

life of the Club. In 1880 C. E. Mathews, the retiring President, gave a sketch, commencing in 1855, of the growth of mountaineering from the English point of view. Since that time every President, at the end of his term of office, has delivered a farewell address, in which he has reviewed the history of the Club, and the principal feats of its members, during the preceding three years. These in combination form a fairly complete and continuous narrative. Finally, a paper entitled 'Fifty Years of the Alpine Club,' read by C. Pilkington, himself a former President, shortly after the jubilee celebrations of 1907, provides another general survey of mountaineering history, in which many of the topics here touched upon are treated by a master hand.

THE HORUNGER.

By RAYMOND P. BICKNELL.

(Read before the Alpine Club, March 4, 1919.)

THIS paper calls for some excuse in that it was written as a description of a large number of lantern slides rather than for publication in the JOURNAL. The lantern slides being removed, much of the writing became meaningless. It has, however, been thought that a general description of this very pleasant group of mountains may be of some interest to readers of the JOURNAL and of some future use to climbers. I have therefore rewritten the latter part of the paper, and have tried to turn it into a coherent description of the principal peaks and passes of the group.

The history of my subject is for the most part to be found in the 'Aarbok' of the Norsk Turistforening, which has been published continuously since 1868. English climbers have from time to time contributed papers in their own language to the 'Aarbok,' and these contain useful information. I have given references to them. An instructive paper on the Skagastølstinder by Erik Ullén is to be found in *The Yorkshire Ramblers' Club Journal*, 1906-7. I have given no references to Slingsby's 'Norway: The Northern Playground,' because I have assumed that nobody will be so foolish as to go to Norway to climb without having read the whole book.

The group known as the Horunger, or Horungtinder, occupies the N.W. corner of the wild mountain district known

as Jotunheim, the home of the giants. It is immediately to the E. of the extreme head of the Sognefjord, a narrow arm of the sea running inland for about 100 miles, 50 miles N. of Bergen, that is, in the same latitude as the northern extremity of the Shetland Islands.

The group is very definitely divided from the rest of Jotunheim on the one side by the deep and narrow gorge of the Utlea, and on the other by Helgedal; while on the N.W. side the two valleys are connected by a low pass known as the Keiser—a word of ancient Scandinavian origin and having nothing to do with his late Imperial Majesty. Its geography is simple, for it consists of one main ridge running E. and W., with a number of subsidiary ridges on each side running N. and S. Most of the gaps in the main ridge are very deep-cut, and the subsidiary ridges to N. and S. are in line with each other, so that the group can equally correctly be described as a series of roughly parallel ridges running N. and S. There is a glacier in each of the nine principal valleys between these parallel ridges, some of them, like the Styggedalsbræ, long and comparatively level ice streams; while another, the Stølsmaradalsbræ, is an almost impassable ice cataract. One, the Skagastølsbræ, is peculiar in that it ends in a small lake.

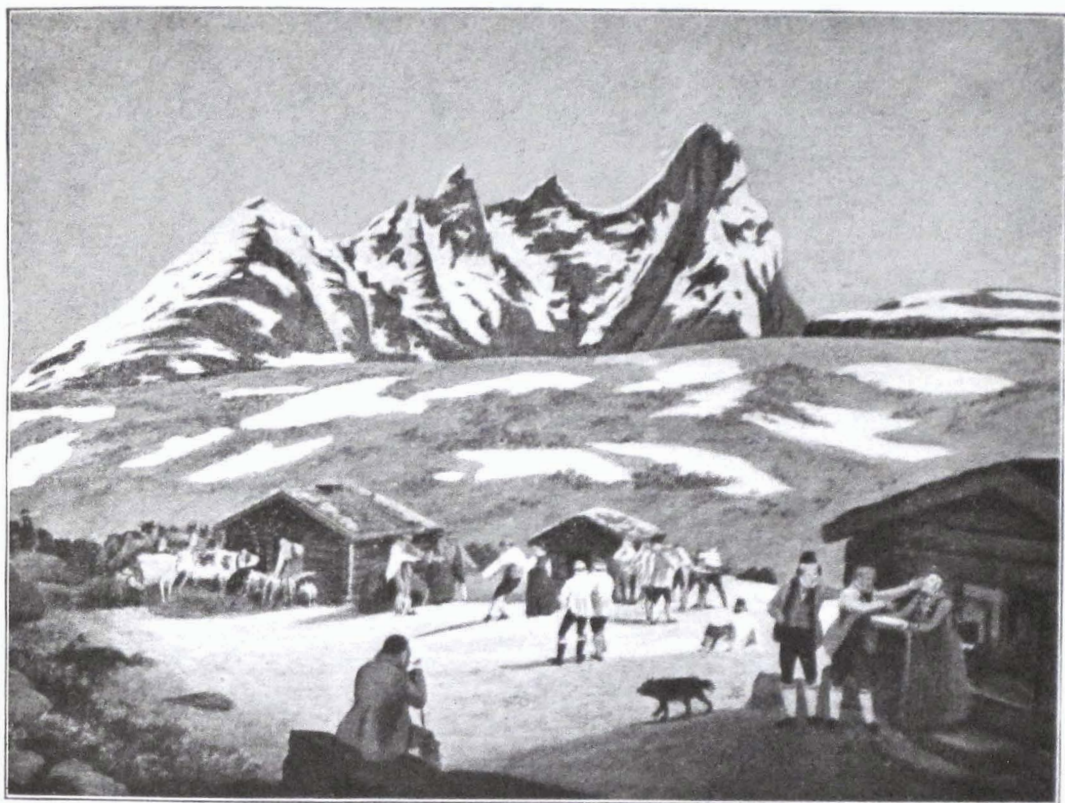
The three principal centres from which these mountains can be climbed are Vetti and Skogadalsboen on the Utlea, and Turtegrö in Helgedal. At Vetti, a remarkable little hamlet of ancient wooden houses in the depths of the Utladal, close to the celebrated waterfall, there is a primitive inn. At Skogadalsboen, three hours farther up the Utladal, there is a comfortable group of huts run on hotel lines by the Norsk Turistforening during the climbing season. Turtegrö consists of two comfortable hotels, now combined under the management of the well-known guide Ole Berge. The hotels stand on a bleak and windswept moor far above the tree-line, but they are splendidly situated for the climber, and there is no peak in the group which cannot be climbed from them in a long day.

For centuries the peaks must have been a familiar sight to the peasants who lived round them, for though the only two regularly inhabited valleys near them are so steep and narrow that there is not a single spot in either of them from which any one of the peaks can be seen, they are in full sight of many of the sæters or summer dairies, and can be seen close at hand from the track over the Sognefjeld, which has been used by cattle drovers and horse dealers from time immemorial.

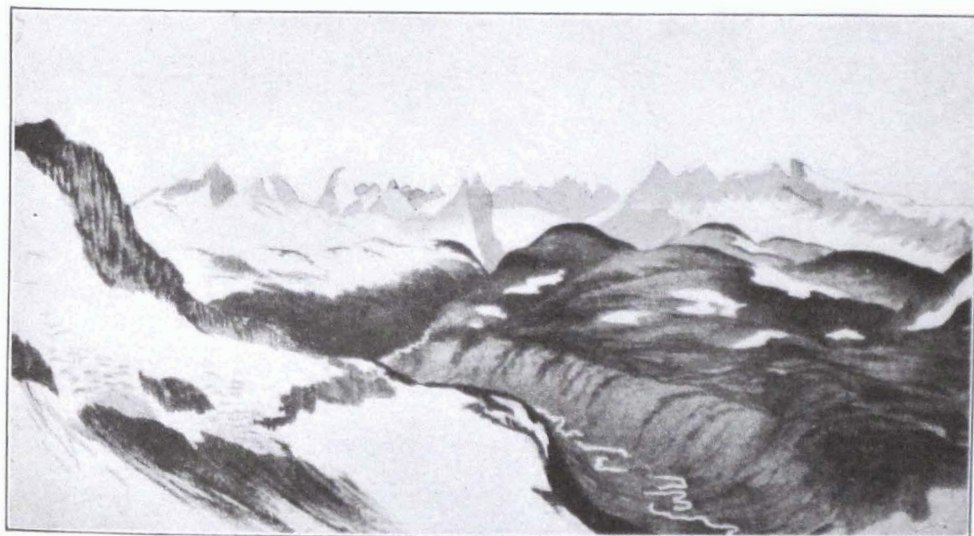
The discovery of the Horunger to the educated and scientific world was begun in 1820, when Flintoe, a Norwegian artist, who was best known as a painter of theatre scenery, held an exhibition in Christiania of what he described as 'A series of exactly drawn views, which show Nature's peculiarities in these to observers of nature as much as to lovers of art, so highly worthy of notice but hitherto so little-known views from the wildest and most picturesque mountain districts of the Bishopric of Bergen.' Amongst these is a view of the Skagastölstinder, the earliest that I have any knowledge of. It is taken from the sæter Skagastöl, about half a mile from the spot where the Turtegrö hotels now stand. It cannot be said that it entirely justifies Flintoe's claim to exact drawing, but it is at least free from that gross exaggeration of mountain form which was still almost universal in drawings of those days.

1820 was a notable year in the history of the Horunger, for in July Bohr, a traveller from Christiania, climbed the easy northern top of the Dyrhaugstinder, which is close to Turtegrö, and thus made the first recorded ascent of any peak in the group. At the same time Keilau, a professor of the University of Christiania, and Boeck, a student, were making their well-known tour in Jotunheim. They made the first ascent of Falketind, which lies to the S. of the Horunger. At the present time Falketind still ranks as a very respectable peak, and its ascent in 1820 was a feat which has never received the credit due to it in the history of the early mountaineers. The ascent is worth making if only for the wonderful view from the top across the gorge of the Utle to the Horungertinder, nearly all of which can be seen. Keilau made an accurate water-colour panorama of this view, which is now in the library of the University of Christiania. The inscription across the picture runs: 'Snow and ice-covered Alps in the Inner-Sogn on the boundary of the Bishopric of Aggershaus (From a top in Koldedal, July 14, 1820).' Their interest in what they saw prompted them to go round to the other side of the range, where they ascended the lowest and northern peak of the Skagastölstinder. From observations which they made they knew that Store Skagastölstind, that is, the big Skagastöl peak, was not far short of 8,000 ft. high, and from this time dates the belief, which lasted for many years, that it, and not Snehatten, was the highest peak in Norway, though Keilau himself rightly suspected that a higher might some day be discovered farther inland in Jotunheim.

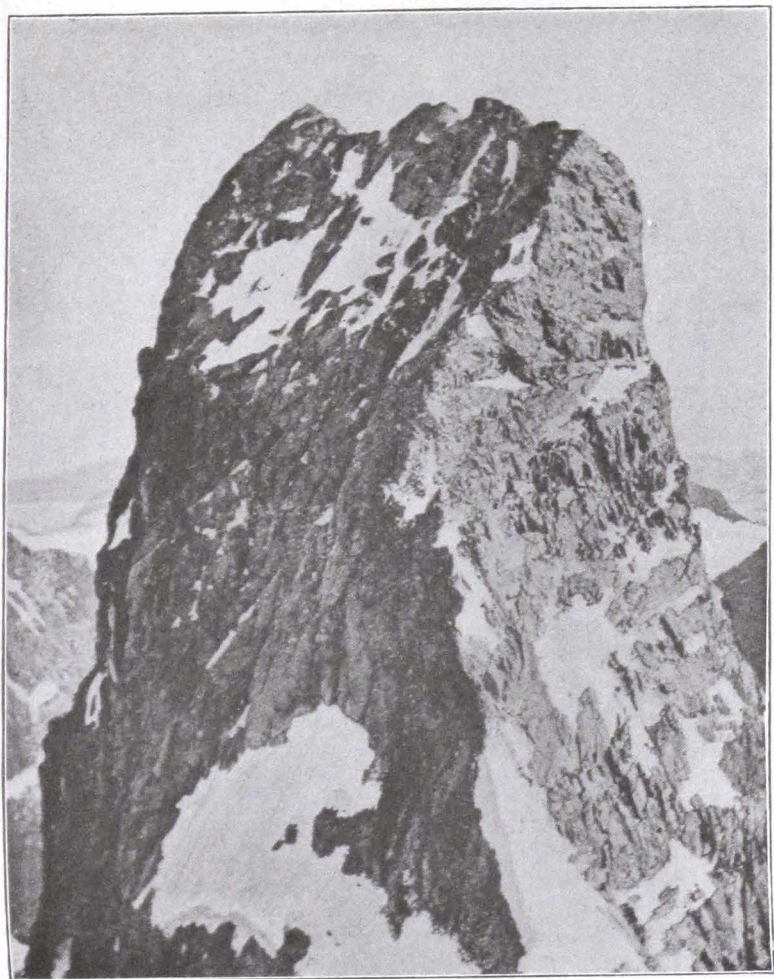
The next year, and again in 1822, the German geologist



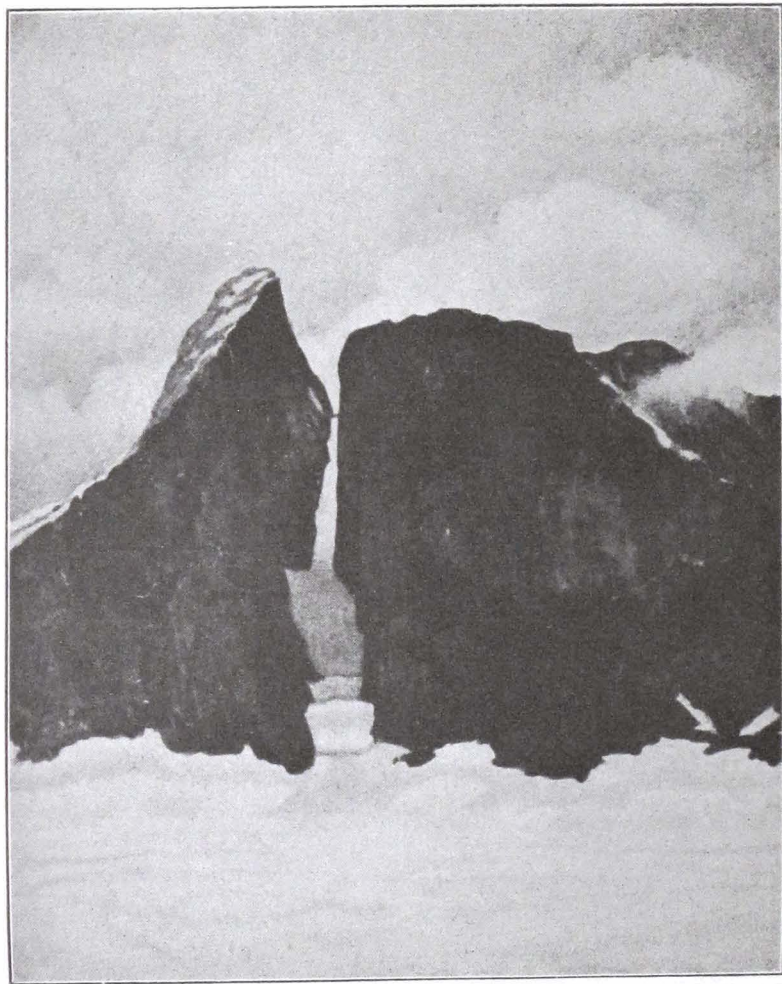
THE SKAGASTÖLSTINDER.
(From a picture by Flintoe.)



THE HORUNGER
from the South.
(From a water colour sketch by Keilau.)



STORESKAGASTÖLSTIND



MANDEN AND KJÆRRINGEN
from Giørtvåstind.

Naumann made a tour in Jotunheim. He wrote a long book on his travels, which Norwegian geologists still regard as an authority on their subject. His remarks on mountaineering will hardly be regarded in the same light by mountaineers. He went most of the way up the northern Skagastölstind, but was unequal to the short rock scramble which leads to the top. Here are his impressions of the view as given in his book: 'To the south, about half a mile away, a frightful rock peak which seemed to far overtop our standpoint. But still higher and more frightful towered into the air the two other pointed Skagastöltinder, the very sight of which made us giddy. . . . It was easy to agree with the common opinion that any attempt to climb these peaks would be as criminal as it would be impracticable.' In mountain descriptions of that date one is accustomed to a good deal of this sort of thing, but I have always thought that the use of the word 'criminal' lends a peculiar distinction to this passage.

In the book 'Norway in 1848 and 1849,' published in London in 1850, one of the authors, Lieut. M. S. Biddulph, described a tour which he made to the Horunger in 1849. He gives two pictures of the group. The one is an excellent lithograph, which gives an accurate view of the Stølsmaradalsbræ, one of the glaciers of the southern side, with the peaks at its head. The point of view is in the forest above Vetti, on the opposite side of the Utlå. The other, a small woodcut, is a general view of the group and is wildly imaginative. Biddulph made short work of Store Skagastölstind. From Fortun, a village on the sea-level and many miles from the foot of the peak, he wrote: 'Had the weather been favourable, I should have been off by sunrise to spend the day rambling upon the fjeld in the direction of Store Skagastölstind, if not in ascending its summit.'

James Forbes, during the journey, which he described in that admirable book, 'Norway and its Glaciers, visited in 1851,' was within twenty miles of the Horunger when he visited the Justedal, but unfortunately he went no nearer, and there is no evidence in his book to show that he had ever heard of them. In the next twenty-five years the peaks were seen and described by a good many English travellers, but they were reindeer stalkers and fishermen rather than mountaineers. To this period belongs a remarkable water-colour drawing by James Backhouse, now in the possession of Mr. Slingsby. It is a general view of the Horunger from the S., painted during a total eclipse of the sun.

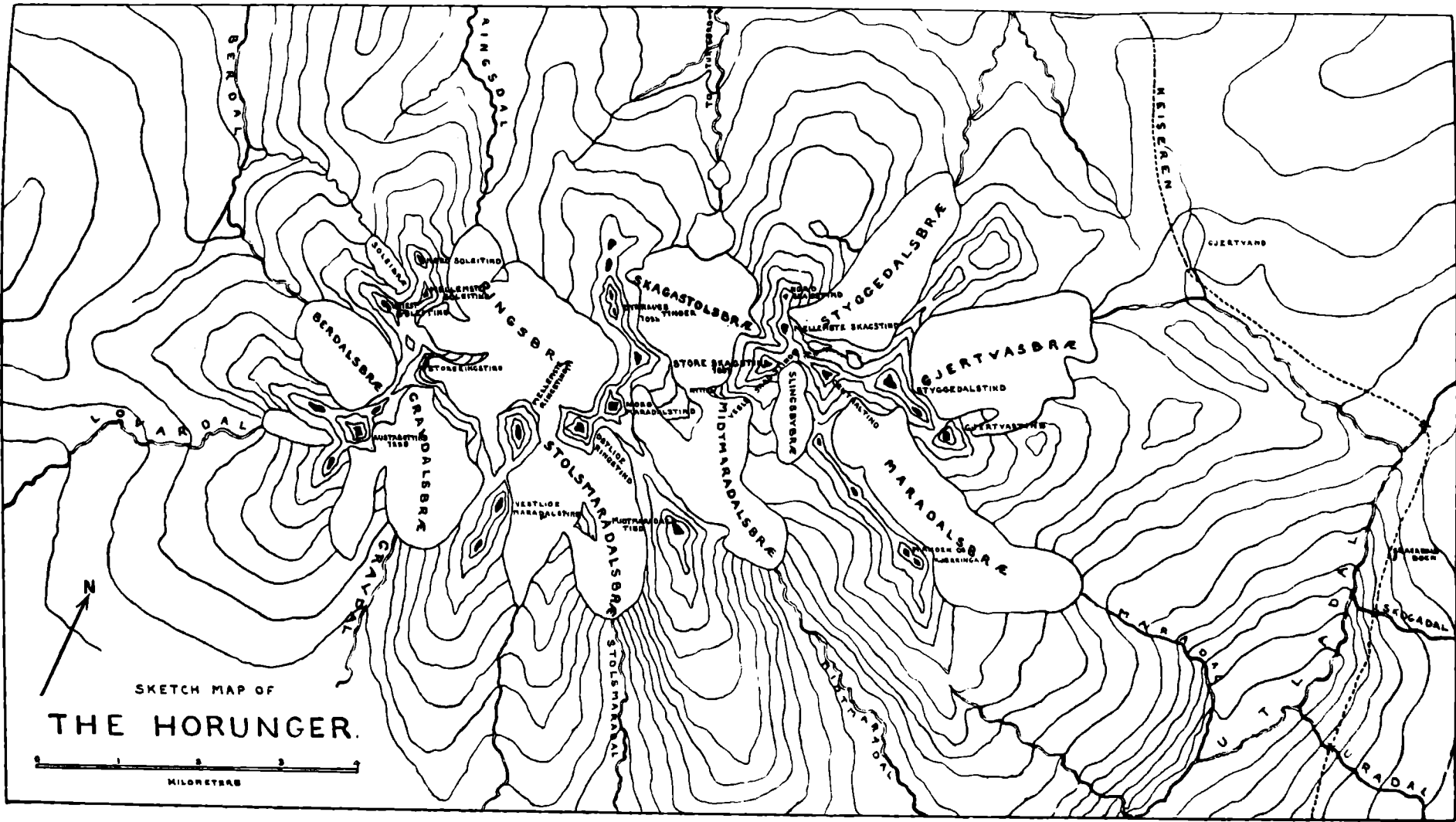
The real history of modern mountaineering in the Horunger

begins in 1874 with the appearance of Slingsby. In that year he and Dewhurst, with the Rev. A. G. Girdlestone and another, crossed the Ringskar, and thus made the first pass over the main chain. They started from the S., and cutting their way up the icefall of the Stölsmaradalsbræ descended on the other side by the Ringsbræ.¹ This was a first-rate ice expedition, and though another and much easier way of reaching the Ringskar from the S. has since been discovered and frequently used, I cannot find any record of the passage of the icefall having been made again till I came down it in 1911 with Peder Bjerk, a Norwegian porter. We were in thick mist most of the day and saw little of our surroundings. We groped our way down the left side of the glacier till we came to the top of the icefall. There we took to the rocks to avoid a region of crevasses, which appeared to be quite impassable, but the slabs were so steep and smoothly polished by ice that we were soon driven back. We worked our way along a ridge between two immense crevasses right out into the centre of the icefall, where the surface was less broken, and then spent three very busy hours cutting down to the snout of the glacier.

In the same year, 1874, Slingsby and Dewhurst camped in Stölsmaradal, in the hope of climbing Store Skagastölstind, but were driven away by bad weather. Slingsby returned to the attack in 1876, accompanied by the Norwegian traveller Emmanuel Mohn, and Knud Lokken, a native reindeer hunter, who, on the strength of having assisted at the first ascent of Knuthulstind, an easy peak in South Jotunheim, had acquired a reputation as a mountaineer which appears to have been wholly undeserved. They began by going up Gjertvastind, at the extreme eastern end of the group. This expedition is notable as the first ascent of any peak on the main central ridge. Then they turned to Store Skagastölstind, which by this time had attracted general attention. The whole story of the first ascent has never been fully told in English, Slingsby having been too modest to describe all the moral and physical difficulties with which he had to contend. Mohn, however, made no secret of the minor part which he played, and it is from his description, published in Norway soon after the ascent, that I have drawn some of my information.

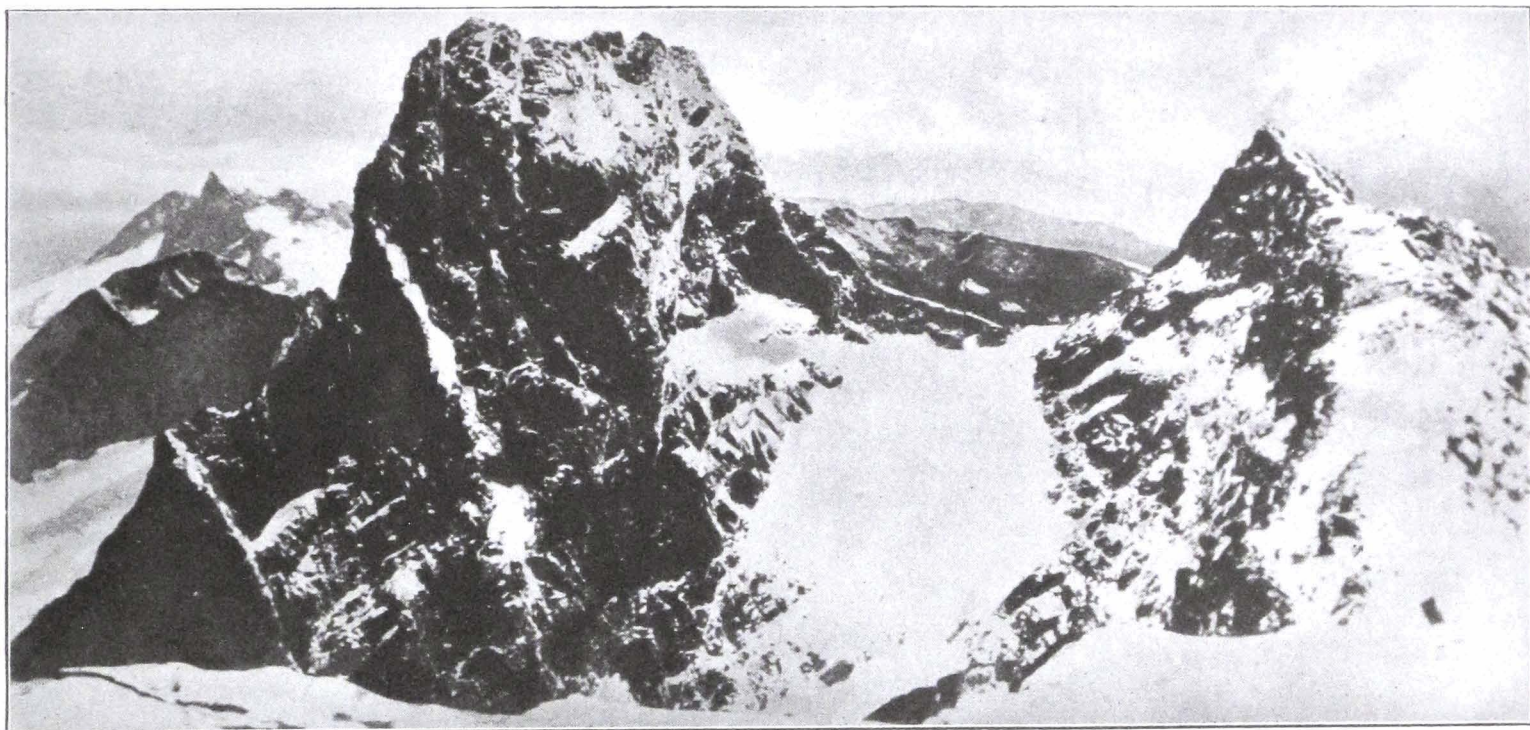
The three adventurers set out from Vormelid in Utledal, which is a great distance from the climb. They had two high ridges to cross and a long, rough descent into Midtmaradal,

¹ *Aurbok*, 1878, p. 83.



SKETCH MAP OF
THE HORUNGER.





P. Keith-Murray.

STORE AND VESLE SKAGASTÖLSTIND WITH THE HEAD OF SLINGSBYBRÆ
from the top of Centragtind.

from the head of which valley the attack was to be made. From previous examination they had learned that a narrow and steep little glacier, invisible from all but a few points of view, winds down the eastern and southern sides of the peak, and that at its head a steep snow or ice slope leads up to a gap some 600 ft. below the top. On Whymper's principle of attacking a mountain on the side where the snow and ice run highest, they had decided that this glacier, which has ever since been known as Slingsbybræ, was the most likely line. The lower part of the glacier is steep and heavily crevassed. Mohn confesses to various slips, which were only limited by the length of the rope, and at one point he fell off a narrow snow edge at the side of a crevasse.² The upper part varies greatly from year to year, but is never easy. At one point near the top a protruding band of rock with a wall of ice above it is sometimes a formidable obstacle. At last they got up the final slope into the gap between Store and Vesle Skagastölstind, which is now known as Mohn Skar. From the skar the rest of the climb looks most exceptionally hopeless. Mohn was exhausted and quite unfit to go on. Lokken remarked that if the Englishman wanted to kill himself he could do so alone. There are few more thrilling passages in Alpine literature than Mohn's description of how Slingsby, undaunted by this want of support, went on alone and completed the climb, arriving at the top at six in the evening. The upper part of the mountain is a narrow wedge of rock, the sharp edge of which runs down to Mohn Skar. The way lies entirely on this edge, which is excessively steep, though judged by modern standards it is not difficult when free from snow and ice.³

The mountain was not climbed again till 1878, when a Norwegian artist, Harald Petersen, repeated Slingsby's climb. He also was accompanied by Knud Lokken, who once again distinguished himself by deserting his companion in Mohn Skar, leaving him to complete the ascent alone.

In 1879 the well-known route up the other side of the moun-

² This lower part of the glacier is now usually avoided as there is a quicker route on the rocks on its W. side.

³ Mr. Slingsby tells me that on the first ascent he considered it impossible to climb the ridge direct from Mohn Skar, and that his greatest difficulty was on the face to the left before he was able to get back to the ridge: furthermore, that Petersen met with a similar difficulty, and after subsequent visits to the place they were both of the opinion that there had been a great fall of rock which had made it possible to keep closely to the ridge.

tain was discovered by a Norwegian party organised by Hefty, who published a pamphlet of sixty-three pages describing the climb. From this pamphlet I gather that they intended to follow Slingsby's route; but they do not seem to have known where it was, for they started up the opposite side of the mountain and went up the W. face. This face is very easy at first, but becomes steeper and steeper as one goes up. At last they were stopped by the almost vertical wall just below the top, and after a good deal of wandering about they discovered the traverse round to the right and the chimney by which the climb is finished. This has become the usual route, and is used far more often than any other. It is entirely a rock-climb, and with the exception of Hefty's chimney it is easier and less interesting than Slingsby's route, which offers a splendid variety of ice and rock work. The upper part of Hefty's route does much to make up for the tameness of the lower part. One goes round to the right till one is on the edge of a great cliff which rises out of the lower part of Slingsbybræ. The chimney itself might be easy were it not that it begins as a narrow crack 9 ft. up a smooth vertical face. The leader has to get into a standing position on the shoulders of his second. This in itself is a somewhat delicate manœuvre till he can get his arms into the crack. Then he has to turn sideways to get his shoulders in, and do the rest by wriggling his body into the chimney. Were it not that there is a good ledge at the foot of the wall, I doubt if the place would ever have been climbed.⁴ I have seen this chimney completely blocked up by ice. It is then sometimes possible to get up an alternative route to the left, known as Vigdal's chimney. Vigdal was not the well-known schoolmaster and guide of that name, but an enterprising native of Skjolden on the Sognefjord, who made the seventh ascent quite alone. He was unable to get into Hefty's chimney, so had to find something else. Vigdal's chimney is easy, but the traverse which leads to it is the reverse. One goes across a slab where friction of one's knees has to make up for absence of foothold. The handhold is none too good and is frequently wet, if not iced.

The greater part of the pioneer work which followed the first ascent of Store Skagastölstind was done in the ten years between 1880 and 1890 by the Dane Carl Hall, who with two Norwegian guides from the Romsdal, a district farther N., made the first ascents of the seven largest peaks which were

⁴ *Aarbok*, 1891-2, p. 31.

left, together with many other new expeditions. Hall left a record of his work in a series of delightful papers in the Year Book of the Norsk Turistforening.

My first visit to the group was made twenty-five years ago at the end of this heroic period. Store Skagastölstind was only climbed eight times in the first eighteen years, and was still looked upon with some awe. I tried to get up both sides, but was defeated by a mixture of bad weather and inexperience. I returned to the attack the next year with my brother. We took as our guide Ole Berge, already a mighty hunter of reindeer and then just beginning to add mountain climbing to his many activities. We succeeded at the first attempt, going up by Hefty's route and down by Slingsby's, thus making the first traverse of the mountain in that direction. We got up quickly, as Berge had climbed the W. face before. Hefty's chimney was adorned by an iron spike which afforded handhold and then foothold at the critical point. This spike has long since disappeared and has never been replaced. The Norwegian mountains are still commendably free from the pitons and fixed ropes with which some natives of the Alps have so industriously striven to spoil their peaks. None of us had ever been on the upper part of Slingsby's route, and we knew very little about the right line. Almost immediately after leaving the top, one comes to an awkward little gap in the ridge. One ought to cross the gap and keep closely to the ridge, but Berge thought that we should go to the right, and led us diagonally down the face. It was the first time that I had been called upon to go down a steep ice slope without a rope above me, and I shall never forget the moment when I had to leave the ridge and cross the first and worst piece. We were soon pulled up on the edge of the cliff, and had to make a most unpleasant downward traverse over ice patches and rock slabs back to the ridge. This was one of those mistakes which it has now become the fashion to classify as variations, but it is better avoided.

In 1899 Andrews and Williamson made a new route by breaking away to the left from Hefty's line and going straight to the top by a conspicuous gully which cuts the upper part of the W. face. This is the most direct and on the whole the easiest route. Since then a route has been made between Hefty's and Andrew's by difficult rocks on the S.W. corner of the peak.

If the Norwegians did not take a very active part in the early exploration of their mountains, their younger generation have made up by a great many brilliant new climbs. To

this period belongs the ascent of the N.W. side by Tandberg and Rostrup, who climbed direct from Skagastölsbræ partly by a shallow snow-filled gully and partly on rocks to its left. So far the climb is fairly easy, but above this they had to go up continuously steep slabs with very small ledges, hardly any of which were large enough to stand on in comfort. Close under the top they were stopped by a perpendicular wall, and after traversing over the edge to their right, they lowered themselves into the upper part of Andrew's gully on a doubled rope and so reached the top. With the exception of these few feet at the top, the whole route was entirely distinct from any other. This climb was repeated in 1917 by our fellow-members Bryn and Sundt, who reached the top without going down into Andrew's gully. It now appears to be passing through the usual stages of a new and difficult climb, for I have recently learned that it has been conquered by a lady. It is none the less an expedition to be undertaken only by very strong parties in the best of settled weather. •

Store Skagastölstind's neighbour, Vesle Skagastölstind, *i.e.* the little Skagastölstind, is a fine peak, and only little by comparison. It is most easily reached by going nearly to the head of Slingsbybræ and then up an easy rock face to its S.W. ridge, which can be followed to the top.

Mellemste Skagastölstind was first climbed by Carl Hall in 1884 by an intricate route on the W. face, which is seldom used now that the route along the ridge from the N. has been discovered. I have not been up this way since 1897. I then thought that one piece near the top was very difficult, and a party who have been there recently have told me that my opinion was well founded. In 1886 Hall repeated his ascent and tried to follow the ridge to Vesle Skagastölstind, but was stopped by a vertical slab which is certainly not to be climbed, and which he thought impossible to circumvent. Three years later he traversed the ridge from the S. to the top of the slab, and he and his guide, being let down by another party, completed the traverse to Mellemste. The real conquest was made in 1896 by Patchell and Bowen, who got round to the left and then regained the ridge by a short but difficult crack.⁵ The last obstacle on the ridge of the Skagastölstinder, the V-shaped gap to the S. of the easy northern peak, was overcome in 1900 by a party organised by Slingsby.⁶ The descent into the gap from the N. is easy, but the climb

⁵ *Aarbok*, 1897, p. 53.

⁶ *Ibid.* 1901, p. 114.

up the other side is very good. The traverse of the whole ridge from end to end has now become a popular expedition, and when the rocks are reasonably free from ice it can be done from and to Turtegrö in fourteen or fifteen hours. The ridge is very narrow over its entire length, and on its eastern side a great ice wall goes down to the Styggedalsbræ. This wall has been climbed at three different places by English parties. None of these routes has ever been repeated, and this side is only for those who are prepared to undertake much step-cutting.⁷ On the western side a Swede, Herr Erik Ullén, once climbed direct from Skagastölsbræ up the great rock-wall into Mohn Skar.

I now propose to take the group from end to end and give some indication of how its peaks and passes may be climbed.

Austabottind is the peak at the extreme western end of the group. I have climbed it from Fortun, a few feet above the sea-level, and, as it is over 7,000 ft. high, this makes a very respectable day, equal in height climbed to many of the big Alpine expeditions. The usual route is right along the northern ridge, and when the rocks are in good condition it is an easy climb.⁸ Several routes have been made on the eastern face which rises out of Berdalsbræ.⁹ In 1909 Peder Bjerk and I descended from a point close to the top, first by rocks and then by hard ice. The face is cut from top to bottom by a narrow couloir, which can be climbed easily if the snow is in safe condition without being too hard. Mr. A. C. Roberts, with the Fortun guide Ole Oiene, once descended the southern face on to the Gravdalsbræ. I do not think that there is any published description of this climb, but from what Oiene has told me of it, and from what I have seen of this side of the mountain, I believe that it must be difficult. Anyhow, it has never been repeated.

Store Ringstind is on the opposite side of the Berdalsbræ, from which glacier it rises in an inaccessible cliff. The usual route is from Turtegrö up the Ringsbræ, and then either up an easy rock ridge or on the easy snow slopes on its side.¹⁰

Soleitind is on the ridge which runs N. from Ringstind. It is not a very interesting mountain, but it is close to Turtegrö, and the traverse of its three peaks makes a good day for anyone who wants a short and easy expedition.¹¹

⁷ *Aarbok*, 1894, p. 100.

⁸ *Ibid.* 1893, p. 80.

⁹ *Ibid.* 1889, p. 72.

¹⁰ *Ibid.* 1893, p. 77.

¹¹ *Ibid.* 1888, p. 78.

The next peak, the Mellemste Ringstind, stands right at the head of the Ringsbræ, with two of the passes of the main ridge, the Ringskar and the Gravdalskar, to E. and W. of it. The W. face is very easy, but there is a good climb up the E. side from the top of the Ringskar, and the traverse of the peak makes another good short day from Turtegrö.¹²

Farther S. on the same ridge is the double-topped Stölsmaradalstind. The top can be reached very easily by the southern ridge from Vetti. I have combined it with a crossing of the Ringskar from Vetti to Turtegrö at the cost of a couple of hours. The northern ridge of the northern top is a difficult climb and has not often been done. I have been up it but cannot recommend it, for it is one of the few places in the Horunger where the rocks are really rotten, and the maximum of rottenness occurs where the ridge is at its steepest.

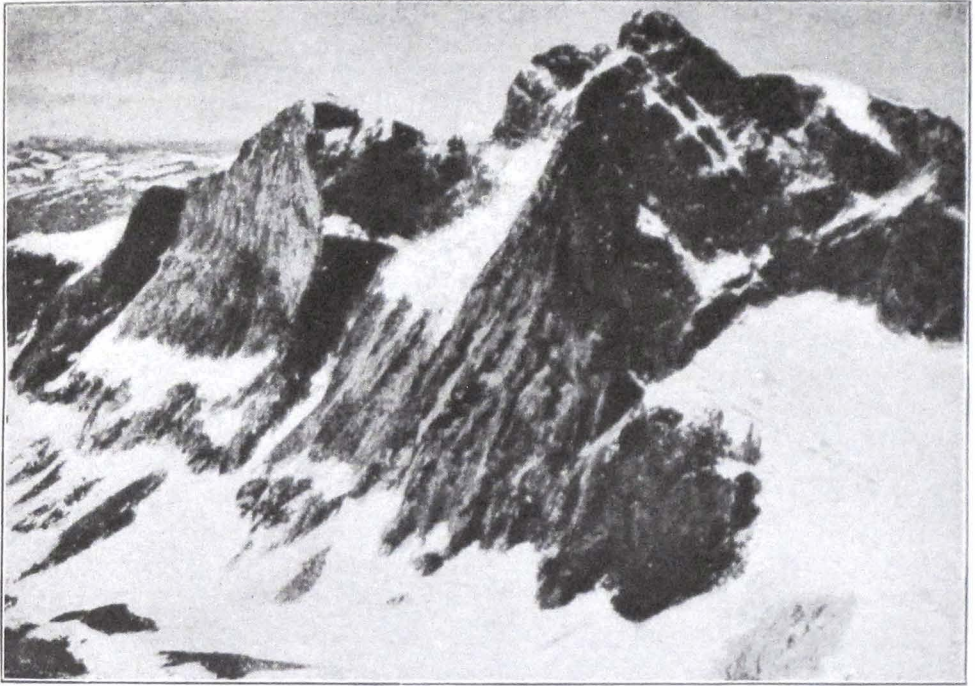
The next ridge runs right through from N. to S. N. of the main ridge it is known as the Dyrhaugstinder, to the S. it becomes the Midtmaradalstinder. The traverse of the Dyrhaugstinder is one of the popular lesser climbs from Turtegrö. One follows a narrow ridge over a number of tops for several hours with splendid views to right and left. From the most southerly point it is easy to get down to the eastern arm of the Ringsbræ and down that glacier to Turtegrö. On the W. side of this southerly point, where a ridge runs down to the pass at the head of Skagastölsbræ, the climbing is of a very different order. Patchell and Bowen made the first ascent of this ridge in 1895.¹³ It has now become a popular rock-climb, and various difficult variations have been invented.¹⁴

The most northerly of the Midtmaradalstinder is easily climbed, but on its S. ridge is a row of four remarkable needles which have occasionally been used as a playground by enterprising climbers. Farther S. the ridge rises to its highest point in Store Midtmaradalstind, one of the big peaks of the group. The northern ridge, though it rises gradually, is extremely narrow and bounded on both sides by precipitous rock and ice walls. Hall tried this ridge in 1886, but was stopped by a perpendicular step about half-way up, and after trying in vain to find a way round it he and his guide were obliged to spend a night on the ridge. A few days later they attacked the mountain again and found a way up the S.W. face; but this route is such a great distance from Turtegrö

¹² *Aarbok*, 1893, p. 79.

¹³ *Ibid.* 1896, p. 66.

¹⁴ *Climbers' Club Journal*, 1913, p. 12.



THE EAST FACE OF MIDTMARADALSTIND
from Skagastölsbandet.

	Skagastölstind.		Styggedalstind.	
Maradalstinder.		Centraltind.		Gjertvastind.



THE EASTERN HORUNGER
from the South



P. Keith-Murray.

THE WESTERN HORUNGER AND THE N.W. WALL OF STORESKAGASTÖLSTIND
from above Mohnskar.

or any other habitable night quarters, that the mountain was not climbed again till 1897, when my brother and I with Ole Berge made another attempt on the N. ridge. The first part of the ridge went easily, and there was no difficulty in knowing when we had reached the place which had stopped Hall eleven years before. We found a rough stone wall where his party had slept on the ridge, and immediately beyond it the obstacle. The ridge dwindled to a thin knife edge, and then ended against a perfectly smooth perpendicular slab. We returned along the ridge for a short distance till we found a narrow chimney on the W. side, down which it was possible to climb. Fifty feet down we were able to traverse out of the chimney on to the face, and then, after crossing some narrow ledges, found another chimney which took us back on to the ridge, which we followed to the top. This has since become one of the regular ascents from Turtegrö and the whole journey up and down can be done in about fourteen hours.¹⁵

The E. side of this mountain above the Maradalsbræ is so steep that hardly any snow or ice collects upon it, and it rises from the glacier to the top in an almost unbroken slope of black slabs. It was climbed for the first time in 1908 by a party of three Norwegians. After fourteen hours of difficult climbing they were close under the top when Tönsberg, who was leading, fell off high up in a chimney, and was only stopped when he had fallen past the other two men and had gone the full length of the rope. This was at half-past eight on a Thursday evening. The position was desperate, for Tönsberg was unconscious and had amongst other injuries a broken leg, and it was not even certain that the other two men could get to the top. Bryn stopped with the injured man while Saxlund went for help. He traversed out to the left, succeeded in reaching the S. ridge, and then crossing over the top descended the N. ridge and ran to Turtegrö, where he arrived at one o'clock on the Friday morning. A relief party started as soon as possible, and going back the same way reached the scene of the accident at ten o'clock. They got Tönsberg to the top by hauling him straight up the face with ropes and then took him down the S.W. face, carried him up the Stölsmaradalsbræ, over the Ringskar, and down the Ringsbræ to Turtegrö, where they arrived on the Saturday morning, thirty-four hours after the accident. This story ends better than it begins. All the members of the relief party were awarded the

¹⁵ *Aarbok*, 1898, p. 99, and *Climbers' Club Journal*, 1913, p. 6.

Norwegian medal for valour, which had never before been given to mountaineers for any such service: also Tönsberg made a good recovery, and I have since spent a long day in the mountains with him.

To the E. of the Skagastölstinder, with which I have already dealt, all the big peaks are on the main central ridge. This part of the ridge is cut by no deep gaps, and only one pass has ever been made across it. Little will be done in this region by any party which does not include a man who can use an ice-axe quickly.

Centraltind, so called because it is the culminating point of the group where the greatest of the subsidiary ridges joins the main ridge, is usually climbed from Slingsbybræ by the N.W. ridge, on which there is a short vertical piece, the turning of which may give trouble if the mountain is in bad condition. I went up a few years ago, after an unsuccessful attempt upon Store Skagastölstind, with my friend Keith Murray, who was anxious to climb that mountain before leaving Turtegrö. The attempt was something of a forlorn hope, for it was nearly the end of August and there had been a fortnight of almost continuous bad weather earlier in the month. We got up Slingsbybræ into Mohn Skar without great difficulty, but above the skar the rocks were heavily iced and thickly covered with loose snow. An attempt on the ridge soon brought us to the conclusion that it was too dangerous to be amusing, and we descended to the skar. Then, spurred on by the knowledge that our holiday was almost at an end, we climbed on to the lowest part of the ridge between Vesle Skagastölstind and Centraltind and ascended both peaks. From the top of Centraltind Keith Murray took the photograph of the Skagastölstinder, which is here reproduced.

On a ridge running S. from Centraltind is the Maradals-tind, divided by a narrow cleft into two peaks, colloquially known as Manden og Kjærringen, the man and his old woman. Manden was first climbed in 1885 by Dr. Claude Wilson's party.¹⁶

Next to the E. of Centraltind on the main ridge is the double-headed Styggedalstind. Hall made the first ascent in 1883, going up either on or close to the E. of the northern ridge, the lower part of which divides Styggedalsbræ from Gjertvasbræ. This ascent was not repeated for twenty-eight years, and the fact that it was made does not appear to have

¹⁶ *A.J.* xiii. 153, and *Aarbok*, 1893, p. 82.

been very generally known in Norway. I once examined this side and picked out, as the safest route, what I afterwards learnt was Hall's line. We tried it the next day, and I reluctantly turned back because my companions thought that the final ice slope was too hard and steep to be safe. Hall's route was repeated for the first time in 1911 by an American and German party, who, delayed by the necessity of much step-cutting, had to spend a night on the top, and ultimately got down by following the summit ridge right over Centralind and Store Skagastölstind.

On the other side the mountain is equally difficult. The southern face runs down to the Maradalsbræ. This is the finest yet the least-known glacier in the group, and I believe that the parties who have been right up to its head could still be counted on the fingers of one hand. The gap between Styggedalstind and Gjertvastind is connected with the glacier below by a narrow ice-filled gully some 2,000 ft. high. Hall climbed this gully in 1887, and then from the gap descended the Gjertvasbræ on the other side. In 1888 this expedition was repeated by an English lady, Miss Green, with Thorgeir Sulheim and Anders Eide. Sulheim, a landowner and farmer of Skjolden, was Slingsby's companion in some of his early adventures. He made only occasional but generally brilliant incursions into mountaineering, and was one of the very few Norwegians of his day who was willing and able to lead a difficult snow and ice climb. This pass is in a class by itself amongst such climbs in the Horunger, and I know of nothing to equal it in Norway. Nobody has ever crossed it again; but I speak with some experience, for in 1909 I took part in the third ascent of the S. side, and I have also reached the gap from the N.¹⁷ I need hardly say that the gully is a place to be approached with some caution, and only after careful consideration of the condition of the mountain.

Gjertvastind, the last peak of the main ridge, is very easily climbed from Skogadalsboen by the broad eastern ridge. It is worth going up if only to look over the edge of the extraordinary cliff which runs right up to the top on the S.W. side. The climb between the top and the gap to its W. varies greatly with the state of the ice and snow, but is never easy.¹⁸ When the gap is once reached there is a little further difficulty in following the summit ridge over the top of Styggedalsbræ

¹⁷ *A.J.* xxv. 699, and *Aarbok*, 1891-2, p. 70.

¹⁸ *Aarbok*, 1891-2, p. 70.

and Centraltind. Ardent ridge wanderers have even been known to combine the traverse of this ridge with the ridge of the Skagastölstinder, but it is well to attempt this expedition only at high summer when it is light all night, for it is never likely to take much less than twenty-four hours.

I have now said enough of the principal peaks, and turn to the passes. The quickest way of getting from Turtegrö to Skogadalsboen is round the eastern end of the chain over the Keiser. This is not a glacier pass, and it is possible to get a pony over it; but it is never free from snow, and a good deal is expected of the pony. The four chief passes across the main ridge are none of them difficult. Beginning at the W. end the first is the Berdalskar, between Austabottind and Store Ringstind. There is some difficulty in passing a short but steep wall of rock and ice patches on the S. side, but the N. side is an easy glacier walk.

The Gravdalskar between Store Ringstind and Mellemste Ringstind is an easy pass and the most direct route between Turtegrö and the steamboat station at Aardal, a journey which can be accomplished in one long day.

The Ringskar is between Mellemste Ringstind and Ostlige Ringstind. If the passage of the Stölsmaradalsbræ icefall is avoided by keeping on the flat-topped ridge to the W. of that glacier, this pass offers no particular difficulty, but it is none the less a very interesting glacier expedition and a delightful way of going between Turtegrö and Vetti. They who make this pass in clear weather are rewarded by an astonishing view of the great waterfall on the opposite side of the Utladal at Vetti.

The fourth pass, Skagastölsbandet, is a wide snow col connecting the Skagastölsbræ with the Midtmaradalsbræ. On the top, close under Store Skagastölstind, there is a small stone hut which is about three hours above Turtegrö. On the S. side there is an easy descent to the left of the glacier into Midtmaradal, a valley cut off from the Utladal below it by so steep a cliff that no stock is ever brought into it to graze the abundant herbage which grows at its lower end. The sub-alpine part of the pass is indeed its only difficulty, and those who wish to cross it from N. to S. will do well to make careful inquiries as to how they are to get down into the gorge of the Utlå and cross that river when they have reached it.

A good many passes have been made over the subsidiary ridges—some easy, others excessively difficult. They are mostly of that order of pass which has been described as

leading from nowhere to nowhere, so they are for the entertainment of the mountaineer rather than for the use of the traveller. Some of them are none the less well worth crossing, and I for one have found that little passes do not always make little days. Elsewhere in the JOURNAL I have described how I once spent twenty-eight hours assisting at the first crossing of the gap between Manden and Kjærringen, when we had nine hours of continuous step-cutting in the ice-filled gully shown in the accompanying illustration.¹⁹ After this expedition I took an interval of an hour for a meal at Skogadalsboen, after which I had occasion to make a hurried journey over the Keiser to Turtegrö, where I arrived at the end of the thirty-seventh hour of a very active day. As an example of what can be done with better management within a reasonable day I recall a pass-crossing expedition which I made with Peder Bjerck in 1908. We began by going from Turtegrö to the head of the western branch of the Ringsbræ, and then made the ascent of a difficult little ice and snow-filled gully to a gap in the ridge just to the S. of Soleitind. We then went down to the Berdalsbræ and up to the head of that glacier, crossed the main ridge pass over to the southern side of the chain, traversed the upper part of three glaciers on this southern side, crossed back to the northern side by Skagastölsbandet and so back to Turtegrö. We had been away thirteen hours, and in that time had crossed six different glaciers and the five passes between them.

THE SOUTHERLY WALLS OF KANGCHENJUNGA
AND THE RATHONG PASS¹ (I.A).

BY HAROLD RAEBURN.

FIRST EXPEDITION.

KANGCHENJUNGA,² 'the Five Great Snow Peaks,' is one of the best known of Himalayan mountains. Its photograph from Darjeeling has been frequently reproduced, and the view of its snows from that rail-head and much

¹⁹ *A.J.* xxv. 706.

¹ Pronounced 'Ratong,' with a very faint aspirate before the 'o.'

² Lit. Kung-chen-dzö-nga, 'snow-great-peaks-five.' I believe its original name was simply 'The Great Snow,' analogous to Mont Blanc, Elbrus, and Ben More.