

summit and returned to meet Hainsworth in the snow basin and resume the tramp in the soft snow. Returning to the S. ridge of Mt. Maligne, we glissaded down steep slopes, and thought we could reach our trail more directly by cutting down into the gorge below; we were soon stopped at the brink of a huge cliff, where we had to turn around, climbing wearily for another half-hour. Then we just strolled down.

Near one's journey's end comes a feeling that we have rushed over it too much; that, indeed, in the anxiety of covering too much ground, of learning details of a region, of seeing new things, we actually tramp past the finest ones. And so, again, that evening we became suddenly silent and once more introspective; and when we reached camp that night, almost in total darkness, we felt that our spiritual maturity in mountain climbing was still far away. It rained heavily that night and next morning, and the mountains were all veiled when the boat called for us about noon. We came down the lake and spent the rest of the day at the chalet. Phillips' great kindness helped our return trip from the Medicine Lake to Jasper, on July 15, but we should have been lost for transport between Maligne and Medicine Lakes had not Joe Weiss, genial mountain-lover and photographer, helped us with our rather heavy loads to Medicine Lake. There, more rapid means of locomotion took us back to Jasper, where we had a hard time to preserve some of the spell of the high hills through the rather noisy welcome of civilization.

NOTES.

All ascents made in the Maligne Lake district are first ascents.

Several of the names used in the present article are new, and have been duly submitted for approval to the Canadian Geographical Board.

The bibliography of the region is well reviewed in the article by Mr. Palmer ('A.J.' 36, 93-115).

THE KEBNEKAISE DISTRICT, SWEDEN.

By H. L. JOSELAND.

IN view of the extent of the mountain area in Swedish Lapland, it is strange that, with the exception of an article on Sulitelma in Vol. 20 of the *ALPINE JOURNAL*, little or no information appears to be available about it in English.

Of the three main groups into which the Lapland mountains may be divided, one is now, thanks to the work of the Svenska Turistförening, easily accessible, and as this contains Kebnekaise, the highest peak in Sweden and indeed in Europe N. of the Arctic Circle, a few notes on this district, or at any rate on that small part of it in which the highest peak is situated, may be of some interest, even if they contain no 'record of mountain adventure.'

Kebnekaise itself was first ascended in 1883 by M. Charles Rabot of Paris, and an account of his ascent appeared in his book, 'Au Cap Nord,' published in 1898. A translation into Swedish of the chapter describing the ascent is given in *Ultima Thule*, the Lapland Alpine Club's Årskrift for 1929. The peak itself was approached from the W. over what is now known as Rabot's Glacier, and the top reached by a climb up steep rocks where the party were in constant danger from falling stones. The story of the expedition is very interesting, but is too long to be included here. Their observations at the top were cut short by the cold. As M. Rabot says (the original French is given in a footnote in *Ultima Thule*): 'Quand on est simplement vêtu d'un caleçon, la plus belle ardeur pour les observations géographiques se refroidit rapidement par cette température.' Anyone who has been on a Lapland peak on a cold day can well believe it.

Nowadays one takes the train from Stockholm to Kiruna, the mining town of 11,000 inhabitants that has grown up since the year 1900, some 100 miles N. of the Arctic Circle. The trains are comfortable, the sleeping accommodation they provide is good, and when the restaurant car leaves the train a halt is made for a meal at convenient times.

A word of warning to beware of Boden had better be given to any who wish to travel N. by road. Boden is a military headquarters where foreigners are not wanted. Two young Englishmen, who were this year motoring or proposing to motor through this little town, were pursued by a police car and arrested on arrival. They were told that their car would be detained at Boden till authority for its release could be obtained from Stockholm, which would require at least a week, and in the meantime they were sent to the railway station to wait 5 hours for the next train that would take them elsewhere. There was a picture-house in the place, and thither the travellers went to pass the time. But the building happens to be outside the limits to which foreigners are restricted, and they were promptly pursued by the police, brought out, and

sent back to the railway station. When I last saw them a week later they were on their way back to Boden to try to recover their car. I do not know whether they succeeded.

At Kiruna there is an excellent station hotel, where also provisions can be got for the 2 days' journey to Kebnekaise. From Kiruna the midday train brings us in 15 minutes to the little station of Kalixfors, from which a charming walk of 2 or 2½ hours, through woods of dwarf birch trees, leads to the little village of Kaalasluspa, on Lake Kaalasjärvi, where twice a week a little motor boat, provided by the Svenska Turistförening, takes travellers to the Lapp village of Nikkulahti. The journey from Kaalasluspa to Nikkulahti, along a chain of lakes, takes about 5 hours, and is delightful in fine weather. The navigation is occasionally very tricky, but the boatman, Peter Haugli of Nikkulahti, steers the boat with great skill among the sunken rocks. At the end of the first 9 miles, passengers have to walk a mile or so through the woods while the boatman gets the boat through the worst of the rapids met with on the way. The banks from this point are well wooded, and the little red houses of the Lapp settlements nestle charmingly amid the dark green of the trees.

At Nikkulahti, a Lapp village inhabited by about half a dozen families, the night is now spent in a wooden building of one room, of good size, well equipped with a stove, cooking utensils, unlimited firewood, and comfortable sleeping accommodation. It belongs, I believe, to Peter Haugli. At any rate, on the occasion of my first visit, when it was quite new, Peter Haugli, who has a vein of humour, told me that he had heard an Englishman was coming and, thinking the old 'kåta' not good enough, had put up the new building for his benefit.

On that occasion I shared the accommodation with four Swedish young ladies, who insisted on doing all the cooking and washing up, and provided me with various luxuries not included in my modest parcel of provisions. This year the other occupants were four very pleasant young German mountaineers from the University of Berlin. They had no coffee, while I had a great deal, owing to my inability to make it understood at Kiruna that I only wanted a little; but they had excellent materials for soup, so that again we pooled our resources and I had once more the best of the bargain.

From Nikkulahti a Lapp, Sarri by name, takes us a pleasant walk of an hour and a half through more birch woods,

where reindeer may sometimes be seen, to another lake (Ladtjojaure), where a still smaller motor boat is kept. This lake is a beautiful spot lined by wooded slopes, behind which rise rugged cliffs, and to the W. is a charming view of Kebnekaise with its outlying buttresses, Singitjåkko, Tuolpagorni and Rulleware.

The boat follows the winding Kalix River beyond the end of the lake, and this year we disembarked near Sarri's country house—his town house is at Nikkulahti—where he entertained us to coffee before we began our final walk, which follows the bottom of the valley (Ladtjodalen) in a direction almost due W. About half an hour before reaching the Tourist Station we ascended somewhat to the right and crossed by a little bridge the torrent descending the Tarfala Valley from the N.

At the Tourist Station, which is about 2260 ft. above sea-level, it is possible to live in comfort for some days with beds, table-d'hôte meals, and provisions available for purchase for expeditions. Crampons, ropes, and ice-axes may also be borrowed, and there is usually a lady in charge who speaks English. The post comes and goes twice a week, and an outbuilding, now in course of construction, will, I believe, contain a bath.

Immediately to the N. of the Tourist Station slopes of grass and stones rise to the stony plateau of Kebnetjåkko, and a walk in a N.W. direction over or round a lower top leads to the highest point (5800 ft.). From this point a good idea of the topography of the district may be obtained.

Before us rises the mountain wall that stretches 2 or 3 miles from S. to N. and separates the glaciers on the W. from those on the E. From the S. peak of Kebnekaise (6965 ft.), directly in front of us, the snow or ice ridge narrows to what is in places little more than a knife-edge, and extends a short distance to the slightly lower N. peak of Kebnekaise. Thence it runs rather to the E. of N. and descends very steeply to Halspasset, rising again to a peak, Kebnepakte (about 6560 ft.), and descending once more to the lowest point in the ridge N. of Kebnekaise, Stora Tarfalapasset, where the ridge may be easily crossed.

From the snowfield at the base of the E. cliffs, four glaciers descend, of which one, Björling's Glacier, lies to the S. of Kebnetjåkko. The three most northerly extend in an easterly direction to the Tarfala Valley already mentioned. Of these three the most southerly, Storglaciären, 2 or 3 miles long and about $\frac{1}{2}$ mile wide, lies at the foot of the N. precipices of Kebnetjåkko, and is separated from Isfallsglaciären



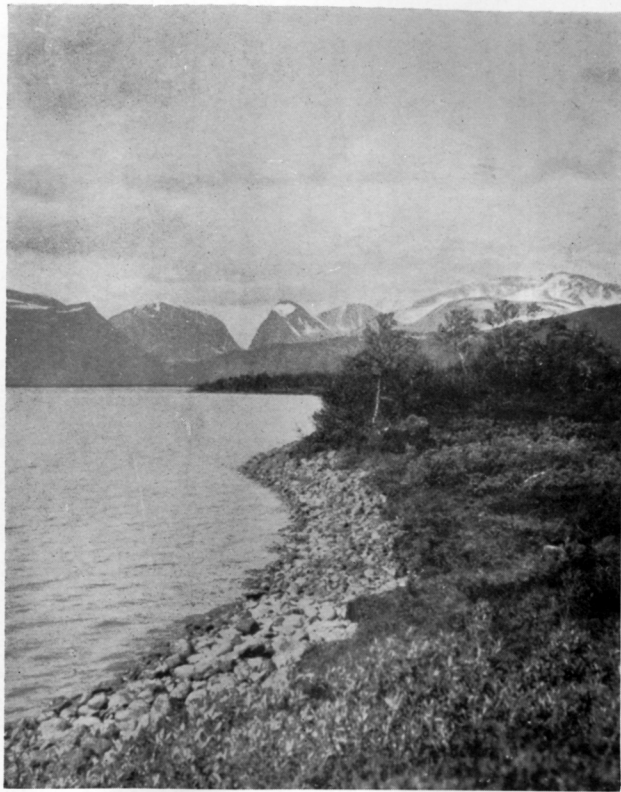
Photo. Svenska Turistförening.

E. face of KEBNEKAISE; higher S. Peak to left; lower N. Peak to right.



Photo. H. L. Joseland.

KASKASAPAKTE with TARFALA LAKE



Photo, H. L. Joseland.

LAKE LADTJOJAURE.

by a rock ridge, the South Klippberg; while between Isfalls-glaciären and the Kebnepakte Glacier, the most northerly of the three, is another rock peak, the North Klippberg. The Kebnepakte Glacier descends about 1000 ft. to the Tarfala Lake, above which the ice cliffs rise to a height of 60–70 ft., and into which masses of ice constantly fall, forming a Märjelen See on a rather larger scale and in even more striking surroundings.

From the N. of Stora Tarfalapasset three peaks rise from a ridge, of which the general direction is rather N. of E., Kaskasapakte (6676 ft.), Liljetoppen (6398 ft.), and Kaskasatjåkko (6811 ft.). East of the last-named peak is a col from which a glacier descends to the neighbourhood of the Tarfala Lake, and on the E. side of the col rises a summit (Tarfalatjåkko). From the Tarfala Lake the Tarfala Valley runs almost due S. for 6 miles or more, and is the one through which flows the torrent crossed by the traveller shortly before he reaches the Tourist Station. It is into this valley that the three glaciers, Storglaciären, Isfallsglaciären, and Kebnepakte, descend, producing a striking Alpine effect, reminding one of the three icefalls that descend to Stein from the snow plateau below the Sustenlimmi.

A walk up this valley from the Tourist Station is well worth taking. From the lake it is possible to return on the W. side of the valley, mounting Storglaciären, a fine crevassed glacier well worth a visit, and thence reaching the plateau of Kebnetjåkko, either by a fairly steep snow couloir, as a Lapp, Enok Sarri, and I did on a day when we had been turned back from Kaskasatjåkko by bad weather, or by steep and stony slopes at one of two or three possible points.

But a still finer view of the whole of the ridge, Vargryggen, from Kebnekaise to Kaskasapakte, is obtained by mounting the ridge to the E. of the Tarfala Valley and following it for 6 or 7 miles to Tarfalatjåkko. It is from a point on the flank of this ridge that the photograph showing Kaskasapakte and the Tarfala Lake was taken.

The ordinary tourist route up Kebnekaise is toilsome and uninteresting except for the views obtained on the way. On the occasion of my first visit to the Tourist Station, I was out of training and tired with the exertion of carrying a heavy rucksack, which becomes a laborious business when one is well over sixty. The morning after my arrival was wet, but it cleared up somewhat after midday, and a party starting in the early afternoon for this ascent persuaded me to join them, after a vain attempt on my part to get someone to take the

more interesting 'östra leden' with me. We trudged along westwards past the foot of Kebnetjåkko at an alarming pace, and turned up the valley N.W. of Tuolpagorni, the conspicuous and striking peak shown in the centre of the photograph of the lake (Ladtjojaure). Down this valley flows the torrent from the little Kitteldal Glacier, and the crossing of this stream to the right bank and back to the left to avoid some rock was the most troublesome part of the expedition. Had I realized the reason for it I should certainly have scrambled over the rock in preference, as, in fact, we all did on the return journey. Higher up we gained an upland valley known as Kitteldalen, with the tongue of Björling's Glacier high up on the right, and a low wall of rock rising from the small Kitteldal Glacier and seeming to offer an obvious and direct route to Kebnekaise. This wall has indeed been climbed once by a Swiss, G. A. Baumann, but this turned out to be a very difficult and somewhat hazardous undertaking which, as far as I know, has never been repeated.

The route now adopted after the torrent is once more crossed, this time by one of the snow patches bridging the stream, mounts W. to the saddle between Tuolpagorni and Rulleware, seen behind and to the right of Tuolpagorni in the Ladtjojaure photograph, ascending or skirting a considerable snow slope, which provides an excellent glissade of some hundreds of feet for the return journey. Thence the ascent of the stony slope of Rulleware, and a corresponding descent on the other side, bring us to the foot of the long slope that rises some 2000 ft. to the final snow or ice cap of Kebnekaise, forming its S.W. face. On the occasion in question the whole face was covered with snow, which made the going easier than would otherwise have been the case. The veteran of the party found it hard work as it was. The ice of the final peak was also well covered with snow, and the top was gained without step-cutting at about 8 p.m. It consists of a curving ridge of no great width descending pretty steeply on both sides. The view from the top gave one some idea of the extent of this mountain country. Only eastwards did one see anything but rock, ice, and snow.

A better route to the top, known as 'den östra leden,' is very direct and not difficult, but is not to be recommended to inexperienced tourists when there is much snow on the rocks.

Of the other peaks in the district the most striking is Kaskasapakte, which may be seen in the photograph rising behind the Tarfala Lake. This peak appears to have no really easy line of ascent, unless the long ridge rising from Stora

Tarfalapasset is easy. The writer does not know whether this has been climbed. The first ascent was made by the S. ridge, which seems to have afforded a very interesting climb, but one difficult and very dangerous from falling stones, at any rate in its lower portion. Various attempts have been made to reach the summit from the N.E. The climbing is difficult and exposed, and so far no one has succeeded in completing the ascent. The complete traverse from the N.E. to Stora Tarfalapasset will, when it is accomplished, provide one of the finest expeditions in the district.

Another climb as yet uncompleted is the direct ascent of the N. peak of Kebnekaise from Storglaciären. The rock face has once been ascended, but on that occasion the final snow or ice defeated the party.

The complete traverse of the two Kebnekaise peaks from N. to S. has been made from Halspasset. This year an attempt, by the four young Germans already mentioned, to traverse the peaks in the reverse direction was foiled by bad weather.

What has been dealt with here is only a small section of the whole Kebnekaise group. To the N. there are many peaks, some of them still unclimbed. One new ascent has in fact been made there this year, and is said to have been of considerable difficulty.

So far nothing has been said of the Sarek district, and this must be dismissed in a few words as the writer has no personal knowledge of it. The group is the most extensive and the wildest of the Lapland mountain areas, containing over 100 glaciers and many peaks. But it is difficult of access. Herr Erik Drougge, the secretary of the Svenska Fjällklubb, writes that 'there are no huts, no bridges over the rivers, and provisions for many days must be carried.' The district is best known by the remarkable work done in it by Professor Axel Hamberg, begun at a time when it was almost unknown except to the Lapps. Captain H. N. Pallin writes to me: 'He is certainly the most prominent alpinist of Sweden. He has, for instance, made the first ascent of forty-six different peaks in the Sarek mountains, among them eight peaks of over 1900 m. His scientific work in that part of Lapland began in 1895 and is still being continued. He has erected five observation houses in the Sarek mountains, among them the Porte-Observatorium (1883 m.), the highest situated dwelling in Scandinavia. . . . He was one of the collaborators of A. E. Nordenskiöld, the explorer of the North-East Passage, and accompanied him during his great expedition to Greenland in 1883.'

A tribute to his notable work needs no apology.