not the name be changed, particularly when Sir George Everest was not its calculator? Should not a Committee be appointed to investigate whether its original name could be identified?

Various authorities have at different times pressed the Survey of India to adopt such Nepalese and Tibetan names as Devadhunga, Gauri Sankar, Chomo Kankar, Chomo Lungma, &c., in place of Mount Everest, but the Survey of India has not considered any of these as having been satisfactorily established.

Certain aspects of Mount Everest's discovery have received undue publicity and much has been written that will not bear examination. It is the object of this paper to set out some of the problems associated with high Himalayan peaks in their proper perspective and to indicate their complexity.

The Name of Mount Everest

The Himalayan peaks in Nepal were observed by surveyors in 1849-55 from distant low-lying stations in the plains of India about

100 miles or so away from them. Nobody at that time, including the observers, had even a suspicion that one of these was the highest mountain in the world, as from this viewpoint Mount Everest is not at all prominent and merely appears as one of the numerous array of peaks. In fact, at this distance it was hidden by lower peaks that lay between it and the various stations of observation, and some of these gave the appearance of greater height. The peaks were observed as intersected points as a matter of routine, from the triangulation stations of the North East Longitudinal series of Primary Triangulation of the Survey of India. The general belief at that time was that Kanchenjunga was the highest mountain in the world.

The observers could not allot individual names to the innumerable peaks that they observed, as many of these were unknown to local people in the Indian plains, and the normal method was to designate them by Roman numbers. Thus when Mount Everest and Gauri Sankar were first observed, they were entered in angle books as Peak XV and Peak XX respectively.

So much work is involved in sorting out observed data and checking field books that the computations at headquarters invariably lag considerably behind observations. The observations to Mount Everest were taken in 1849 and 1850 but it was not till 1852 that the computations were sufficiently advanced to indicate that Peak XV possessed a height greater than that of any other known mountain. The question of atmospheric refraction was, however, still being investigated at that time and it was only in 1865 that the determination of the figure of 29,002 feet for the height was considered sufficiently reliable to be accepted.

Finding a name for this peak then became of paramount importance. From 1852 to 1865 much thought was given to the question of the name, but none of the suggested local names was found acceptable, and consequently Colonel Waugh, with the concurrence of Colonel Henry Thullier, Deputy Surveyor-General, and Mr. Radhanath Sikhdar, the Chief Computer, and in consultation with the Royal Geographical Society, finally decided to name it after Sir George Everest (who had actually retired in 1843) to commemorate his contribution to the Geodetic Survey of India.

The Survey of India has often been blamed for this choice on the ground that local names did exist for the peak and were deliberately ignored. Thus, when in 1855 Sir Andrew Waugh first suggested that the newly discovered peak should be named Mount Everest, Mr. Brian Hodgson, who had been Political Officer in Nepal for many years and was an able linguist and scientist, gave out that the peak had a local name, Devadhunga. Inquiries regarding this assertion went on for well over the next half a century whenever opportunity

offered but the claim has not been substantiated. In 1904 Captain H. Wood visited Nepal for observations to the principal peaks and consulted the Nepalese authorities on the subject, but did not hear the name Devadhunga mentioned. Neither did it come to the knowledge of Surveyor Natha Singh, who surveyed the Nepalese slopes of Mount Everest in 1907, nor of General Bruce, who had been in Nepal for some time and published an account of it in 1910. It was also not heard by the Mount Everest Expedition under Colonel Howard Bury in 1921 and the Nepal Survey Detachment of the Survey of India when they visited Nepal in 1924–5. It can thus be taken as fairly certain that Hodgson was mistaken in his belief, and that he had possibly learnt the name Devadhunga from Nepalese literature and regarded it as a mystic name suitable for Mount Everest. It is possible, however, that some scholar may be able to offer a better explanation of how such an eminent authority went astray over such an important matter.

Yet another name for Mount Everest over which a keen controversy has raged for years is 'Gauri Sankar'. In 1855, soon after the discovery of Mount Everest had been made by the Survey of India, three German brothers by the name of Schlagintweit came on a scientific mission to India and one of them resolved to carry out some observations to the new mountain. He observed it from Phallut in Sikkim and from Kaulia in Nepal (see Chart at end).

On his return he gave out that his inquiries had revealed that Mount Everest was named Gauri Sankar in Nepal and that its Tibetan name was Chingopamari. Schlagintweit's results were published in Berlin in 1862 and caused a great sensation. The Royal Geographical Society, London, supported his views and disagreed with the Survey of India. The name Gauri Sankar came to be adopted in European maps for the highest mountain instead of Mount Everest, and even as late as 1903 Mr. Douglas W. Freshfield, the then Secretary of the Royal Geographical Society, who later became the President, wrote in an article in the *Journal*: 'The reason for which the surveyors argued so strenuously forty-five years ago that the 29,002-foot peak cannot be the Gauri Sankar of Nepal was, of course, that their chief's proceeding in giving the mountain an English name was excused, or justified, at the time by the assertion that it had no local or native name. We have now got two native names, the Indian name Gauri Sankar and the Tibetan name Chomo Kankar, long ago brought forward by Chandra Das, and, though never, so far as I know, seriously disputed, generally ignored, until Colonel Waddell brought it into prominence. Personally I should like to see Gauri Sankar win the day.'

Schlagintweit was a good artist and a fine mountaineer but he was

apparently not familiar with the technique of identifying peaks from different points of view. Even a professional surveyor needs careful instrumental observations and computations for this purpose. This is especially so when, as in the case of the Himalayas, the area involved is immense and covered with countless ranges of innumerable peaks which obscure one another.

Schlagintweit's sketches and observations were subjected to close scrutiny by the Survey of India, and it was discovered that at both his stations of observation he had failed to see the peak Mount Everest. From Phallut he had observed to Makalu a mountain about 11 miles east of Mount Everest, and from Kaulia to Gauri Sankar about 36 miles west of Mount Everest, and in his *Panoramic Profile of the Snowy Ranges of High Asia*, published by F. A. Brockhaus, Leipzig, in 1861, the three distinct peaks Makalu, Mount Everest, and Gauri Sankar are wrongly shown as being one and the same.

The Survey of India's arguments were, however, not then considered convincing and the controversy was only finally settled in 1904, when Captain Wood was specially deputed by order of Lord Curzon to sketch and identify all peaks that could be seen from Kaulia and other stations in Nepal. By accurate observations he established that Gauri Sankar was a distinct peak about 36 miles distant from Mount Everest and 5,500 feet lower (see Chart at end). From this locality it so happens that Gauri Sankar (23,440 feet) is very conspicuous while Mount Everest is hardly visible above intervening ranges; and this is how Schlagintweit was misled.

But traditions die hard. The imagination of the European world had been excited by the local name Gauri Sankar; and as stated above, Mount Everest was wrongly named in the *Times Atlas* prepared as late as in 1920 by Bartholomew at the Edinburgh Geographical Institute. Some German maps still persist with the name Gauri Sankar and questions have only lately been asked in the Indian Parliament as to why the name of Mount Everest is still perpetuated when its original and proper name was Gauri Sankar.

Recently several Tibetan names are claimed to have been found for the peak, such as Chomo Kankar, Chholungbu, Chomo Lungma, Chomo Uri, and Mi-ti Gu-ti Cha-pu Long-nga. The last one is intriguing, and when freely translated is said to mean 'You cannot see the summit from near it, but you can see it from nine directions, and a bird that flies as high as the summit goes blind'. In addition to the above, General Bruce in his book *Twenty Years in the Himalayas*, published in 1910, writes that he had heard the name Chomo Lungmo applied to Mount Everest by Bhotias in Nepal, and Sarat Chandra Das gives in his dictionary (p. 450) Jomo-Gans-Dkar as the Tibetan name for the peak. Burrard in his 1933 edition of *A Sketch of*

the Geography and Geology of the Himalaya Mountains and Tibet (pp. 21–25) has fully discussed these names and gives reasons for doubt that they are really applicable to the actual peak.

The question has often been asked, 'Who was the discoverer of Mount Everest?' The story which has unfortunately gained considerable currency and has a special appeal to the popular press is that one day the Bengali Chief Computer, Radhanath Sikhdar, rushed into the room of the Surveyor-General breathlessly exclaiming, 'Sir, I have discovered the highest mountain in the world'. Burrard in his book (p. 194) has effectively contradicted this version and proves that the above words could not have been uttered. Even if they had been, a computer at the computing office cannot be properly regarded as the discoverer of a peak, as the observations play a more important part than computations. That considerable skill is required in observations should be apparent from the failure of such a reputed explorer as Schlagintweit to identify Mount Everest even when he went with the express purpose of observing to it. He actually confused it with a peak about 1 mile lower in height and about 36 miles distant. The discovery of Mount Everest must, therefore, be regarded as the result of a combined effort of the observers and computers, and the credit should go to the Survey of India Department as a whole.

It will be manifest from the above how keen controversies can arise over a name and how different are the views that have to be reconciled. The policy of the Survey of India has always been to adopt the local names of all geographical features rather than give them any personal names. Mount Everest is the only exception as no local name was known at the time of its discovery.

In a similar way, no local name has ever been found for the peak of the Karakoram range that is the second highest in the world. It has been allowed to retain its symbolic name K2, which was given to it by its discoverer, Captain Montgomerie, during his triangulation of the Kashmir series in 1856–9, although several personal names such as Mount Godwin Austen, Mount Waugh, Mount Babar, and the like have been suggested for it.

Height of Mount Everest

Determination of heights in the area of his work is one of the most important tasks of every surveyor. There are a number of methods at his disposal, the one usually resorted to being the observations of vertical angles. The most accurate method is, of course, spirit-levelling, which apart from the disadvantage of being very slow is quite inapplicable to high peaks. So long as the surveyor's work is confined to short rays to hills of moderate height all is plain sailing,

but with lofty peaks observed from great distances numerous complications set in and the problem comes within the domain of higher geodesy, involving a knowledge of advanced theory of refraction, plumb-line deflexions, gravity, geoids, datums of reference, and so on. Indeed, many of the technical considerations cannot be elucidated in simple language and even geographers find them difficult.

Before going into the value adopted for the height of Mount Everest, it will be well to set forth some elementary facts about the various factors that play an important part in the determination of the heights of very high mountains.

Datums. The heights of points on the earth to be comparable with one another have to be reckoned above a level surface. Mean level of the open sea if imagined to be prolonged under the continents by means of narrow channels provides such a level surface. This is called the geoid. This surface, along with the other level surfaces of the earth above or below it, is approximately spheroidal in shape. The surveyor for computing his latitudes and longitudes adopts a true spheroid (approximating very closely to the geoid) as his figure of the earth on which he can carry out his mathematical computations. In India this figure is called the Everest spheroid. It should be realized that on account of the irregular distribution of land and sea the geoid is necessarily an irregular figure, but it has an actual physical existence, and the surveyor's or engineer's level at each setting sets itself parallel to it.

Starting with mean sea-level at a given coastal observatory, precise levelling would trace the geoid in great detail within the limits of observational and instrumental errors. The reference spheroid, on the other hand, has a mythical existence and can only be located by means of the geoid with the help of geodetic observations.

Our predecessors in the last century knew levelling and so were able to obtain geoidal heights, but if they had wanted to obtain levelled heights above the Everest spheroid, they would not have been able to do so as they lacked the information regarding the separation of the geoid from the spheroid. The geodetic programme of gravity and plumb-line deflexions in India in late years has enabled us to determine the undulations of the geoid with respect to the spheroid in detail in the plains of India, but not in the mountainous regions, on account of difficulties of observation. There are grounds for inferring that sea-level under Mount Everest would be raised by 150 feet on account of the attraction of the mighty mass above it, but the exact amount can only be determined by further observations.

In India, for our precise purposes, we use mean sea-level as the datum of reference for heights, and not the spheroid which is assumed as the normal figure of the earth. In the plains, there is no

alternative but to use this height because of the following difficulty. Everest's spheroid is so placed that its height differs from that of the geoid by the following amounts at some ports:

Karachi	+ 50 feet
Bombay	— 25 feet
Cochin	— 35 feet
Madras	— 40 feet
False Point	— 45 feet

If, then, this spheroid were to be used as the datum of heights, a point near Karachi at mean sea-level on the coast would have to be shown as 50 feet above sea-level and a corresponding point near Madras as 40 feet below mean sea-level. This would violate the usual conception of height and would not only cause endless embarrassment to engineers but would be quite intolerable on maps. The engineer accordingly has to be given heights above mean sea-level.

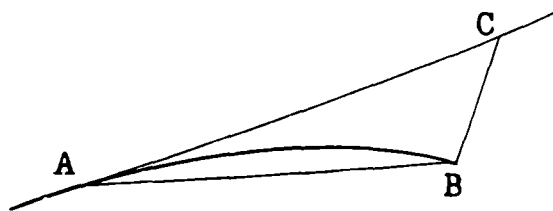
It can be argued that engineers are never going to work up to Mount Everest and that for mountainous peaks we can reasonably take the spheroid as a height datum, particularly as the Himalayan peaks are so far from the sea and position of the geoid under them is still unknown.

This system would lead to non-uniformity, as different countries use very different spheroids as their figures of the earth while the geoid (the mean sea-level) is a universal surface. It is accordingly desirable to obtain heights of Himalayan peaks above the geoid in conformity with heights in the plains. These heights would in fact be the heights of perpendiculars from the peaks to the surface of water at mean sea-level, were this brought up from the open sea by channels to points below the peaks.

Plumb-line deflexions. The normal to the geoid represents the true vertical, and the bubble of any optical instrument when levelled sets itself perpendicular to it. This line may not be normal to the spheroid at this particular point, and the angle between the two verticals is called the deflexion of the plumb-line. The method of its determination is a technical problem of geodesy involving a combination of astronomical and triangulation observations.

Angles observed with survey instruments are with respect to the geoid. The liquid in levels of instruments is generally tilted upwards towards high hills and consequently the observed angles of elevation are too small. Approximate corrections for this tilt, or what are technically named plumb-line deflexions, have to be applied to such observations. These do not normally worry the surveyor in his ordinary work. It is only in mountainous areas that they assume large proportions and have to be taken into account.

Refraction. The main difficulty in obtaining great precision in trigonometrical heights is on account of the refraction with which observed vertical angles are burdened. An observer viewing a peak B from a point A does not see it along the straight line AB but along a curved line. The point B appears to him elevated to the position C along the tangent to this curve. A correction has, therefore, to be applied for this, but its exact evaluation presents great difficulties. To obtain accurately the curvature of the ray AB , a knowledge of the air density is required all along the ray at the time of observation. This is never achievable in practice and certain assumptions have to be made.



Refraction depends on temperature, pressure, and temperature gradient of the atmospheric layers through which a ray passes, and is consequently changing all the time. A rigorous theoretical formula for it involves an infinite series. In the olden days when reciprocal vertical observations were taken, it was thought that refraction was the same at both ends of the ray and cancelled out in the mean. This assumption has been shown by experience to be very untrue both in flat terrain where the rays graze the ground and also for long, steep rays. By far the major portion of the variation of refraction is caused by the temperature gradient, which is subject to large fluctuations in the course of a day and in particular near the vicinity of the ground. Modern tables of refraction tabulate it according to temperature and pressure on the hypothesis of a fixed temperature gradient (called the adiabatic lapse rate) of $-5^{\circ} \cdot 42$ F. per 1,000 feet, the reason being that while temperature and pressure can easily be measured at the time of observation, the determination of lapse rate involves much more laborious work which is generally not possible at a field station. Now, the adiabatic lapse rate is the greatest temperature gradient that can occur in the atmosphere and generally obtains at a time of maximum temperature, and at this time the amount of refraction is at a minimum. The modern practice, accordingly, is to overcome irregular effects of refraction by selecting a particular time of observation called the time of minimum refraction, which happens to be near midday, because it is only at this time that variations in the temperature gradient from day to day are least. Observations of vertical angles are accordingly confined to the hours between 12 noon and 3 p.m.

Now, the law of propagation of error of trigonometrical heights is such that the error due to refraction is proportional to the square of

the length of the ray. Hence, within limits, the shorter the shots the greater the accuracy. As a corollary it follows that the greatest possible accuracy for heights would be given by spirit-levelling with rays of seven chains or less; and where topographical and geodetic triangulations exist in the same area, the former—because of its much shorter sides, provided the work is of good quality—should be used to control altitudes of geodetic triangulation—a fact not generally recognized.

The modern technique of taking reciprocal angles at times of minimum refraction works on the whole quite well for rays of moderate length. The snow peaks of the Himalayas, however, present one great difficulty in that reciprocal observations are not possible. When fixed by observations from the plains at long distances, the refraction effect can amount to several hundred feet, and the conditions at the elevated end of the ray being entirely unknown, the estimation of the refraction can be in error by as much as 25 per cent. It might be of interest to record here that the observations to Mount Everest necessitated a refraction correction of as much as 1,375 feet. In such cases, a variation in the angle of refraction of as much as 200 seconds of arc can occur in a 100-mile ray between the morning and afternoon observations.

Variations of snow. The amount of snow on very high peaks varies considerably with the seasons, and this source of uncertainty cannot be precisely evaluated. Indubitably on a peak like Mount Everest the fluctuation of snow will be considerable during the course of a year.

Adopted value 29,002 feet as height of Mount Everest. Observations to Mount Everest were made from the following six stations of the N.E. Longitudinal Series in 1849–50: Jarol, Mirzapur, Janjipati, Ladnia, Harpur, and Minai. These are stations in the plains at an average height of about 230 feet above mean sea-level and towers had to be built on them to make them intervisible for triangulation. The stations were about 110 miles away from the mountain. The heights of Mount Everest as computed from these stations were 28991·6, 29005·3, 29001·8, 28998·6, 29026·1, and 28990·4 feet respectively. The mean of these is 29,002 feet and this is the figure adopted up to the present time.

Regarded in the light of modern knowledge this value suffers from several serious sources of error. While it is sound principle to determine the height of a peak from observations at several stations, it is well to realize that at such long distances all measurements blur in a common uncertainty, due to refraction. It has been described how meteorological observations of temperature and pressure are necessary for first-class geodetic work to delineate properly the curvature

of the observed ray. These were not made, neither were the observations taken at the time of minimum refraction. The observations are thus quite heterogeneous, being taken under very different conditions, and should not be lumped together. Again, in the actual computations refraction was allowed for by assuming coefficients of refraction varying from 0.07 to 0.08. These seem too high for a ray whose other extremity goes up to 29,000 feet, and the error in resulting height may be as much as 200 feet due to this wrong supposition. Furthermore, the distances are far too great for any accurate value of height to be obtained by vertical angles.

Finally, no account was taken of plumb-line deflexions and no corrections to the observed angles were applied on this account. The resulting height is accordingly vague and above no recognized datum. It can be described either as a preliminary geoidal height or a rough height above the Everest spheroid so placed as to touch the geoid under the north Bihar plains. This is not our present definition of the Everest spheroid.

In the seasons 1880-3 and 1902, observations were taken from the Darjeeling hills in the course of the normal survey programme. These stations were also too far away, being at an average distance of 90 miles from Mount Everest, but had the advantage of being at a higher level. It was not possible to observe always at the time of minimum refraction and in certain cases early morning observations had to be taken. The average height of Mount Everest was derived from these observations by Sir Sydney Burrard in 1905 by assuming a coefficient of refraction of 0.05 and worked out to be 29,141 feet; but he never claimed any finality for it. Here again plumb-line deflexions were not utilized for want of data and this value is still above an undefined datum. Actually, for each station of observation there was a different datum, and the various heights are above different Everest spheroids so placed as to touch the geoid under the hill stations.

This value seems to have attracted more attention than others in recent years. The Americans have published it on their maps and such an eminent mountaineer as F. S. Smythe in his book *Mountains in Colour*, published in 1949, makes a definite statement that the true height of Mount Everest is 29,141 feet. He attributes the difference from 29,002 feet to be due to the fact that 'the mass of the Himalayas puts the bubble of a theodolite very slightly out of plumb to the centre of the earth', which, of course, is not the true explanation.

Dr. Hunter in 1922 (*Survey of India, Geodetic Report*, vol. i) tried to put the existing data on a rational basis and selected some observations from both the earlier and the later sets of data but had to subject them to different treatments. Deflections were known only for a few of the hill stations and he utilized them, and for the others the

geoidal angles had to be used. He also tried to reduce some of the earlier observations, which were not made at the time of minimum refraction to midday, by conjectural extrapolations. His final value of height, viz. 29,149 feet, is a confused height obtained from incomplete data. It is neither above the Everest spheroid nor above the geoid. He assumed the geoid under Everest to be 70 feet above the spheroid, and allowing for this the height of Mount Everest above sea-level works out to be 29,079 feet.

It should be made clear that although these later values may be slight improvements on the adopted value of 29,002 feet due to modifying the original faulty computations, they are by no means precise enough as judged by modern standards. It may also be that in spite of the height 29,002 feet having been computed in a most incomplete manner, i.e. with a definitely wrong refraction coefficient, omitting the plumb-line deflexions, and with no idea of the datum surface, the various errors may have conspired in the direction of cancellation. In any case, the existing observational data is far too incomplete and so many doubtful factors enter into it that no matter how it is manipulated it cannot produce a result final enough to justify supersession of the traditional value. Further observations carried out on systematic lines are needed for this purpose, and these would entail observations from mountains in Nepal not far from Mount Everest. The recently executed topographical triangulation in Nepal can be utilized for establishing suitable stations to the north of it. Refraction at these high altitudes, being neither so large nor so erratic as in the low-lying plains, can be tackled better. In addition, it can be shown that this method does away with the necessity of finding the geoidal form under Mount Everest, which is quite a difficult proposition.

Conclusion. Mount Everest, being the highest point on the earth's surface, has rightly commanded a lot of attention, and a vast literature exists about it in the form of books by eminent authors and explorers and a number of articles in such important journals as the *Royal Geographical Journal*, the *Alpine Journal*, the *Himalayan Journal*, and so on. Just as it has so far successfully defied experienced mountaineers to reach its summit, it has also defied any attempt at finality both as regards its height and the establishment of a local name. There are still some widespread beliefs about it which are not well founded, and contradictory reports about its discovery, height, and name continue to be published in the popular press, scientific journals, and on maps. This is not to be wondered at, since a study of the various problems associated with the Himalayan peaks provides a common meeting-ground for linguists, historians, geographers, surveyors, and geodesists, whose views are not always reconcilable.

We can, however, deny certain fallacies that keep recurring at frequent intervals:

- (i) Gauri Sankar is not the old and correct name of Mount Everest.
- (ii) Chief Computer Radhanath Sikhdar cannot be regarded as the discoverer of Mount Everest.
- (iii) 29,002 feet must be adhered to as the height of Mount Everest until further observations are taken.

‘THE INNER LINE’

PARTICULARS of the ‘Inner Line’ have not yet appeared in our *Journal*, and the following details have been supplied by the courtesy of the Minister of External Affairs at New Delhi. It relates to the State of Tehri and the Districts of Almora, Garhwal, Spiti, Bashahr, and Lahul. The ‘Inner Line’ generally runs at a distance of about five or six marches from the Indo-Tibetan border and may not be crossed without special permission which is sparingly granted.

In the State of Tehri. From the snowy peak on the Bashahr–Tehri boundary to Mallick station. Thence to Bhairaunghauti and then along the watershed between the Bhagirathi and Jad Ganga valleys to the Tibet boundary.

In the Districts of Almora and Garhwal. A straight line from the junction of the Darma and Kali rivers on the frontier of Almora and Tibet to Mansiari; thence direct to Phurkia; thence direct to Suraitota; thence along the road to Vishnuprayag; thence direct to Kedarnath and then due west to the frontier of Tehri and Garhwal.

In the District of Spiti. From the point where the Spiti river leaves Spiti to flow southwards into Bashahr, following the river upwards as far as Kibber; thence to the Takling La, or La Suma (pass), and from that pass to the peak marked 20,200 feet on the Kashmir border. Thence by the Pangpo La; by Zamdang to Muldem, and on to the Baralacha pass by the Yunantso Lake.

In the District of Bashahr. From a point about 4 miles east of the Great Snowy Cone (19,962 feet,) on the Bashahr–Tehri boundary, along that boundary in a westerly direction so far as the Nela Peak; thence northwards to Nilhal on the Baspa river and down that river so far as Chitkul, from Chitkul over the Gharang pass to Dogri in the Todoong valley: along the Todoong river to the Sutlej, so far as the confluence of that river and the Spiti river and thence up the Spiti river to the border of Spiti.

In the District of Lahaul. From the Baralacha pass to Zingzingbar, up the Bhaga river to Dharcha; across the Shingkun La to the point where the boundaries of Kashmir, Chamba, and Lahaul meet.

NOTES

A PURE LAND

This broadcast was given by Mr. Hugh Richardson, C.I.E., O.B.E., in June 1951, before the Communists had gained control over Tibet and it may be considered out of date. Nevertheless it is hoped, and indeed may well be, that the age-old conservatism of the Tibetans will not be too deeply impaired, and that future generations from non-Communist nations will be able to visit, without undue restriction, that fascinating land with its lovable people—ED.

A VERY early fragment of Tibetan verse dating from the eighth century A.D. which I shall quote because I hope you will like the sound of it, describes Tibet as KANG RI THÖN PO NI Ü; CHHU BO CHHEN PO NI GO; YÜ THO SA TSANG: 'The centre of high snow mountains; the head of great waters; a lofty country, a pure land.'

That is an apt description of a country bounded by the Himalaya, Karakoram, and Kuenhun mountains, and containing the sources of many of the greatest rivers of Asia: the Indus and the Sutlej, the Ganges and Brahmaputra, the Yellow river, the Yangtse, the Suleveen, and the Mekong. But I like also to see—perhaps without justification—in that word which I have translated as 'pure', the earliest expression of the idea of Tibet as a holy land. For that is the conception which explains the exclusion of outside influences. Indeed, it explains most of Tibetan thought and actions today.

Tibetans are always careful to tell one, in explaining their policy, that 'Tibet is a Religious Country'. That is no mere form of words. State and Religion are one and the same. The single conscious aim of the administration is the maintenance of religion which automatically means the maintenance of the State.

That idea sends its roots deep into Tibetan history—perhaps as far as the great days of the Tibetan kings—1,300 years ago. It has certainly dominated Tibet for about 900 years and since the sixteenth century has unified the country under the present line of Dalai Lamas.

The Tibetans see the justification of their system in its long survival. They see threats to it in change of any sort. And, as the ideas of all other peoples are now different from their own, they seek to keep all new ideas out of their country. They have succeeded so well that they have preserved a form of government and a social structure unchanged for 300 years and containing elements that go back many centuries earlier.

The Dalai Lama is sincerely believed to be a divine reincarnation; the feelings of awed but affectionate devotion which surround him dominate the minds not only of the peasants but also of the most

intelligent nobles. This devotion is largely responsible for the ready acceptance by the Tibetan peasantry of a position that must be described technically as 'feudal serfdom'. But if the Tibetan peasant is technically a serf he certainly does not groan under any intolerable hardship. However strange it may seem to would-be reformers, he is in general well contented. I would add that signs of real poverty are very rare. The peasant and his family get enough food and clothing in return for their work; they have time for holidays and for idling. And there seems to be something in their nature that satisfies them with their life and with the belief that by accepting their destined place in the scheme of things they are serving the Dalai Lama and upholding the Religious Government.

In political matters Tibet has always been more closely involved with China than with her other neighbour—India. The Tibetans have at no time been willing to be absorbed by the Chinese Empire, but they had a common ground with China so long as the emperors were Buddhist or made a show of Buddhist sympathies. It was for centuries a political theory convenient to both sides, that the Chinese emperors were the disciples of the great Tibetan lamas and that their interest in Tibet was in the role of Defenders of the Faith. In fact, for a very long time there was no real danger to Buddhism in Tibet; for the Muslim conquerors of India, although feared and hated by the Tibetans as persecutors of religion, did not stretch out more than tentative hands to the fringes of the Himalaya. The Jesuit missions in Tibet in the eighteenth century represented no more than a mild and scholarly invasion of religious argument which was met by an equally resolute logic and a polite but adamant opposition. Mere persuasion was no danger to Tibetan Buddhism on its own ground.

Heretical force first broke into the seclusion of Tibet with the Younghusband Expedition of 1904. The Tibetans were surprised to find that the invaders didn't want to occupy their country and upset their religion but were in fact moderate, humane, and tolerant. So, apart from some new light on the British character, little in the way of new thought came in with the Expedition and, as soon as the party withdrew, the puncture in Tibetan spiritual defences sealed itself automatically.

The next shock to the established order in Tibet came from the east. Foreign infections suddenly jerked China from the Middle Ages to the threshold of modernity; and the collapse of the Chinese Empire before the Republican Revolution in 1911 carried off Tibet's last spiritual ally against innovation. The disappearance of the Divine Emperor, the Protector of Buddhism, removed the one bond with China which Tibetans had been prepared to accept. With that gone, Chinese political influence, which had always been distasteful,

appeared suddenly as a threat to the Tibetan form of government. The Tibetans took the opportunity of confusion in China to shake off the last remnant of Chinese control; and since then, Chinese approaches to Tibet were viewed with bitterness and suspicion because of the revolutionary outrage to religion and constitutional propriety.

In order to support their reasserted independence, the Tibetans were glad to cultivate closer relations with the government of India. The expedition of 1904 had left no hard feelings. Indeed the moderation with which it was conducted and its speedy withdrawal from Lhasa are still remembered with appreciation. Moreover, the Thirteenth Dalai Lama had come into close and friendly contact with a British official. This was Sir Charles Bell, an officer of the Political Service of the Indian Government who was then in charge of relations with Tibet. The Thirteenth Dalai Lama was a man of strong will. He had seen something of the world as an exile, first in China when he fled from the British expedition, and then in India when he had to escape again, this time from the Chinese invasion of Tibet in 1910. From his friendship with Sir Charles Bell he acquired sound and reasonable ideas of where the best interests of Tibet lay and of methods by which he might gradually bring the country on to a more progressive way of government. His efforts to put his ideas into practice were simple enough—some training in India for a few army officers and men, a small police force for Lhasa, a simple hydro-electric lighting plant. He was an ardent Tibetan and did not want to see Tibet managed or influenced by any other government, and his aim was to make it possible for Tibet to stand on its own feet and defend its independence against China.

The Dalai Lama's modest reforms were the first deliberate introduction of western ideas into Tibet; and the system rose up silently and overwhelmingly and blotted them out. No one openly resisted the innovations and there are faint material traces of them visible to this day. But anything likely to change the existing social system or alter the balance of power inside the country was soon reduced to a shadow. The reception of these reforms showed clearly from where a Dalai Lama derives his power and on what conditions. It was the monasteries that put on the brake and asserted themselves as the guardians of conservatism against all forms of change.

Now the monasteries in Tibet are believed to contain between 200,000 and 300,000 men. In a population which may number about 3,000,000 that is a large proportion. But it was at least a threat that a well-armed and well-trained army—even if it were not increased beyond its existing size of about 10,000—could be an effective check on the influence of the monasteries and could make it possible for a Dalai Lama to be independent of their support.

I do not intend to suggest that it is thoughts of personal advantage which lead the monks to oppose all forms of change. All goes back to the idea of the Religious State which commands an especially fanatical devotion from those who feel that by taking part in the religious order they are protecting and perpetuating the flame of the faith. Hatred of change is so much a part of their thought and habit that the monastic order would protect their conservatism even against a Dalai Lama.

Since the death of the Thirteenth Dalai Lama there has been an acceleration of the speed with which western ways have become known in Tibet. It is no new thing for Tibetans to visit India. They have gone there for pilgrimage and for trade for many centuries. But in the war of 1939 to 1945, as all other approaches to China became blocked, Tibet found itself a busy channel of trade between India and China. Tibetans are naturally traders, and all classes—monks, yak-herds, farmers, noblemen turned to this promising business with enthusiasm. The number of Tibetan visitors to India increased greatly and the range of their visits extended beyond Calcutta and the places of religious pilgrimage, to Delhi and Bombay. And I am afraid that contact with war-time India led the Tibetans into ways of black marketing and undesirable business sharpness.

In Lhasa itself the presence since 1936 of a political mission representing the Government of India must have given many Tibetans some insight into the ways of life and thought of other peoples. Tibetan officials also have been on missions abroad and have seen the ways of industrial countries and have exchanged views with British and American business men and officials.

All those new contacts must have had some effect on the Tibetan mind. Perhaps the successful business men would like some change that would give them a more active part in the direction of affairs. Perhaps some of the younger officials see difficulties in the way of maintaining Tibetan isolation in a world of modern communications. Perhaps—and I hope this may be so—some officials have begun to appreciate that some liberalization of the land-tenure system could ensure that the government continues to rest on the loyalty of a contented people.

But in the background still looms the restraining authority of the monasteries—still resolute against new ideas, still strong to impose their will on the country by the power of faith and ancient tradition. So I would say that the tide of new ideas is only washing round the shores of Tibet. It has made no breach yet.

The danger point lies, of course, in the expressed intention of the Chinese government to 'liberate' Tibet. In pursuance of that purpose, Chinese troops have entered Tibet; and although they have halted just inside the borders and have not followed up their initial

success, it is clear that matters cannot rest like that. Some change in Tibetan internal affairs seems inevitable.

The Chinese have only to study the centuries of their relations with Tibet in order to recognize the power of religion in that country. Their alternatives—to put them roughly and in an over-simplified way—are to break that power as the Russians did in Mongolia, or to use it as the Chinese Empire did under the Yuan and Ch'ing dynasties.

An attempt to break the power of religion quickly would need the use of force on a considerable scale. The successful use of force might leave the country in a state of chaos; so a body of administrators would have to be ready to restore order. There is no sign that the Chinese want to follow so violent a course even if they were in a position to commit men and money on a task so far from home for the sake of an uncertain reward. On the contrary, they seem deliberately to have restrained various forces and elements which could be used to create internal dissension in Tibet. And they have been making conciliatory offers to the existing régime, promising to maintain the political status of the Dalai Lama and the property of the monasteries. Liberation, it seems, is to be the delivery of Tibet from the entirely imaginary threat of Anglo-American imperialism. So one gets the impression that, for the present, the Chinese hope to re-establish in Tibet a form of control similar to that which existed under the Ch'ing dynasty and to exert their influence through a Tibetan government based on the old model. To be successful in such a plan it would be necessary to secure the co-operation or obedience of the Dalai Lama. A comparatively moderate programme of that sort does not rule out the possibility of measures to reform the social system from within, but it does imply the adoption and continuance of an old method of government. A good deal could be done under that old method to improve the conditions of the agricultural class without directly challenging the power of the monasteries; but if any considerable social changes were to be proposed and if a government headed by the Dalai Lama were used to put them into effect, there would be the probability of a clash between the executive and the monasteries.

In the field of foreign affairs the maintenance of a traditional Tibetan government would indicate that professed Chinese fears of 'imperialist intrigue' in Tibet were either a blind or a mistake. If the Chinese government has genuinely feared external interference in Tibet, it should by now have realized that there is no cause for anxiety on that score. Unless, therefore, the Chinese have aggressive designs on India, we may see Tibet continuing for some time to fulfil the function for which it is peculiarly well fitted—that of a buffer—with the difference that the present amicable links with India may be replaced by a closer control from Peking. I do not propose to speculate about Chinese intentions towards India.

That would lead us away from Tibet, from one hypothesis to another and from one continent to another. It will be easier to look for indications of those intentions by watching what the Chinese seek to do in Tibet.

For myself, I think that what we are now seeing is a swing of the political pendulum which, regardless of social ideas, in the long centuries of relations between Tibet and China has brought the two countries now nearer together and now farther apart. Perhaps the Chinese approach to Tibet is still explanatory and the first aim is the restoration of Chinese face. Of course, the threat of a new and revolutionary way of society and of government lies behind any approach from Communist China. But so far, it is the fear of new ideas and not their power that has entered Tibet.

Western minds accustomed to the complex, impersonal administration—should I say over-administration?—of modern countries may find it difficult to appreciate the simplicity and intimacy which are among the merits of the ancient and still surviving Tibetan form of government. The local official knows personally almost every one under his control; anyone with a grievance can, by persistence, bring it personally before the Cabinet; anyone can go to the throne of the Dalai Lama and receive the blessing of his divine ruler.

It is not, of course, all purely idyllic. There is no lack of imperfections. But it would, I think, be short-sighted and over-exacting to concentrate doctrinaire criticism upon the inequalities and to deny strength and virtue to a system through which Tibetans have lived for nine centuries at least in the enjoyment of internal peace and absence of poverty to a degree which I do not think any of their Asiatic neighbours could equal. In all those centuries, too, the Tibetans have never threatened the peace of their neighbours.

It may be even more difficult for Western minds to comprehend the survival into this cynical age of sincere religious devotion as a living and unifying national force.

We have become used to seeing attempts to inspire unquestioning faith in the rulers of Russia and now of the new China by voluble propaganda, supported by the removal of those whose loyalty is doubted. But in Tibet such faith in the ruler is traditional and habitual. It is woven into the life of every Tibetan from his childhood up.

Communist planners may hope to make use of that habit of faith for their own ends by providing it with a new object. Perhaps such hopes are not impossible. But before they could be fulfilled it would be necessary to break down or melt away the barriers set up by that firmly entrenched, uncompromising defender of the faith—the Tibetan religious hierarchy.

HUGH RICHARDSON

Very recent reliable information from Sikkim indicates that the Chinese are not interfering in internal administration in Tibet.—ED.

THE ELUSIVE MOUNTAIN

Map reference. Survey of India maps, 4 miles to one inch.
Sheets 51D and 52A.

So much is done for Mount Everest: it is explored, examined, discussed, photographed, and in fact is the centre of all mountaineering activities. Even the stony-hearted band of publishers, who will not consider the ordinary volume of climbing reminiscences, are at once melted by any mention of Everest, and indeed will produce anything to do with that peak. Yet Mount Godwin Austen (let it be so called rather than call it K2, in memory of that great man who first saw and mapped it, and who is one of the glories of the Survey of India) is 28,250 feet high and only 750 feet lower than Mount Everest. It is thus the second highest summit in the world, and is as noble a mountain as any one would wish to see. It is, moreover, politically 'safe'. There is no need to approach the authorities in Tibet or in Nepal for a government permit to visit an area in which they are not interested. Indeed, the taste for heights is a purely Western one, and incomprehensible to the bored but polite Oriental.

There have been in recent years three attempts to climb Mount Godwin Austen and all have failed. Indeed, the record of failure is quite astonishing, and very much to the credit of the peak itself. But it can be climbed: there is no doubt about that.

The first, and incidentally the most elaborate, of these three attempts was made by an admirably equipped American expedition, and an account of the enterprise appears in a book called *Five Miles High*. The whole affair was dogged by bad luck, and in spite of the careful and elaborate preparations, which should have enabled someone in the party to reach the summit, Mount Godwin Austen remained untouched by man. One of the attractions of the book is the food taken by these American stalwarts. It is fascinating to read the lists of good things and the exciting menus, and the author in his wigwam in the snow used to think sadly on the privilege of being a member of such a show. The menus made one's mouth water. It is true that there was once a mountaineering team who went to the wilds of Baltistan and took vast stores of asparagus and of *pâté de foie gras* in tins. The tale is that large quantities of these delicious and expensive viands were abandoned in Baltistan, and the local peasants benefited greatly. They opened the tins, threw away the contents, and used the containers for boiling their tea. It doubtless shows a lack of appreciation on the part of the Baltis, but then why take these stores to the back of beyond?

The second expedition to Mount Godwin Austen was that led by

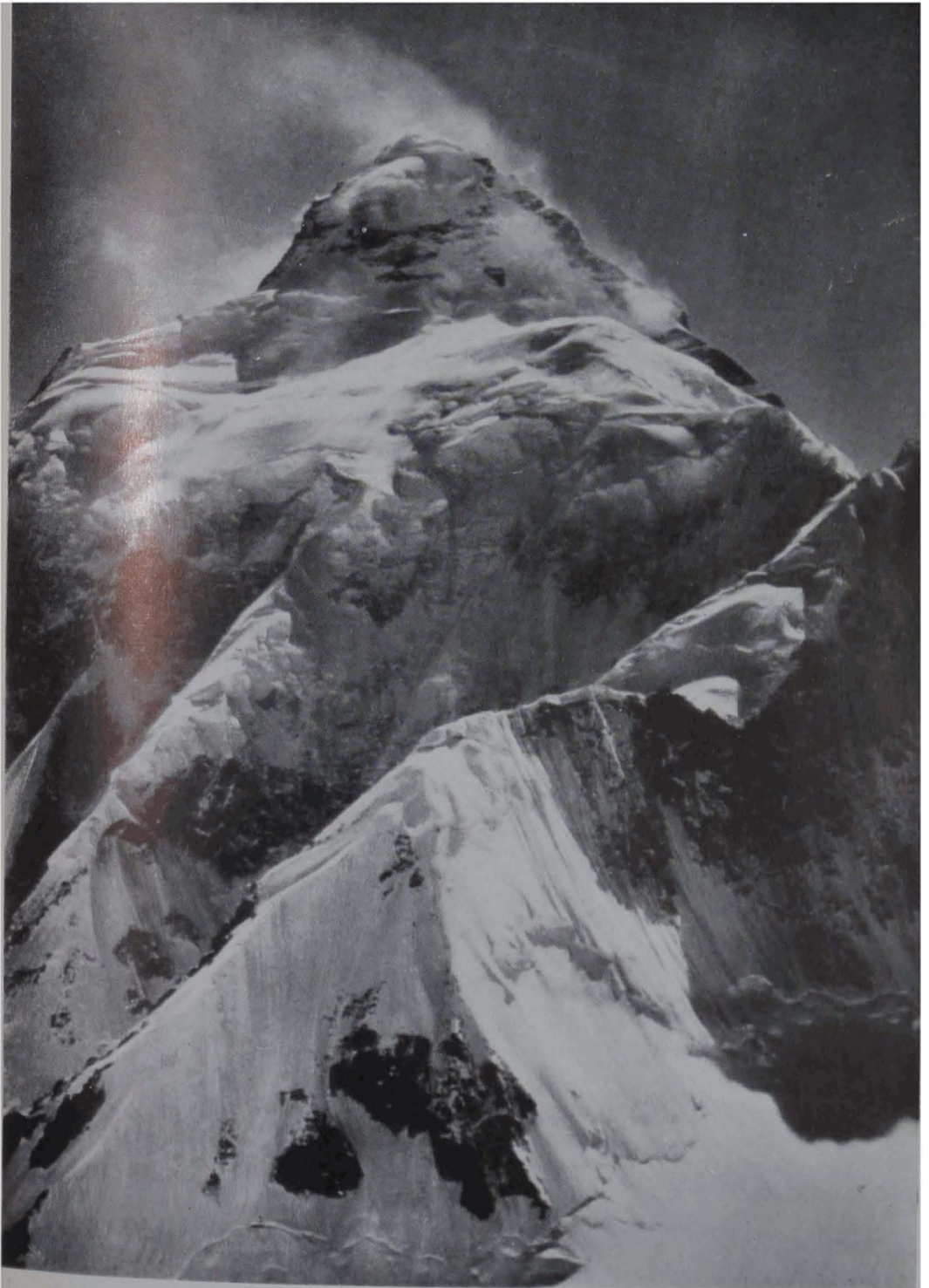


Photo by the Duke of Abruzzi

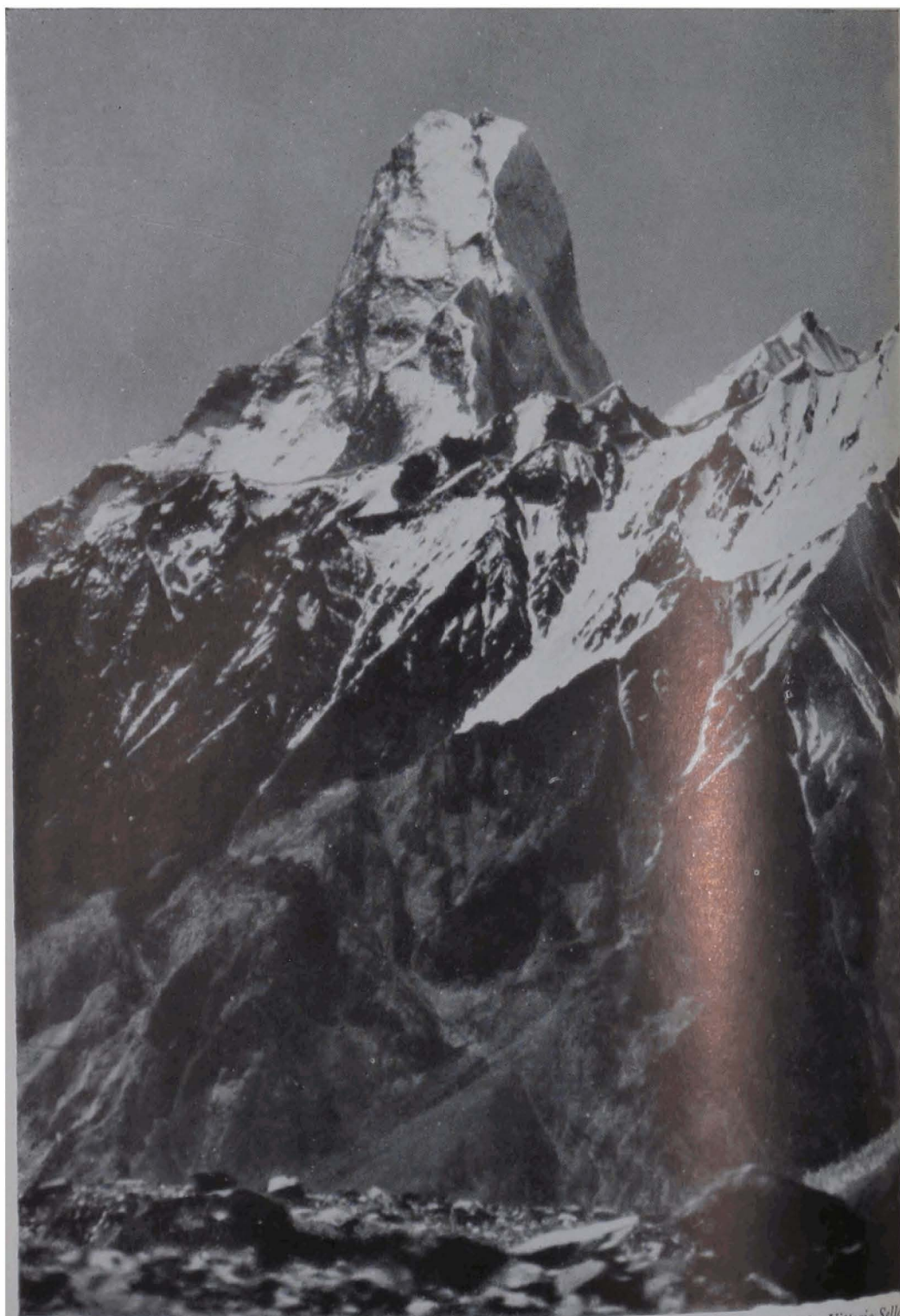


Photo by Vittorio Sella

Mustagh Tower, 23,860 ft.

Mr. Eric Shipton in 1938. The account of the whole venture is given in his book *Blank on the Map*, and very good it is. The volume is adorned with excellent photographs, and a really good map, an addition so often omitted in books of travel.

But the expedition did not succeed in climbing the mountain. The great peak had again defeated man.

A third attempt to reach Mount Godwin Austen was made by the writer of this article in 1945. His party ascended the Mustagh-Shaksgam river from Shingshal Aghzi, and arrived opposite the mountain. The weather had been unfavourable, though not greatly so. It was, however, impossible to ford the stream from the Sarpo Lagga glacier, and that in spite of having rafts with us and two experts to work the contraptions. Besides, if any man can ford a stream, the men of Shingshal can do so. We had to abandon the attempt. The real cause why we could not wait was the food question. When we did cross the stream it was too late. I found Mr. Shipton's camp, and groped about hopefully but uselessly in the foolish expectation that he may have left a cache of food, but we saw nothing except a wolf sitting in a bush. We dared not stay. Anyone who knows these remote places will realize the worry that feeding a number of men always causes.

What, then, are the difficulties about this mountain, for it surely will be climbed one day and it deserves to be. Mount Godwin Austen is a magnificent peak, a noble object worthy of any trouble to ascend. As we approached the area from Shingshal Aghzi, I had ample opportunity of gazing at this stupendous mass. It is true that it is remote. It is not, however, particularly inaccessible as far as merely reaching it is concerned. It is always a matter needing great care and forethought to convey the food and the men so far from any centre of supplies. Mr. Shipton took Balti coolies with him, and a lively account of these folk is given in his book, in the chapter 'The Hungry Hundred'. Baltis have many virtues, but it is wiser for any expedition to dispense with their invaluable services.

This is only a brief account of this wonderful mountain, but it may encourage someone to organize a party and to reach the top. It is beyond the influence of the monsoon, and, in spite of what I have said about myself, the weather can usually be trusted. Storms seldom last long in the Karakoram. A thorough reconnaissance is essential before the actual attempt on the mountain is made, and careful preparations are needed regarding transport and, above all, rations. There is no worthier mountain in the world than this giant.

R. C. F. SCHOMBERG

A LITTLE-KNOWN SIKKIM PASS

THE following account of the crossing of the Patra La in August 1905 is taken from letters written at the time to my parents which I have now come across.

The Patra La is a pass on the range between the Lachung valley in Sikkim and the Chumbi valley in Tibet and is about 3 miles north of the Tanka La and 7 miles south of the Gora La. The more direct and easier pass for me to have taken would have been the Tanka La itself; but as I was having difficulty in getting permission to enter Tibet I thought it better to take the pass which led me direct to the hot springs in the Kambu valley without troubling the military authorities at what was then known as New Chumbi but is now called Yatung.

In 1904, during the Tibet Expedition, I had been ordered to take a patrol of mounted infantry from Phari to the hot springs in the Kambu valley to report on the possibility of a Tibetan force gathering there and attacking the lines of communication from the west. I had to go out and back to Phari in the day. When I reached the hot springs I found on the hills many herds of burrhel with some fine heads, and this determined me to visit this valley again after the expedition was over.

Leaving Darjeeling on 14th August I spent my first night with Mr. Lister at his tea-garden at Peshoke. Lister was a wonderful naturalist and knew more about the people and the country in that part of the Himalayas than any other man. He had, I believe, come out to India when a young man as botanist to the Abor Expedition of 1854.

There were, of course, no cars in those days and the cart road from Rangpo to Gangtok was new and in an uncertain state, especially in the rains of August. So to reach Gangtok I travelled via Rangpo and Pakyong. I reached Lachung on the fifth day from Darjeeling. Here I was delayed a day as the coolies had to make themselves boots and undertake other preparations for the journey over the pass. I was delayed a second day as Mr. Claude White, the Political Officer, who had just arrived in north Sikkim direct from Gyantse, had sent for coolies to take him on to Gangtok. Luckily these were not required after all and I succeeded in getting off on the third day. There were two pleasant Swedish missionaries, Miss Fredericksen and Miss Johansen, in Lachung who fed me with delicious scones, fresh butter, and jam made from wild strawberries. I had some difficulty in persuading any coolies to take me over the Patra La, which none of them had ever crossed, and they tried to persuade me to cross the Tanka La.

The first night we slept at an overhanging rock called Menpupya. This was only 4 miles by the map but took me and my men $6\frac{1}{2}$ hours. It is called 'Monphu Cave' on the map. My aneroid showed an alti-

tude of 11,700 feet. The next day, six hours' travelling took me to Sumdendzong at 15,500 feet. This was above fuel level and I did not expect to find yak dung on this little-frequented track, so just before leaving the fuel level I made each man collect a little firewood, enough for one night. On 23rd August we made an early start. I came on some snowcock and in futile pursuit of them I got lost in a fog; but by good luck I found my coolies again. There was now no track of any kind, but I had an inaccurate map on a small scale. After crossing two low passes we descended to a valley where there were a few rhododendron bushes. From here on our journey was pure guess-work, but we happened to strike the right valley. After going up this for two hours we reached a fork with no indication as to which branch to take. It was very cold and pouring with rain. I sent some of the men up the most likely branch to see if they could find any indication as to the way to the pass. My Indian servant and I, who were both mountain sick, took what shelter we could among the rocks and had a calorit of hot pea-soup. I have often wondered why calorits went out of fashion. Perhaps because they had an unpleasant flavour and were more bulky than ordinary tins of food; they were, however, handy and comforting, quick to prepare, and carried their own fuel. As I have not heard of them since those days I may explain that the tin of soup or stew was surrounded by an outer tin about a quarter of an inch larger all round. This outer casing was pierced in three or four places with a skewer. This allowed two chemicals to mix and in a very short time the food inside was heated and was then opened in the ordinary way. After $2\frac{1}{2}$ hours the men returned. They had found a single stone balanced on another and this was sufficient to indicate the road. The clue seemed slight but we followed up that valley and came on several more of these faint signs. We had to scramble over loose stones among patches of snow. Near the summit I was so bad with mountain sickness that I had to be helped up to the pass, and several of the coolies were in the same state. The fit ones left their loads at the pass and gallantly returned to carry the loads and generally assist those who were ill. The summit was 17,500 feet by my single small aneroid; but I think the pass cannot be quite so high as this.

Just over the pass we had to cross two patches of ice—small incipient or dying glaciers. We had an easier time down and soon got on to open turf which we descended until to our joy we saw a black Tibetan tent surrounded by a herd of grazing yaks. I was glad to get warm and to dry my soaking clothes before the *drukpa's* fire, and here we spent the night at 16,100 feet. The next morning it cleared and I saw that the pass behind us was white with snow. Our host the *drukpa* said that now the pass would be closed till next July, so that my efforts to avoid the military authorities in Chumbi were of no avail!

According to my map I should have dropped straight from the Patra La into the upper Kambu valley, but this did not turn out to be so; I had to descend 3,000 feet and then rise 2,000 feet over a spur called the Gepa La before dropping into the Kambu valley itself. The latest maps are accurate compared with those available to me in 1905, and I see that the Gepa La is now marked at 15,420 feet, though no height is given for the Patra La itself.

I hope I have not exaggerated the difficulties of this pass; perhaps my impressions were coloured by mountain sickness. When all is said and done I was able with difficulty to have my pony led over the pass.

I remained in the Kambu valley for over three weeks and shot several burrhel besides pigeons and partridges for the pot. I travelled up and down the valley, moving my tent several times. Once I went up to the head of the valley, whence from a hill I had a view of the real dry Tibetan country in the direction of Kambu Dzong—such a contrast to the green hills of Kambu with the comparatively large rainfall.

I came on one curiosity in this valley. Going through a patch of fir forest at the lower end of the valley I suddenly came on a gilt turquoise-studded *chöten* (shrine), roofed and protected from the weather on three sides but quite open in front. It was, if I remember rightly, 5 or 6 feet high and must have been of considerable value. I was told that when the Nepalese sacked Shigatse in 1790 this was removed and hidden in the valley for safety and no one had ever taken the trouble to take it back. I paid repeated visits to this valley in subsequent years, the last being in 1928; but the people professed not to know or even to have heard of such a thing. The *chöten* may still be there. I can say from memory that it was low down on the west side of the valley.

F. M. BAILEY

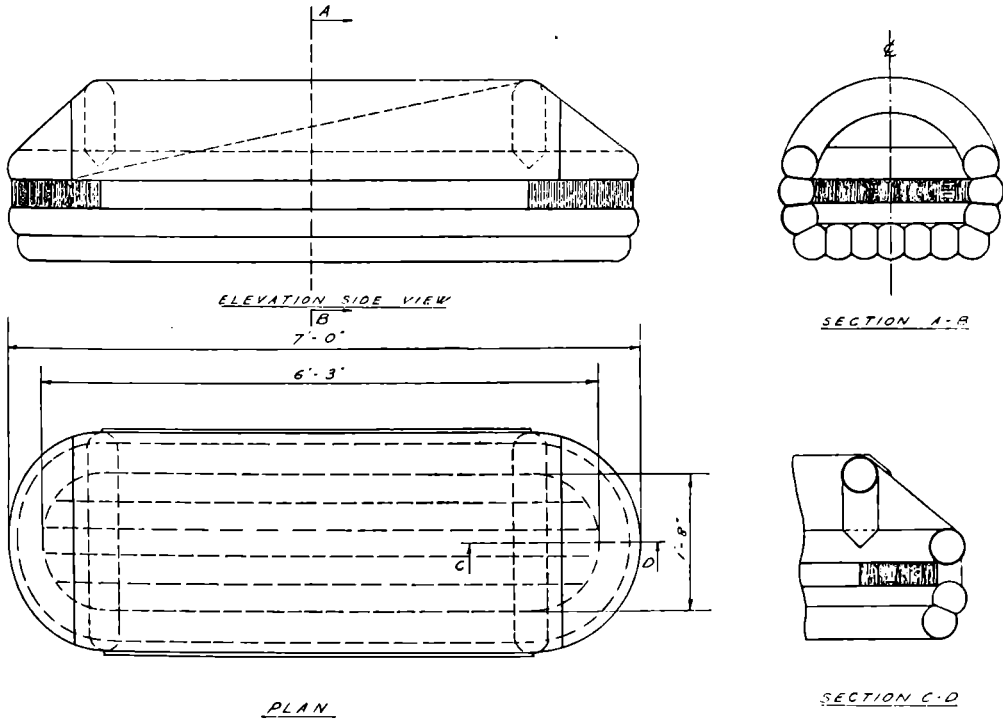
ZELT-SCHLAFSACK (TENT-SLEEPING-BAG)

Made by the Ballon-Fabrikwerke, Augsburg

THIS is designed for regions of great cold, such as the Arctic and the high Himalaya. It insulates against cold, can be used on any kind of ground, will serve as a boat, weighs very little, and packs up very small. It consists of tubes made of rubber-cum-linen fabric, each tube being inflated either by the mouth, with bellows, or compressed air. Damage is thus localized. The arched roof, which can be fastened from inside after folding over, is secured permanently on one side. The inflation of the tubes stiffens it against collapse through external pressure. The special pattern supplied to Himalayan expeditions is a

light-weight design, a rather heavier type being produced for military purposes. The former weighs just over 11 lb. and when packed measures 20" × 12" × 8". Two climbers in ordinary clothing demonstrated the feasibility of occupation by two persons if necessary.

WILLI RICKMERS



Zürich, den 6 Aug. 1952.

Dear Tobin:

In reply to your letter of July 26th, I wish to inform you that our party did take with them the 'Zelt-Schlafsäcke' made by the Ballon-Fabrikwerke of Augsburg, Germany. However, they were not tried out for their real purpose, i.e. for shelter during a storm in high altitudes. They just offer enough space for one man, at the maximum for two, but no cooking apparatus can be used, they are too small. Consequently, these tents were left at Camp I, where they served to store provisions.

I wish to thank you very much for your kind words of congratulation on behalf of our party.

With very best wishes,

Sincerely yours,
Schweizerische Stiftung Fuer Alpine Forschungen
ERNST FEUZ

INTERNATIONAL HIMALAYAN GATHERING

THE International Himalayan gathering at Munich at the end of September 1951 was a thoroughly good show; as was to be expected, very well organized. Representatives of mountaineering clubs in Switzerland, Sweden, the Netherlands, Italy, and Austria were there and the Alpine and Himalayan Clubs had also their own representative. We were met individually on arrival at the Hauptbahnhof and accommodation had been arranged and paid for by our very welcoming hosts. Transport, too, was provided free throughout the three days.

Proceedings began with a stag dinner-party of some score in all, the guests being welcomed by Herren Paul Bauer, Max Mayerhofer, and Fritz Bechtold. Oral bouquets were handed round and the A.C. cum H.C. representative did his best with the limited German he speaks. He conveyed the greetings of the Alpine Club—the Himalayan Club committee having cabled their own. Politics were kept out except for the *nem. con.* agreement that mountaineers abhor them. Next day the conference took place, mainly on equipment, clothing, and diet. The most interesting exhibit was a combined sleeping-bag-bivouac-shelter. It is made by the Ballon-Fabrikwerke in Augsburg of cloth and rubber tubes, each inflated by a sturdy-lunged porter or climber. Two can squeeze into it and the top closes over. When occupied it seemed to me reminiscent of the old Michelin advertisement, 'Bibendum'. I was unable to find out what happens when a real High Asian blast strikes it, but Bauer had tried it out on Nanga Parbat in 1938 and spoke well of it. It is not, however, yet in full production. Another departure, new to me, was footgear made of rubber-cum-leather fabric with nails welded in. After a very pleasant mixed lunch-party we assembled to see films of various expeditions, with running commentaries and speeches interspersed. Speakers included Bauer, Allwein—conqueror in 1928 of Pic Kaufmann (now Pic Lenin)—Mayerhofer, and Bechtold. The latter's Nanga Parbat narrative was most moving. In the evening another mixed party dined at small tables and mingled after each course. Bed, if my memory serves, at about 3 a.m. The final day began with a unique procession of dogs, 2 miles of them, schnauzers, boxers, terriers, dachshunds, &c., and many 'any other variety'. At intervals there came big drays drawn by fine horses with glittering harness and loaded with polished barrels of Munich's many beers. At the head and at the tail of the procession rode a section of smart mounted police. Before dispersing in the late afternoon we paid a visit to the 'October Fest' which began at least 300 years ago as a sort of harvest thanksgiving and has now developed into a sort of combined Hampstead Heath, Blackpool, and Butlin's, but very orderly and extremely happy.

H. W. TOBIN

THE SHERPAS OF EVEREST

With the permission and by the courtesy of *The Times*.

AN expedition in the Himalayas is largely a transport undertaking—transport by train, boat, and lorry, then by coolies, and from the base camp it is Sherpas who have the task of carrying all the material up the mountain. The Sherpas are a caste of mountain dwellers whose main centre is at Namche Bazar. These attractive people carry on a big trade with Tibet, Nepal, and India. Men, women, and children carry everything on their backs. There do not seem to be beasts of burden in that part of the country; roads are too precipitous and pack-animals apparently too difficult to feed.

The Swiss Everest Expedition's team of Sherpas have been absolutely first class. Their sirdar, Tensing, who is in the prime of life, has taken part in more expeditions than he can remember, including four expeditions to Everest by the northern route.

There are two things one admires in these men. First is their unflinching friendliness to everyone. Year after year they travel with a variety of strange mountaineers. One of these may be surly, another a little boastful, but without any real knowledge of the mountain. The Sherpa is always the same. In camp he puts up the tents, blows up the pneumatic mattresses, fixes sleeping-bags, helps you change your shoes, prepares food, in fact does everything. If a storm has broken out he brings you hot soup or tea in your tent when you are wrapped in warm rugs. If it snows or rains he lends you his waterproof and gets wet himself. If you shiver in your warm sweaters he gets on with his work unconcerned in just a shirt. The second thing one admires in the Sherpa is the way he manages the transport of baggage up the mountain.

We climbed the tongue of the Khumbu glacier with our coolies as far as the foot of the fearful ice-fall. It was the first of three important obstacles which we had to overcome in order to reach the foot of the South Col of Everest. Two attempts by Dittert, Chevalley, Aubert, and Lambert to get through failed, and in the end we managed to construct a rope bridge. It can hardly be said that the Sherpas, in their turn, took that rope bridge 'in their stride', but they negotiated it with their heavy burdens time and again, and it was an almost unbelievable feat. Each day they left Camp I at the foot of the ice-fall, crampons on their boots, three or four roped together. Every day some of the crevasses widened, making it necessary to change route, take a new direction, look for new bridges. Half-way up the ice-fall, on a kind of platform of great riven blocks, they came to a colony of seven tents. That is Camp II. From there the climb continues through a small couloir, and then begins a

circuit through pyramids left by avalanches from the west spur of Everest.

This circuit would not be difficult if it meant only climbing. What is disagreeable is the constant danger of slipping and sliding, and of avalanches. We are always glad to get out of that menacing region and reach the rope bridge. There burdens are lowered and slung on the rope one after another. Then there is a further march between cracks enormous enough to contain a few apartment houses to Camp III, situated on a sloping terrace between crevasses inside the West Cwm. On this journey to Camp III enough material, equipment, and food to last twenty men for three weeks has to be carried. It has been divided into portable packs and the Sherpas carry a load each day. The sirdar Ang Tharkay, chief of Shipton's porters, said to Tensing after the 1951 reconnaissance: 'You'll never carry a single pack on the upper Khumbu glacier.' Actually the ice-fall has been climbed every day by at least six Sherpas. All my companions stand amazed at their performance.

ANDRÉ ROCH

IN MEMORIAM
THE LATE HEAD LAMA OF THE
RONGBUK MONASTERY

MR. W. H. MURRAY has brought home the sad news—heard at the Thyangboche monastery in 1951—that the old Lama of Rongbuk died in the previous year; and he and Colonel H. W. Tobin honour me with the suggestion that I should write an obituary notice regarding this good and distinguished friend of many expeditions to Mount Everest.

He was not known to the members of the reconnaissance of 1921, being engaged in meditation at the time of their arrival. It is not unlikely that, prizing as he did the advantages of isolation from the busy world, he was reluctant to meet strangers.

But in 1922 the irresistible personality of General Bruce persuaded him that here was a reincarnation of a Tibetan lama, and deep called unto deep. He himself claimed to be a reincarnation of the nine-headed god Chongraysay; and, once satisfied that the purpose of an expedition to Mount Everest was pilgrimage, he willingly gave the enterprise his blessing; the more so that the Sherpa porters from Solah Khombu were his parishioners. Naturally, he upheld the age-old tradition that no living thing should be killed in the Rongbuk valley; and while undisturbed by the superstition that local demons might be upset he did not deny that the upper Rongbuk and its glaciers harboured no less than five 'wild men'. The human and kindly side of him was displayed when he held a special service after the avalanche which killed seven porters.

It seems probable that the arrival of the 1924 expedition renewed his anxiety for a quiet life of contemplation; yet he willingly gave his blessing to General Norton's party when the fearful hardships at Camp III had temporarily affected the porters' morale. I feel sure he would be saddened by the tragic ending of that expedition, but the record is silent.

The impression left by General Bruce was never effaced, for each successive leader of expeditions was asked what relationship he bore to that great prototype; the questions were very searching, and the Lama's countenance and expression somewhat formidable. But he could and did smile in the most charming manner; and his sense of humour was always at hand—for instance, when poor Frank Smythe endeavoured to pronounce the formula OM MANE PADME HUM with notable lack of success.

I first met the Lama in 1933, and again in 1936. In the latter year he was 71 and had ruled his monastery with strength, wisdom, and

dignity for more than fifty years. His authority over wild Tibetans and high-spirited Sherpas was absolute; and during the last fifteen years he had met a few disciplined Gurkha soldiers and a number of those strange English whom the Dalai Lama had allowed to come but whose purpose was still obscure. However, no harm seemed to have been done, and he was old and tolerant. He made the conventional requests that we would not kill, would not disturb his peace by opening direct communications with the Kharta or Karma valleys, would not cut brushwood near the base camp, since it was needed for his hermits; and, above all, would treat our porters well. His blessings and prayers for the safe return of all were then renewed, with touching sincerity.

I will never forget his last words to me when I went to say good-bye in 1936. He now believed that our motives were not materialistic, and that we underwent a spiritual experience on Mount Everest. He gave me a little silver cup, a pamphlet printed at the monastery for the use of pilgrims, and a cordial invitation to visit him again. On my saying that I was too old to climb again but would like to sit at his feet and learn wisdom, he laughed happily and gave me his blessing. He was a great and good man; scholar, administrator, and saint. May he rest in peace.

HUGH RUTTLEDGE

ROGER DUPLAT AND GILBERT VIGNES

Although these gallant young Frenchmen were not actually members of the Himalayan Club they belonged to that great organization, the Club Alpin Français, with which we reciprocate. It is therefore seemly to include them among others whose passing we regret. General Sir Roger Wilson, who was our President in 1939-40 and was also a founder member, has written of their tragic end on Nanda Devi.

ONCE an Alpine peak has been climbed, subsequent ascents are greatly facilitated. The pioneers have shown how the technical difficulties of the mountain can be avoided or overcome, and later parties build on the knowledge thus gained until finally the mountain gives way to the human and may then, in some fairness perhaps, be said to have been conquered.

This is not so where the great Himalayan peaks are concerned. They oppose, and continue relentlessly to oppose the climber, not the technical difficulties of rock and ice but the less predictable ones of altitude, weather, and avalanche. Given the right combination of luck and Himalayan experience, these peaks may at times be caught off their guard and may be climbed. With the resources at their disposal, however, they will never make a complete surrender and can never be conquered.

Dash and determination are necessary attributes of Himalayan as of all mountaineers. They cannot alone, however, overcome the difficulties of altitude and they have no effect whatsoever on the weather. A slope will be no less likely to avalanche because of the determination of the party who set foot upon it in unsafe conditions.

To the determination, dash, and pluck of Roger Duplat and Gilbert Vignes, Nanda Devi, the Goddess, opposed all the weapons of her armoury. They expected to be on the main summit by noon, whereas two hours later they were still seen making their way upwards. The Goddess had brought into use her first weapon, altitude. Almost at once, when a snowstorm hid them from view, the second weapon—weather—was unmasked. The third and most devastating weapon was still in reserve, but that the danger of avalanche existed is beyond doubt. The snow-slope down the east side of the peak leading to the connecting ridge is depicted in the accompanying photograph. It faces south-east and catches the morning sun. By noon the danger of an avalanche on such a slope is great, by three o'clock it might well be a certainty.

We shall never know how these two gallant young lives were lost, whether from exhaustion, cold, or avalanche, but disaster in one form or another was a possibility from the moment when the party adopted their ambitious programme, dependent on speed, at this great altitude. The possibility may well have become a certainty when, so much behind time, they still pressed on. R. C. W.

GENERAL SIR KENNETH WIGRAM

G.C.B., C.S.I., C.B.E., D.S.O.

GENERAL WIGRAM died in 1949, aged 73. He was a founder member of the Club and in the early days, when Geoffrey Corbett was engaged in collecting the names of likely members and in drawing up the constitution, it was to Wigram he turned for the names of likely soldiers for the new club and for suggestions on the constitution. At the time Wigram was the commander of the Waziristan District and although remote from Delhi, where the bulk of the work was done, he had a great influence on the Club then and as Vice-President in 1931-2 and President in 1933.

As a boy and a young man Wigram was a fine cricketer and player of racquets and polo; he was not a mountaineer but was a lover of the outdoors, of nature, and of mountains. In common with many soldiers, the writer owes to him and to his encouragement and advice opportunities of exploring, climbing, and ski-ing in the Himalayas.

To his brother officers of all ranks and of all ages, and to many others as well, Wigram was known as 'Kitty', which as a short name

was to his generation of soldiers of the Indian Army almost as familiar as were 'Bobs' and 'K.' in earlier years. This is some measure of the affection and respect in which he was held in the Indian Army. His record as a soldier has been told elsewhere—it was a curious and an unfortunate freak of fate which denied to him the two highest honours which can fall to the lot of a soldier—the appointment of Commander-in-Chief India and the rank of Field-Marshal; few who have had the good fortune to achieve these distinctions have been worthier of them than Kitty Wigram.

After his retirement, in poor health, he devoted his great powers of organization and administration to the Royal Cancer Hospital, the Nuffield Provincial Hospitals Trust, as well as to the church in Westminster which he attended, bringing to them the same selfless enthusiasm which he had devoted to the profession of arms during his service of forty years.

Of his early years in his regiment, 2nd King Edward VII's Own Gurkha Rifles (the Sirmoor Rifles), and of his career as a junior staff officer, I am not competent to write: I knew him as a deeply religious man, of boundless generosity, entirely without conceit or self seeking. He was endowed with great personal charm and was the friend of all, from Viceroy to the men in the ranks of his old regiment. By his death the Indian Army and the Club have lost a most distinguished member.

R. C. W.

LIEUTENANT BHAGAT

LIEUTENANT PRITHI PAL SINGH BHAGAT, who died on the Kamet expedition, was an extremely promising young officer in the Corps of Engineers. He had two years' training at the National Defence Academy followed by a year at the College of Military Engineering, from which he passed out with great credit. Though he had no previous experience of mountaineering he was tremendously keen both before and during the expedition. He had spent a day reconnoitring the climb from Camp III to Camp IV, and while descending stumbled on an easy snow slope and stuck the point of his ice-axe into his leg, above the knee. The wound bled very little and he treated it as trivial, climbing the next day to Camp IV. He was not well enough to climb on the following day when General Williams joined him from Camp I, but made no mention of his injury, attributing his indisposition to altitude. Later his wound was dressed and treated and he seemed to be almost fit to move down to the small hospital at Joshimath. His weakness was not fully realized and he died in his sleep at Bampa. Though he had not actually become a member of the Himalayan Club he was on the point of doing so.

MR. GEORGE FREY

MR. GEORGE FREY, who was before his untimely death Assistant Swiss Trade Commissioner in Bombay, died at the age of 29 while on a one-man expedition to climb Koptang peak, 19,900 feet, south of Kabru. He hailed from Zurich and it was his wish before he returned to Switzerland to pay, as it turned out, his last visit to the Himalaya. Mr. Frey was an all-round sportsman and during his stay in the U.K., from 1946 to 1948, as a member of the Swiss Office for the Development of Trade he excelled at cross-country meetings in the neighbourhood of London. But his great love was the mountains and it can be said that he was one of the better amateur climbers in his own country.

Tenzing, who was Mr. Frey's head porter, has told the story himself of the fatal accident on the Koptang peak. 'On the morning of 29th October 1951 we began the ascent. Phu Tharkey stayed in Camp II while Ang Dawa and I went with Mr. Frey. We followed a steep gully, partly snow covered, partly consisting of rocks with a thin coating of ice. The upper part of the gully led to a very steep ridge and Mr. Frey led; I followed ten steps behind with Ang Dawa ten steps below me. Not more than forty steps above the gully Mr. Frey suddenly slipped and fell towards me. I tried to stop him but in vain, and began to fall myself. Fortunately I did not lose my ice-axe as Mr. Frey lost his and I tried to check the fall but failed. While sliding down I hit Ang Dawa and all three of us continued to fall towards the gully. Just before the steepest part I succeeded in stopping my fall but Ang Dawa continued to shoot down towards me. With great luck I was able to stop him. We then roped up and descended very carefully. We shouted to Phu Tharkey to look for Frey Sahib who had fallen the full depth of the gully, at least 1,400 feet. Phu Tharkey reached the spot before us and we arrived to discover with dismay that he was already dead. The three of us carried the body down to the end of a glacier and buried him there near the enormous block which is visible from quite a distance. Above his grave we erected a cairn and placed his ice-axe on the top of it.'

REVIEWS

WE owe an apology to the Mountaineering Association for having omitted to mention, in our volume xvi, two first-class books recently published by them: *Elementary Mountaineering*, with lessons from nine distinguished mountaineers, and *A Short Manual of Mountaineering Training*, by W. C. Burns, F. Shuttleworth and J. E. B. Wright. These two publications are of first-class value.

We have also to acknowledge with great gratitude the following which have been received from other Clubs, organizations, and publishers: *Regard vers Annapurna* and *Nanda Devi*, both superbly illustrated and with good maps and diagrams, and *La Chaîne de Mont Blanc*, vol. ii, by M. Lucien Devies, President of the C.A.F., and recently elected to our Club. All are published by MM. Arthaud of Paris and Grenoble. Also the *Jahrbuchs* of the German and of the Austrian Alpine Clubs, and the Swedish Alpine Club annual *Till Fjalls*.

The French, Germans, and Austrians also send their monthly journals regularly, *Alpinisme*, *La Montagne*, *Mitteilungen des D. Av.*, *Berg und Heimat*, *Osterreichische Alpen Zeitung*.—ED.

ZUM DRITTEN POL. Eight-thousanders of the World. By PROFESSOR G. O. DYRENFURTH. *Munich: Nymphenberger Press.* 10×7 inches, 285 pages, 47 illustrations.

This, as the sub-title indicates, is an encyclopaedia covering the seventeen known peaks of over 26,000 feet, or 'Third Pole' as Herr Dyrenfurth terms them collectively: presumably for the reason that they have largely replaced the North and South Poles as objectives difficult to attain.

The author begins with a simple table giving in order of height the outlines of the expeditions with relevant details. In many cases he differs somewhat from the heights accepted by the Royal Geographical Society, although these too are stated.

The Professor then proceeds to take the seventeen mountains, again in order of altitude, first discussing the various names given to them through the years, then describing briefly the various expeditions, their successes and failures, and finally summarizing the possibilities. Mount Everest, of course, is dealt with first, followed by K2 (*oder Chagori*), then Kangchenjunga and the 'other eight-thousanders in the Everest group, Makalu and Lhotse', and included with them Cho Oyu, almost 20 miles north-north-west of Everest. Then come Dhaulagiri and Annapurna, the former referred

to by the author as the 'Mont Blanc of the Himalaya': this is apparently the literal translation of the Sanscrit name. Chapter VII deals with Manaslu, formerly known as Kutang I, and with Gosainthan whose Tibetan name is Shisha Pangma. Neither of these two has yet been attempted and the latter is now, of course, 'in the red'. Peter Aufschnaiter, however, did make a hasty examination of its eastern approaches during his escape journey from Lhasa to Nepal last winter.

Nanga Parbat, the German *Berg der Kameraden*, receives a good deal of attention, 30 pages in all. The last three chapters are devoted to the great Karakoram peaks, mostly those in the Gasherbrum neighbourhood in which Professor Dyrenfurth with his wife carried out much useful reconnaissance in 1934. In conclusion he has added a list of the 'seven-thousanders'.

The Professor has, with one exception, wisely refrained from mixing politics with mountaineering.

The book, which is beautifully produced, is lavishly supplied with excellent illustrations, as well as with maps, panoramas, and a good index. Unfortunately the reviewer's German is not quite adequate to do full justice to a truly fine production, but he hopes that the author, his leader of 22 years ago, will appreciate his good intent.

H. W. T.

Captain Kingdon Ward's recent book (*Plant Hunter in Manipur*) ends on a pleasantly anticipatory note—'Where next?' Now, in *My Hill So Strong* (Jonathan Cape), Jean Kingdon Ward gives us the answer.

I must say, at the outset, that I was prejudiced in favour of the book from the moment that I read the dedication, at once so generous and so appropriate!

I was enthralled from beginning to end of this delightfully 'readable' book. Mrs. Kingdon Ward tells the tale of a journey that was essentially a failure, and of the disaster which so nearly overtook her husband and herself. After the vivid description of a most uncomfortable journey, through the jungle-clad hills of far eastern Assam, to Rima just across the Tibetan border where they were yet only on the threshold of the country they had hoped to explore, the appalling earthquake comes almost as a fitting climax.

One who has never experienced the horrors of such a calamity cannot possibly appreciate to the full the feelings of those who have nearly been overwhelmed. However, the author is so happily endowed with the gift of vivid description that the reader is enabled to share, to a small degree, in the terrors of her remarkable experiences, and in the feeling of awful helplessness and uncertainty with which

she and her husband must have faced the morning of 16th August 1950.

One can appreciate the disappointment when they realized that their hopes of ever reaching the alpine meadows (their real objective) in search of plants could never be realized. It is therefore all the more pleasant to read how they continued to pursue Captain Kingdon Ward's objective even when faced with disaster.

Throughout the book most generous tribute is paid to the help received from the Assam Rifles, and to the consideration and fortitude displayed by individual N.C.O.s and men of that justly famous Corps of Military Police. It is no overstatement that to these qualities they probably owe the fact of their survival.

It is fortunate that the author had received some 'training' under the conditions to be met with by an explorer, for on this occasion she was called upon to overcome both illness and semi-starvation in addition to more normal hazards. Despite this she and her husband are now planning a further adventurous journey in the more-or-less unknown, and I look forward to reading her account of a truly successful expedition.

The book is well illustrated with photographs, and I would congratulate Mrs. Kingdon Ward on the excellent map which helps one so much to follow the story of a remarkable journey. D. L.

BERGE DER WELT. Schriftenreihe für Alpinismus-Expeditionen-Wissenschaft. Himalaya-Anden-Neuseeland. *Fünfter Band*, 1950. Buchverlag Verbandsdruckerei A. G. Bern. Edited by MARCEL KURZ. Pp. xvi, 254; 44 illustrations; 4 maps. No price given.

This volume, edited by Marcel Kurz, is the fifth of the series, and is a delight to everyone who knows and loves mountains. It is well printed in clear Roman type, and the illustrations are magnificent. The greater part of the book is devoted to the Himalaya, and is thus of peculiar interest to readers of the *Himalayan Journal*.

The chief article in the book is the first of 80 pages, and deals with the Swiss expedition of 1949 of Messes. Lohner, Sutter, and others. Although the journey began in Darjeeling, the area explored was almost exclusively the extreme eastern part of Nepal, and chiefly concerns the Lhonak glacier. If a criticism be made, it is that the maps are disappointing. There is one on the first page, and another on page 43, but these are no more than sketch-maps, and on the first map the route of the journey of Dr. Wyss-Dunant is not given. There is, however, a more elaborate map of the Jongsang-Nupchu region at the end of the book; but this map is again not satisfactory, for however accurate it may be, it is not at all clear. It is suggested

that in reproducing maps the topography of the maps of the Survey of India be followed. The maps in the book are not worthy either of the book itself or of the splendid photographs. There is a brief account of an aeroplane journey in Nepal (pp. 107-14), but the illustrations between pages 112 and 113, number XXXI of the main chain of the Himalaya between Nepal and Tibet, and showing Dhaulagiri, are not improved by the wing of the aeroplane appearing in the photograph.

There is a most interesting list by Marcel Kurz, the editor, of expeditions in the Himalaya; and it begins with the year 1818. It is, of course, hard to say what constitutes an expedition; or, for that matter, what are the limits of the Himalaya. It is rather strange to find the names of Drew, Vigne, Wilson, and others missing, although they were pioneers in many of the remoter parts of these mountains. Surely there is no book that can vie with Frederick Drew's *Jummoo and Kashmir Territories*, 1875, but one expects too much from mere chronology. If, however, the brothers Schlagintweit are placed in this chronicle, why have the others been omitted? The answer presumably would be that a chronicle is not a full bibliography.

But *Berge der Welt* is a fine book, and these criticisms are only minor grumbles.

R. C. F. S.

BERGE DER WELT. Sixth Volume, 1951. Published by the Schweizerische Stiftung für Alpinische Forschungen. Edited by Marcel Kurz.

The Swiss have produced one more beautifully illustrated, detailed, and comprehensive book. Marcel Kurz complains, in his preface, of the difficulty of getting mountaineers to show the same enthusiasm in recording as in climbing their mountains. All the more praise then to the Editor and his assistants, who have not only to collate but to fill in some of the gaps (for instance in the Abi Gamin account) themselves.

The book is again in two parts. The first contains articles on Abi Gamin, by Dr. Chevalley; Annapurna, by Louis Lachenal; and Tirich Mir, by Per Kvernberg. There are two masterly essays by André Roch: one, illustrated, on the measurement of glacier movement; one on the purgatorial second ascent of Mount Logan. Piero Ghiglione writes of a winter expedition in Peru, and there is a long account of the 1950 Baffin Land Expedition. This part ends, rather curiously, with an account of Greek mountaineering by Jacques Santorineos.

To most of us the 'Rundschau,' or review of world mountaineering in 1950, will be the most interesting part of the book. The exploration

described vies in thoroughness with the industry of collation, which is up to the standard expected of a Swiss production. The mountains range from North America to New Zealand; from the Caucasus to the Patagonian Cordillera. And the adventures pass correspondingly from the grim loss of J. W. Thornley and W. H. Crace on Nanga Parbat, to the cat on the top of the Matterhorn which 'admired the view, and had chosen the best day of the summer for its expedition'. For mountain oddities make their appearance too, whether the Italian project of a funicular up the Furggrat, or the astounding, vision-inspired journey of the theosophist Miss Bevan over the Dongkya La into Tibet

There is no space here to give details of the scientific information, the maps, and the excellent photographs which luxuriate through the book. It is a well-bound volume, pleasant to handle, and not too large. As a work of reference it can certainly be called, like its predecessors, a goldmine for those who have access to it.

WILFRID NOYCE

We understand that future volumes will also appear in English which will be an added pleasure.—ED.

In his latest book—*Plant Hunter in Manipur* (Jonathan Cape)—the indefatigable Captain Kingdon Ward tells of a ten-month sojourn in the Naga Hills in Assam and what used to be the Native State of Manipur. During this period he and his wife made numerous short expeditions from their base in a *basha* at Ukhrul, into the surrounding hills that were but little known, in the botanical sense.

Although these journeys were often made under most unpleasant climatic conditions (rain, leeches, and a host of devouring insects), the whole expedition as recounted in this charming book was 'tame' when compared with those that have been described in his many previous books. However, it would seem that it was deliberately planned to 'break in' Mrs. Kingdon Ward to more arduous and ambitious expeditions in the future!

As the title indicates, the book is mainly concerned with botanical discoveries, and although the pages are amply larded with botanical names it should appeal to general reader and botanist alike. As one has come to expect, the author's descriptions of incident, people, and scenery are delightful, while the fact that much of the country described was the scene of fierce fighting and many gallant deeds when the Japanese attempt to invade India was defeated, can but appeal to a wide section of the public. The mere mention of such names as Kohima, Imphal, and Ukhrul stirs the heart with pride and in

gratitude to those who 'gave their tomorrow for our today', and lend an added romance to the whole tale.

Throughout the book there is ever increasing evidence of the enthusiasm with which Mrs. Kingdon Ward entered into the pursuits and interests of her famous husband, and it is delightful to see how often and how generously she is given the credit for the successes achieved. Truly, as the dedication says, she appears to have 'enjoyed every day of it'.

To the botanist and gardener the descriptions of the many trees and flowers, with which our gardens have once again been enriched, are truly delightful. One may perhaps be permitted to doubt the justification for the enthusiasm with which the author compares his new lily, *Lilium Maclineae*, with such giants of the garden as *Lilium auratum* and *Lilium regale*!

If I have a criticism to offer, it is the perennial one of maps. At several points I found it difficult to follow the author's journey on the map provided.

The book is well illustrated with twelve of the author's own photographs, though, personally, I should have welcomed more pictures of the flowers described.

The last sentence of the story (p. 231) gives a most welcome indication that we may look forward to further stories of the achievements of this intrepid explorer.

D. L.

SEARCH FOR THE SPINY BABBLER. An Adventure in Nepal. By DILLON RIPLEY. *Boston, U.S.A.: Houghton Mifflin Company, 1952.*

This well-produced volume is largely a transcript of the journal kept by Dr. Dillon Ripley, Assistant Professor of Zoology and Associate Curator of the Peabody Museum of Natural History at Yale University, during the scientific expedition to Nepal of 1948-9 sponsored by the National Geographic Society, Yale University, and the Smithsonian Institution.

Where he is writing on his own subject, ornithology, the author displays an infectious and undeniable charm of manner, but in other respects he tends to weary the reader by his too-obvious pre-occupation with petty financial and staff problems of the expedition. He is, too, over-sensitive regarding the inevitably lowly status of the invading Westerner in a very conservative little kingdom like Nepal, while his very American impatience with the Oriental's engaging but often irritating disregard for time-tables and schedules is amusing to anyone who knows the East.

From the scientific point of view, the much-publicised target of the expedition, a specimen of the rare partridge-like *Ophrysia Superciliosa*,

last seen near Naini Tal in 1876, which we failed to find, is soft-pedalled, and the fortunate acquisition of a Spiny Babbler (*Aconthoptila nipalensis*) is substituted as the object—at least as far as the title of the book is concerned!

The Spiny Babbler was a bird species that had defied scientists for years. None had been collected since Brian Hodgson's Nepali collectors, working for him from Khatmandu, had secured a few specimens in 1844, and these had been simply labelled 'Nepal'. Was it a highland bird, a lowland species, did it live in grassland or forest? Did it, in fact, still exist on the face of the earth?

The bird rediscovered 6,000 feet up in the Mahabharat hills of western Nepal was a brownish creature the size of an English black-bird. The throat and upper breast were white, the rest streaked brown. The feathers of the upper side, particularly the forehead and crown, had stiff wiry shafts, as did those of the throat. Describing his find the author writes:

As the bird lay in my palm, I could think of no species of laughing thrush known to me which it remotely resembled. I brought it back with me to camp, and in the excitement of unpacking and arranging our camp and getting Christmas dinner ready, I gave the specimen little thought. It was not really until the next day that I began to ponder seriously over the new bird. Meanwhile Toni had skinned it the night before, and I had written up the label very carefully, noting the flock and the open situation where I had seen the birds. Holding my prize and thinking about it I began to turn over all the Indian species in my mind. What could this bird be? In the field a problem like this was not an easy one, when books were not ready to hand, when there were several hundred of species to choose from. Finally the stiff wiry shafts of the feathers gave the bird away. Although it was as big as a thrush, it could only be a Spiny Babbler . . .

Summarizing the results of the expedition Dr. Ripley classifies the 1,600 bird specimens taken into 331 species and subspecies, including ten which had not previously been recorded from Nepal. Tabulating all the forms of resident birds which we had collected along the Himalayan foothills from west to east, he found that a total of twenty-one species had two distinct populations or subspecies within the territory of Nepal. Of these fourteen, or 67 per cent., showed that a distinct break in the fauna occurred in the eastern part of Nepal about the region of the Arun Kosi river.

Dr. Ripley can find no geographical or geological factors to account for this phenomenon, but attributes it to a marked difference in climatic conditions east of the Arun valley from those obtaining in the rest of Nepal—greater humidity and a heavier and more even spread of rainfall in the east, drier conditions and more contrast between winter and summer in the west.

Nothing is said regarding the 200 small mammal and river-fish specimens taken in the Nepalese foothills, which is a pity, as I for one was looking forward to learning the results of their collation by the museums sponsoring the expedition.

Dr. Ripley's book is beautifully turned out, with those all too rare occurrences in modern travel books—clear and accurate maps, concise appendixes, and a bibliography. It is a pity that the photographic illustrations are unnecessarily cramped into the middle of wide-margined pages. There is a particularly charming dust-cover which depicts Dr. Ripley at the colourful Court of Nepal as the scene would have been painted by a Rajput artist of the seventeenth or eighteenth century.

F. B. L.

A LHASA E OLTRE. By GIUSEPPE TUCCI. *Rome. Libreria dello Stato*, 1950.

Following an eighteenth-century guide-book written for the use of pilgrims, Professor Tucci spent the spring and summer of 1948 visiting many cities and temples in central and eastern Tibet, returning through Shigatse and Kampadzong in western Tibet. The professor kept a diary during the brief resting periods of the trip, and this book is in the nature of a summary of the observations made on the religious beliefs and customs, the economic situation, and the countryside. It in no way attempts to be highly technical or erudite, nor on the other hand is it a conversational travel book. It is primarily intended for the non-specialist reader anxious to increase his factual knowledge of Tibet. A considerable amount of scientific material was collected from various sources, inscriptions, chronicles, liturgical and theological books and so on, and a further report was being prepared at the time of going to press of Professor Tucci's book. There is a short summary, however, in this volume, by the doctor of the expedition, Lt.-Col. Moise, an Italian naval medical officer. He notes the various illnesses (goitre being particularly prevalent), kinds of food eaten, living conditions, climatic temperatures, &c.

The small party set off from Darjeeling, and after a long wait at Kalimpong were informed that only Professor Tucci would be given permission to enter Tibet. (In fact, four months later, two other members of the party, Mele, who took most of the photographs, and the doctor, Moise, were also granted permission, and they joined the professor at Chushul.)

Professor Tucci first went to Lhasa where he was further delayed by the non-arrival of his gifts to the Dalai Lama. Among the most

acceptable gifts in Tibet were revolvers, cameras, clocks, wirelesses, and various forms of electrical gadgets. The electric power-station built east of Lhasa was no longer working. Its construction had been supervised by Ringang, one of the Tibetans who had received an English education due to the initiative of Sir Charles Bell. A new station was being built when Professor Tucci was in Tibet, under the supervision of two Austrians¹ who had escaped during the war from a camp in India. No new works were being started, however, as according to the astrologists—and with some justification—1948 was to be a year of ill-omen for the Dalai Lama.

From Lhasa the professor went to north-eastern Tibet through Yerpa, where the temple is said to be the oldest in Tibet. He then went up the Netang river, in a boat constructed of yak skins stretched over a frame made from willow, as far as Chushul, where he was joined by the other two members of the party. They visited many temples, studying the statuary, the relics and old documents, speaking to hermits who spent their lives in contemplation and meditation. Among the cities they visited were Samye, Densatil, and, right over in eastern Tibet, Oke and Zinji.

Perhaps one of the most interesting features of the journey was the discovery, or rediscovery, of the ancient tombs of the Tibetan kings at Chongye, where incidentally the great Fifth Dalai Lama was born. There was evidence of the existence of the tombs in some old documents, and sure enough, Professor Tucci came across an area of ground covered with tumuli. He was able to identify the tomb of the founder of the Tibetan dynasty. In general, the tumulus consisted of a central cell in which the body of the king was placed together with his armour, and over this cell a stone pillar was erected, bearing an inscription. There was only one pillar which had remained in an upright position, the inscription of which Professor Tucci and a lama managed with great difficulty to copy. Many of the tombs had been violated in the tenth century, when the dynasty had crumbled.

Professor Tucci's account of his travels is interspersed with long digressions on the Tibetan form of mysticism, and an exposition of the Buddhist belief in transmigration, the passing of the soul from the mortal body to a new resting-place. It ultimately reaches its Nirvana in the eternal contemplation of the god of light. These digressions into the sphere of religion and mysticism are by no means misplaced if the Tibetan way of life is to be at all understood, as every event and action is guided by religion. In fact the professor's journey started with the appropriate propitiatory rites to the gods, which no doubt accounted for the success of his visit to Tibet.

DIANA ELLES

¹ Peter Aufschnaiter and Heinrich Harrer.

OUT OF THIS WORLD. Across the Himalayas to Tibet. By LOWELL THOMAS, JR. *New York; The Greystone Press, 1950. \$3.50. Macdonald & Co. (Publishers) Ltd., London, 1951. 18s. net. Copiously illustrated with photographs both in black and white and in colour.*

On the 1st August 1949 the author, who has travelled widely, and his father, Mr. Lowell Thomas, Sr., who has long been well known as a traveller in many lands and as an author and radio commentator, arrived at the foot of the Himalayas armed with an invitation from the Tibetan Government to visit Lhasa. Some ten weeks later they were back in India. A similar journey had been undertaken in 1944 by another American, Mr. Arch Steele, who contributed a series of long and excellent articles to the *Chicago Daily News*. In such accounts of brief visits to Tibet one does not expect evidence of deep research such as is to be found in the late Sir Charles Bell's *Portrait of the Dalai Lama*, but such accounts have a particular value of their own because men who are familiar with many lands may be trusted, when they visit a new country, to pick out what is essential and to be free from bias.

The book contains a few slips, such as the statement that from 1904 to 1947 the British Trade Agents (who actually were located in Tibet at Gyantse and Yatung) 'kept in close touch with Tibet but mostly from the Indian side of the borders'; that Kangchenjunga is visible from the train as it approaches Siliguri, or that the Bishop Cotton School in Simla is 'for sons of Maharajas'; it was not in September 1939 but in October that the present Dalai Lama first reached Lhasa, nor has it yet been ascertained that the Tibetan Himalayas are unquestionably a virgin source of tremendous mineral wealth—as the author admits, the region is (largely) unexplored and geologists appear to be of opinion that it is well to the north of the Himalayan chain that valuable deposits, which may include oil, are most likely to occur. And it is incorrect to say that 'every devout follower of Tibet's god-king tries to make at least one pilgrimage to Lhasa each year'. But such minor inaccuracies of detail in regard to matters which for the most part did not come within the range of the author's actual observation detract little if at all from the value of the vivid account which he gives of what he himself observed.

He found the Tibetans devoted to their religion and to their Dalai Lama, welcoming and hospitable, but apprehensive of the threat of Chinese domination which has since the time of his visit become a reality. He gives attractive accounts of the young Dalai Lama and of Lhasa society, and manages in little more than 200 pages of easy writing to give a remarkably full account of much of Tibet's history and of present conditions in the country. The

illustrations are well chosen and of excellent quality and help greatly towards making the reader feel that he is at home in Tibet. In the American edition but not in the English edition there are useful sketch-maps, printed as end-papers, (1) of Tibet and adjacent regions and (2) of the author's route. To these might well have been added a map on a larger scale of Lhasa and its immediate neighbourhood. In the English but not in the American edition are included Tables of Contents and of Illustrations and Indexes of Persons and of Places. Messrs. Macdonald and Co. are to be congratulated on the fact that in get-up and print and paper and especially in the reproduction of the illustrations the English edition is markedly better than the American edition. B. J. G.

CHINA TO CHITRAL. By H. W. TILMAN. *Cambridge University Press*, 1951. 128 pages, 69 illustrations; 4 maps. 25s.

Mr. Tilman's second visit to Chinese Turkistan was no doubt inspired, and certainly facilitated, by the presence in Kashgar of his old friend Mr. Eric Shipton who, as Consul-General, was 'still spreading his beneficent rays' over Kashgaria. Access to Sinkiang (the modern nomenclature) had normally been by way of Gilgit and the Mintaka pass, or by way of Kashmir, Leh, and the Karakoram pass. But on account of the political situation both these routes were ruled out and the author was transported by air to Shanghai and Lanchow, and continued his journey thence by post bus to Urumchi. We feel at one with Mr. Tilman in his distinction between the traveller who takes time to look about him and the passenger who is 'carried' swiftly by machine, and his agreement with the missionary author of *Through Jade Gate and Central Asia* who laments the ousting, in the Gobi desert, of the camel caravan by motor transport. To their minds, as to ours, 'a truck is a vehicle fatal to romance'. However, flying in China seemed to be remarkably cheap, especially when compared with a hair-cut which cost 70,000 kuchen.

In the neighbourhood of Urumchi, now capital of Sinkiang, rises Bogdo Ola, the 'spirit mountain' which was the chief objective of Mr. Tilman and Mr. Shipton. Although the author states in his preface that his theme is to be 'mountains unsullied by science and alleviated by Chinese brandy' a great deal of his book is given to vivid description of 'that fascinating country, Chinese Turkistan' and of his many strange encounters there, while the fact that their attempted ascents of Bogdo Ola and Chakra Agil were unsuccessful does not detract in the least from the interest and charm of the story. Failure seems to give even more scope for the exercise of the

Tilman brand of humour and wit which apparently thrives on adversity and frustration, notably when, baulked of his wish to return to Chitral by a route following the south side of the Hindu Khush, he finds comfort and resignation in 'double-marching' towards the rumoured scene of another rumoured world-war, and, frustrated again, is almost disappointed to learn that 'a more or less deep peace still broods over Europe, Africa and Asia'!

The four maps and the many photographs provided are most interesting. This is a very pleasant book. H. W. T.

MOUNTAINS WITH A DIFFERENCE. By GEOFFREY WINTHROP YOUNG. (*The New Alpine Library.*) London: Eyre & Spottiswoode. Pp. ix and 282. 18s. 1951.

This book has a good title, for mountains can mean so much or so little to so many different people or even to the same people on different occasions. The significance of mountain scenery is hard to estimate, because its values are by no means exclusively materialistic and cannot therefore be measured. To people with divers temperaments, mountains may mean almost anything between two extremes; to some they may represent a fine well-aired gymnasium; to others an excursion outside time into Paradise. Perhaps among mountaineers the ideally comprehensive experience can only be achieved by an athlete who is a poet with a logical mind, a climber who has been able to assure himself of his devotion when in that fine and terrible phrase, best understood perhaps by the French, he has become 'un grand mutilé de la guerre'.

Mr. Young's book will certainly make many of us conscious of our limitations, perhaps, for instance, of our unnecessary dissatisfaction with mountains of the smaller sort merely on account of their limited dimensions or their lack of perpetual snow. One cannot imagine the author speaking contemptuously of any mountain, even the easiest. Probably, like Mummery, he would have climbed if there had been no view, or would have walked to the top if there had been no difficulty. Above all he is interested in the psychology of mountaineers as it is affected by mountain scenery and climbing. He is an explorer at heart and he used to rejoice in discovering virgin rock-faces and ridges among British hills. He appreciates, too, the charm of an old rock-climb because it is old, no less than a new climb because it is new. The man who 'may climb and climb and prove a villain' he accounts for by the adequate explanation that he will have climbed from vanity.

Young's love of nature is catholic and includes in it that great

alternative or accompaniment to mountains—the sea, and he refers with sympathy to Andrews, the climber who spent a lifetime exploring the cliffs on the Cornish coast. Nor does his love of British hills yield to his love of the Alps. Ingleborough, Snowdon, Ben Nevis, Matterhorn, the south side of Mont Blanc have all seemed equally sublime to him at different times, and he devotes a chapter to the west coast of Ireland with the tremendous cliffs of Mount Brandon falling sheer to the Atlantic.

The splendid praise that the book accords to British climbers is sure evidence that the 'death or glory' type of stunt climbing played no part in the development of mountaineering in this country, and, says Young, 'it has remained true of our best climbers that they are fonder of the mountains than of their own skill'.

It is interesting to read of the impressions made on a great mountaineer by the fierce fighting on the Isonzo in which he took part. The resemblances between modern warfare and the seamier side of mountaineering are obvious, but the contrasts are more real than the resemblances, for the good mountaineer is expected to mitigate risks constantly, whereas the good soldier has to grasp 'this nettle, danger' more often than he plucks the flower, safety.

Young's loss of his leg in the fighting on the Isonzo is vividly described, but what is probably most interesting both to him and his mountaineering readers is the enthralling story of the indomitable attempts to overcome the handicap of his disablement by climbing in the British hills and the Alps. Even more interesting is his own analysis of the psychological results. To judge by his unique experiments and experience, the practical lesson seems to be that the conventional mobility and activity of a man as disabled as Young was can be vastly extended. On the other hand, Young's greatest feats of one-legged climbing can only be within the capacity of an exceptional being, and it is doubtful whether it can be profitable to emulate them. As he himself says in an early stage of his Alpine campaign, 'I climbed only on the undying hope that things would not be so bad with me, and with the leg, as I knew them to be'.

A disheartening moment accepted by him with remarkable composure was the last decision that Young made on the summit of the Rothorn not to recommence his formidable experiments on the great peaks. It was a sudden moment of deeply pondered disillusion: 'The mountains as I looked at them looked to me—just, mountains', and he asks, had the climbing done since the disastrous wound never really served to re-create more than a simulacrum of himself as he once was? As he says, something surely had gone wrong; the mountain did not feel the same, he was no longer part of it. This may be the same tragedy that is to be feared in old age, even if its onset is

less acute and at a cost of less suffering. It is evident that the mountain is always the same, but that man never is.

Young's conclusion was that neither in the mountains nor in himself had the virtue of mountaineering lain, but only in the relationship which could be created and constantly renewed between the two; and that this on his side depended on the technique of climbing. Does not this imply that a mountaineer may perhaps come to depend on technique too much as an end in itself and too much for peace of mind?

Later there is an account of a fearful fall that Young had during the descent of the Rothorn on the same day. It was caused by a lack of balance due to his disablement and could hardly have been predictable. The incident is brilliantly described and I think that all climbers who have had serious falls agree that a state of semi-anaesthesia—or, as Young calls it, dream consciousness—supersedes ordinary consciousness in such emergencies. The result is that an unexpected fall from a great height is not always such an appalling experience as might be supposed.

The book is delightful to read. We have heard very often of how the sun rises in the Alps, many of us have seen it do so and many writers have attempted descriptions, seldom successfully. In the chapter dealing with the author's return to the great peaks after his disablement the real thing is produced; perhaps it has never been done better, but the paragraph deserves to be left in its setting and shall not be quoted here.

C. F. MEADE

THE SCOTTISH HIMALAYAN EXPEDITION. By W. H. MURRAY. *Dent*. 30s.

When, as too often occurs, a book on a Himalayan expedition opens with a long and dreary account of depressing approach marches, I skip through the opening chapters, take a passing technical interest in the description of the actual climbing and only accompany the writer as far down as Base Camp on his return journey. Happily this does not apply to Murray's account of the 1950 Scottish Himalayan Expedition. The Garhwal Himalaya having been chosen, the writing does ample justice to what is acknowledged to be the most beautiful region of the whole great chain. In the valleys we are spared long-winded rhapsodies brimming over with milk and honey; rather do revelations of beauty appear as naturally in the book as they did to the author, in brief, unexpected and often trivial instances. An example is his fleeting vision of a cloud-girt Nanda Devi which in turn is revealed to us briefly, but with great

force. Obviously written by a man who takes an intense interest in human nature, we are treated to many a shrewd and penetrating character study. The over-zealous Swami (Hindu priest) was quite delicious; the porters were old friends by the end of the book.

The expedition itself, considering that it was their first Himalayan venture, manifested extraordinary balance and maturity in eschewing the obvious temptation to attempt one of the mammoth peaks. Recognizing the fact, not easily palatable to the British or Alpine school, that the Himalayas involve much travelling and little climbing, they enjoyed four months of mountain exploration, during which time, nevertheless, nine peaks were attempted and five attained. The strength of the party is well known so that on each occasion when they were stopped on a route by pure mountaineering difficulties it is sufficient evidence that the climb really would not go.

Of his Dhotial porters Murray's praise is unstinted. Goodwill is two-way traffic and that the men gave such cheerful and devoted service is testimony not only of the inherent goodness of the hillfolk but also a very clear indication that the Sahib's conduct and genuineness evoked this selfless service. I envy and admire the enterprise of these four Scots, none of whom are blessed with extensive private means, who decided to leave their jobs for the expedition. 'We had to make a choice of values. Mountains or money. We chose mountains.'

Listening to lectures by Murray and Weir had made me thoroughly familiar with the events, yet I still enjoyed the book immensely for the very good reason that it is so well written. Murray writes with more assurance and lightness than in his earlier works and although deeply interested in Hindu philosophy he wisely (but I suspect only just) refrains from indulging in a chapter on Man and the Universe. It is pleasing to read that Murray is now fully occupied in the profession of writing. Good climbing, good writing; what more can we ask?

M. E. B. BANKS

We have to thank the *Alpine* and the *Climbers' Club Journals* for permitting us to reproduce several of the above reviews.—ED.

THIS cold weather we shall be celebrating the twenty-fifth anniversary of our founding. Though Geoffrey Corbett, in his preface to Volume I of the *Journal*, indicates that the Himalayan Club was born on the path behind Jakko on the afternoon of 6th October 1927, its formal inauguration took place on 17th February 1928 in Field-Marshal Sir William Birdwood's room at Army Headquarters, New Delhi. The following year amalgamation with the Mountain Club of India was agreed on, and as Sir Geoffrey writes, 'the combined Club will not forget how selflessly Allsup advocated this "for the benefit of our common aims".'

It seems appropriate to reprint here an extract from the *Pioneer* kindly furnished by Sir Clarmont Skrine, one of our founder members:

Sir William Birdwood is the first President of the Club and Major-General Sir Kenneth Wigram and Brigadier-General E. A. Tandy, Surveyor-General of India, are Vice-Presidents, Sir Geoffrey Corbett is Hon. Secretary, Major Kenneth Mason Hon. Editor, and Mr. T. W. Young Hon. Treasurer. The Club has already enrolled a large number of members, among the Founder Members being the Viceroy, Lord Halifax, and Their Royal Highnesses the Dukes of the Abruzzi and Spoleto, Sir George Baines, Colonel Sir Sidney Burrard, General Sir Alexander Cobbe, Brigadier-General Sir George Cockerill, Sir Martin Conway, Maggiore Cav. Sir Filippo de Filippi, Sir Malcolm Hailey, Colonel Sir Thomas Holdich, Colonel C. K. Howard Bury, Sir Frederick O'Connor, Sir Aurel Stein, Sir Francis Younghusband, Mr. Douglas Freshfield, Professor J. Norman Collie, the Most Reverend Foss Westmacott, Metropolitan of India, Sir Edward Pascoe, the Rajah of Jubbal, Sirdar Aodor Rahman Effendi, Brigadier W. H. Evans, Colonels E. F. Norton and E. L. Strutt, Mr. N. E. Odell, Mr. E. O. Shebbeare, Mr. C. P. Skrine, Dr. Ernest Neve, Captain F. Kingdon Ward, Mr. Hugh Whistler, Brigadier R. C. Wilson, Mr. P. C. Visser, Major E. O. Wheeler, Colonel F. Muspratt, Colonel A. Shuttleworth and many others.

Lastly we would quote some of the closing words of the late General C. G. Bruce in his *Himalayan Wanderer*—'by no means the least of these children of the parent Club is the Himalayan Club.' . . . 'It has been founded on the wisest of lines.' . . . 'The Himalayan Club are doing their utmost to facilitate access to these glorious countries and it will undoubtedly be a work worth doing . . . and may good luck go with it.'

In spite of changing times and difficulties we have prospered.
May we continue to do so.

C. E. J. C.
H. W. T.

CLUB PROCEEDINGS AND NOTES

CLUB PROCEEDINGS, 1951

THE Twenty-third Annual General Meeting of the Himalayan Club was held at Artistry House, Park Street, Calcutta, on Tuesday, 18th September 1951, at 6.30 p.m. The President, Mr. C. E. J. Crawford, took the chair.

The Minutes of the Twenty-second Annual General Meeting held in Calcutta on 10th October 1950 were confirmed. The Annual Report and Audited Accounts for the year ended 31st December 1950, copies of which had been duly circulated by post to all members, were confirmed and approved. Messrs. Price, Waterhouse, Peat & Co., Ltd. were reappointed Auditors for the year ending 31st December 1951. The Officers, Elective Members of Committee, and Additional Members of the Balloting Committee were duly elected as follows:

OFFICERS

President: C. E. J. Crawford, Esq.

Vice-Presidents: Dr. J. B. Auden.
Lt.-Col. H. W. Tobin.

Honorary Treasurer: J. T. Ewing, Esq.

Honorary Secretary: T. H. Braham, Esq.

Honorary Local Secretaries:

Delhi:	R. E. Hotz, Esq.
Darjeeling:	L. Krenek, Esq.
Bombay:	A. R. Leyden, Esq.
Kulu:	H. M. Banon, Esq.
Dehra Dun:	J. A. K. Martyn, Esq.
Karachi:	W. A. Brown, Esq.
United Kingdom:	Lt.-Col. H. W. Tobin.

Honorary Editor: Lt.-Col. H. W. Tobin.

Elective Members of the Committee:

S. E. Golledge, Esq.
R. E. Hotz, Esq.
W. E. Murphy, Esq.
V. S. Risoe, Esq.
Dr. T. A. Schinzel.
Dr. K. Biswas.

¹ This arrived too late for inclusion in vol. xvi.

Maj.-Gen. H. Williams, C.B.E.
F. H. V. Scrimgeour, Esq.
R. A. S. Thomas, Esq.

Additional Members of Balloting Committee:

W. B. Bakewell, Esq.
A. R. Colley, Esq.
J. T. M. Gibson, Esq.
Dr. S. C. Law.
J. O. Sims, Esq.
A. R. Leyden, Esq.
L. Krenek, Esq.
G. O. Arton, Esq.
T. D. Welby, Esq.
M. J. Hackney, Esq.

Other Appointments:

Honorary Librarian: V. S. Risoe, Esq.

Honorary Equipment Officers: W. E. Murphy, Esq.
A. V. K. Murray, Esq.

YEAR'S REPORT

A YEAR of steady progress and continued consolidation during 1951 has seen the Club in closer contact with most of its members; and almost all those who were 'lost' have now been traced. During the year 42 new members were elected and 7 were reinstated; 8 deaths were recorded and there were 4 resignations. In addition, 42 names were struck off the list under Rule 14, and 4 under Rule 15. The total membership at the end of the year was 490, comprising 168 Resident Members and 311 Overseas Members. Among new members we especially welcome M. Lucien Devies, President of the C.A.F., M. Maurice Herzog of Annapurna fame, and M. Marce Ichac. The deaths of the following members are recorded with deep regret:

General Sir Kenneth Wigram, G.C.B., C.S.I., C.B.E., D.S.O.,
a founder Member and past President of the Club.
Colonel W. B. Spalding, O.B.E.
Dr. A. W. Wakefield.
Mr. P. T. Murphy.
Mr. G. Frey, Assistant Swiss Trade Commissioner, Bombay.
Mr. T. C. Bernard.
Lt.-Col. J. L. R. Weir, C.I.E., a founder Member.

Mr. J. W. Thornley, who died in December 1950 with W. H. Grace attempting a reconnaissance of Nanga Parbat via the Rakhiot route.

With increased interest and activity in the Himalayas, the need was more keenly felt for some means of keeping members in touch with current club events and matters of general interest. The issue of a News Letter from time to time seemed to meet the case and the first number was sent out in August. It was gratifying to find how well this experiment was received, and it is hoped that these News Letters are of interest both to the active mountaineers and to those who for one reason or another are unable to find their way to the Himalayas.

Many interesting expeditions were organized during the year, and the emphasis appeared to be on the small well-organized party. The virtual closure of Sikkim focused more attention on Garhwal and also Nepal. Many successful parties were organized in India and a few from abroad. Special mention should be made of three expeditions to Garhwal: The New Zealand party led by Mr. H. E. Riddiford which made a first ascent of Mukut Parbat, 23,760 feet; the group of young French climbers from the Lyons section of the Club Alpin Français who scaled both the main and east peaks of Nanda Devi before two members perished in an attempt to traverse the ridge connecting the two peaks; the party organized by Mr. Gurdial Singh of Dehra Dun which climbed Trisul and Rataban.

Of major importance during the year was the Everest Reconnaissance expedition led by Mr. Eric Shipton. Much was achieved in a short period and the party paved a way for the ascent of Everest by an entirely new route from the south. Members of the Club in Calcutta were fortunate to attend a lecture on the Reconnaissance by Dr. Michael Ward, a member of Shipton's party. The party was welcomed by the Club in Bombay and Delhi.

Other expeditions during the year included: Robert Walter's ascent of Trisul with the Sherpa Nima Tensing; Harrer and Thomas's attempt on Panch Chuli; Mr. Justice Douglas's visit to Ladakh with Prof. Rahul; Ashok Madgavkar's trip to the Gangotri region, and the attempt by E. H. Peck to climb Deo Tibba. Major N. D. Jayal accompanied the French party to Nanda Devi as liaison officer.

There was a steady demand during the year for equipment from the Calcutta store which it was possible to meet more satisfactorily owing to the addition of some new items imported from Britain. We acknowledge with thanks gifts of equipment to the Delhi Section from Mr. Justice Douglas and other members.

It was possible during the year to revive the appointment of Club

Technical Correspondents, who will be very glad to deal with inquiries from members. The following gentlemen kindly consented to act and were duly appointed.

Geology and Glaciology	. Dr. J. B. Auden.
Botany . . . . .	. Dr. K. Biswas.
Ornithology . . . . .	. Dr. S. C. Law and Mr. Salim Ali.
Entomology . . . . .	. Mr. Gordon Williams.
Photography . . . . .	. Mr. A. R. Leyden.
Shikar . . . . .	. Mr. R. J. Clough.

The activities of the Club's Sections were very encouraging. In Delhi Mr. R. E. Hotz organized a large number of meetings and illustrated talks which were well attended and much enjoyed by members and their guests. This Section held its first Annual Dinner on the 8th December 1951. In Bombay Mr. A. R. Leyden, and during his absence Dr. T. A. Schinzel, both welcomed most hospitably members of expeditions from abroad who passed through the city. The Annual Dinner of this Section was held on the 12th January 1951. In Dehra Dun Mr. J. A. K. Martyn gave much help and advice to the many parties which operated in the central Himalayas. In Darjeeling Mr. L. Krenek handled a continuous flow of inquiries for Sherpa porters and rendered invaluable aid in recruiting suitable men for mountaineering and other expeditions.

CLUB DINNER

Following the Annual General Meeting of the Club held this year on the 25th July 1952, at the Great Eastern Hotel, Calcutta, a very successful dinner was organized. This was the first Club Dinner to be held since the war, and thirty-three members and guests attended. At a meeting held before the dinner, Dr. K. Biswas showed members a coloured cine-film taken in Sikkim, and provided an instructive description of the richness and variety of the beautiful botanical specimens seen during springtime. This was followed by an interesting talk on 'Ice Caves in Czechoslovakia' given by Mr. R. D. Vaughan, who although handicapped by the absence of an epidiascope, succeeded in conveying a descriptive picture of a beautiful area. Mr. T. H. Braham then gave a talk on his attempt on Kangchenjhou in NE. Sikkim, sketching a brief history of the mountain and the previous attempts made on it including Dr. A. M. Kellas's first ascent in 1912.

Members then adjourned to dinner and at the conclusion the President rose to say a few words. In the course of an interesting speech reference was made to the mountain cult during the last century and the motives and ideals which inspired men towards the

high hills. Outlining the aims and objects of the Club, the President concluded by thanking all those present for making the evening such a success.

CLUB PROCEEDINGS, 1952

THE Twenty-fourth Annual General Meeting of the Himalayan Club was held at the Great Eastern Hotel, Calcutta, on Friday, 25th July 1952, at 7.15 p.m. The President, Mr. C. E. J. Crawford, took the chair.

The Minutes of the Twenty-third Annual General Meeting held in Calcutta on 18th September 1951 were confirmed. The Annual Report and Audited Accounts for the year ended 31st December 1951, copies of which had been duly circulated by post to all members, were confirmed and approved. Messrs. Price, Waterhouse, Peat & Co., Ltd. were reappointed Auditors for the year ending 31st December 1952. The Officers, Elective Members of Committee, and Additional Members of the Balloting Committee were duly elected as follows:

OFFICERS

President: C. E. J. Crawford, Esq.

Vice-Presidents: Dr. J. B. Auden.

Lt.-Col. H. W. Tobin.

Honorary Treasurer: J. T. Ewing, Esq.

Honorary Secretary: T. H. Braham, Esq.

Honorary Local Secretaries:

Delhi:	R. E. Hotz, Esq.
Darjeeling:	Mrs. J. Henderson.
Bombay:	A. R. Leyden, Esq.
Kulu:	H. M. Banon, Esq.
Dehra Dun:	Gurdial Singh, Esq.
Karachi:	W. A. Brown, Esq.
United Kingdom:	Lt.-Col. H. W. Tobin.

Honorary Editor: Lt.-Col. H. W. Tobin.

Elective Members of Committee:

Dr. K. Biswas.
S. E. Golledge, Esq.
R. E. Hotz, Esq.
J. Latimer, Esq.
W. E. Murphy, Esq.

V. S. Risoe, Esq.
Dr. T. A. Schinzel.
J. O. Sims, Esq.
R. D. Vaughan, Esq.
Maj.-Gen. H. Williams, C.B.E.

Additional Members of Balloting Committee:

G. O. Arton, Esq.
W. B. Bakewell, Esq.
A. R. Colley, Esq.
J. T. M. Gibson, Esq.
B. R. Jennings, Esq.
A. R. Leyden, Esq.
Brig. C. R. Mangat Rai.
T. D. Welby, Esq.

Other Appointments:

Honorary Librarian: V. S. Risoe, Esq.

Honorary Equipment Officer: W. E. Murphy, Esq.

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