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Across Spitzbergen with Sir Martin Conway, with an Account of the Ascent of Hornsund Tind.

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(Read before the Alpine Club, February 2, 1897.)

> Where creeping waters ooze,
> Where marshes stagnate, and where rivers wind,
> Cluster the rolling fogs, and swim along
> The dusky mantled slope.—Thomson's *Seasons*.

ANYONE consulting the index to the first fifteen volumes of the 'Alpine Journal' in search of information regarding the mountaineering possibilities of Spitzbergen would find nothing, and the name of Spitzbergen has yet to be added to the list of special districts. It is an interesting fact that, in spite of its attractive appellation, no mention of this island group should have appeared in the Club's 'Journal' previous to 1895, in which year we have a paper on Ice Fjord, by Mr. E. Victor H. Gatty. The ascents made by the earlier explorers in this region—Martens, Scoresby, Lamont, and others—were confined to the smaller peaks and plateaux rising from the coast, and abstracts, by the late Editor, from their several accounts appeared in the Club's 'Journal' for 1895.

In the following narrative of a journey undertaken with Sir Martin Conway in the summer of 1896 into the interior of the West Island nothing, I fear, of any importance in the way of mountain ascents has to be chronicled; indeed, the chief claim to consideration that can be pleaded in the way of extenuating circumstances is the fact that the ascents described in the following pages are by far the lowest hitherto brought before the notice of the members of this Club.

On June 2 our party, consisting of Sir Martin Conway, Dr. Gregory, Mr. Trevor-Battye, Mr. H. E. Conway, the artist, and the writer, sailed from Hull for Bergen. Here we picked up our special ship, and, after a somewhat protracted voyage up the Norwegian coast, which looked most lovely in its mantle of winter snow, reached the entrance to Ice Fjord on June 18.

Mount Starashchin, c. 3,000 *ft.*

The ice was still closely packed at the upper end of the fjord, so we dropped our anchor at the entrance and waited till the tide had cleared out some of the floes Conway and Dr. Gregory accompanied our skipper in a boat expedition up the fjord to inspect the condition of the ice, while three of us landed on the flat swampy ground forming the foreshore of Cape Starashchin. Trevor-Battye started along the coast in quest of snipe, and the artist settled down on the spot where we had landed and was soon absorbed in his work.

Wishing to see something more of the country, I struck inland across the low swampy ground, which here extends for several miles between the hills and the sea, and directed my steps to the foot of a prominent mountain ridge running southward and nearly parallel to the seaboard. My original intention was to collect specimens of the rock, but habit is strong, and I had not gone far before the temptation to attempt the ascent of the peak overcame me. After examining the ridge for a practicable route I changed my course, so as to arrive at a point more directly under the summit of the mountain, and avoid traversing the whole length of the arête. This involved crossing the boggiest portion of the foreshore, and my first attempt at Arctic exploration was decidedly damping.

The low ground which must be crossed formed a portion of the recently raised sea floor which makes so conspicuous a fringe to all the more sheltered inlets on both sides of the island, and being composed of glacial *débris* originally deposited as a kind of submarine boulder clay, its consistency is loose and treacherous. This was for the most part still covered with snow, which was melting so rapidly, now that the long Arctic day had set in, that the whole surface had been converted into a species of snow bog. During the six weeks which followed we had ample opportunity of studying the peculiar characteristics of these bogs, half snow, half water, wholly abominable, but this, being my first experience of them, made perhaps the greatest impression upon me.

Here and there low domes of mud, from which the snow

had melted, afforded a firmer resting-place for the foot. The presence of these protuberances, caused by the swelling of the saturated ground by the expanding action of frost, and the consequent formation of shrinkage cracks, approximately hexagonal in shape, during the dry season, is a very characteristic phenomenon of these lowland flats. Progress over this kind of ground was nearly as irritating as the obstacle race over loose moraine by candle-light, so frequently involved by an early start in the Alps. As I plunged up to the knees in the liquid snow bogs, splashed to the eyes, I caught myself quoting remarks which I have frequently heard dropped by the man furthest removed from the candle on one of the above occasions. After nearly an hour and a half's tramping I gained the lower slopes of the mountain, and commenced a diagonal ascent to the foot of a projecting rib. This west side of the mountain is remarkably steep, and the nearly vertical buttresses were intersected by steep gullies, at that season still filled with snow.

Never did I come across a mountain in such a wretched state of repair; step after step gave way, and I do not think that during the whole of the ascent to the arête a single hand- or foot-hold could be called really safe. Having started from the ship without any intention of climbing, I was without an ice axe, and, moreover, hampered by a gun, a camera, and a geological hammer; the former, however, I abandoned soon after commencing the ascent. After mounting a short distance I was on the point of crossing the couloir to my right, in hopes of finding firmer rocks on the buttress beyond, when a portion of the cornice above broke off, and, gathering material from the upper part of the gully into which it fell, rushed past me down the narrow, sinuous couloir, hissing and writhing like a serpent.

After this little exhibition of temper I decided to stick to my rotten buttress, and, after removing a large portion of the mountain in my struggles, reached a small cornice which projected from the W. side of the ridge. Cutting through this with the geological hammer, I gained the arête. The structure of the mountain now became clear, and I was no longer at a loss to account for its disintegrated condition. I was standing on the upturned edge of one of the harder grit bands, here interbedded with the slates of the Hecla Hook formation, a rock series apparently older than any of the fossiliferous strata on the island. In no place in the world can the disintegrating effects of frost be so admirably studied as in these latitudes; the copious discharge of water from the

rapidly melting snow, during the continuous Arctic day, permeates all the cracks and saturates the rocks with water, which on the first frosty night is expanded into solid ice. In the case of the ridge of Starashchin, the strata having been tilted into a vertical position, access for the water is easily obtained along the truncated edges of the numerous bedding planes, slice after slice of the face being consequently wedged off and shattered into incoherent piles of rock.

But my attention was soon diverted from the rocks at my feet to the magnificent panorama which my access to the ridge had unfolded. I cannot hope to convey in words the beauty and grandeur of that view; the poet to the expedition might perhaps have done justice to it, but unfortunately I had left him shooting sandpiper on the marshes below. It was so similar to and yet so different from the views to be seen on a fine day from any of the famous summits in the Alps.

It was my first peep into the scenery of Arctic lands. As we coasted northwards on the previous day thick bands of fog had hung in curtain-like folds along the land, increasing our curiosity as to the country that lay behind. Now these had all rolled away, revealing a fairyland of ice and snow. The sun shone with a tempered glow in a wonderful sky of turquoise blue, a sky the colour of which was different from anything I had ever seen above the snow-fields of the Alps, where, on cloudless days, owing to the absence of suspended particles, the colour of the sky often approaches to black. My immediate interest lay in the direction of the interior, and I eagerly scanned the scene of our future operations.

Inland to the E. and S. my eye wandered over seemingly endless ranges of undulating snow: a few rocky peaks were beginning to push their dark points through the thick white mantle accumulated during the last long Arctic night, like the first young shoots of the snowdrop on the approach of spring. Snow filled the valleys to the E. in the direction of Coal Bay, damming back the drainage and forming lakes, and stretching shorewards till it merged into the frozen margin of the fjord. In the bay at my feet gigantic icebergs of a wondrous blue shimmered in the frosty light as they glided seawards on the ebbing tide. Beyond lay the ice-pack, and at the back of beyond lay that mysterious region the secret of which so many had tried in vain to solve, and which, in spite of many an heroic effort, it still clasps tightly in its icy grasp. I thought of Nansen, that gallant Norseman who, sailing northwards now three years ago, had drifted into the silence of that frozen waste, and, as I gazed, there crept over me a deep

mysterious awe, a shadow from the threshold of the great unknown. It was a scene not easily forgotten.

But a long distance still separated me from the summit, and at any moment the captain might return and sound the signal for my recall, so stepping carefully along the arête, sometimes ice, sometimes snow, I hurried as fast as possible to the foot of the first of the twin summits.

No difficulty occurred which would have caused trouble to a properly constituted party, but climbing alone on a corniced ridge, without rope or ice axe, was rather ticklish work; the situation, however, was not devoid of humour, and I laughed aloud, whilst cutting a staircase with my hammer down a sudden dip in the arête, about as wide as my boot, when I thought of the expression which the face of my old tutor, Joseph Imboden, would have worn if he could suddenly have come across me at that moment.

After many ups and downs, however, I arrived near the summit of the northern peak; traversing below this, I kicked a passage across the snow face and rejoined the arête to the S., and was pounding along to what I considered must be the highest point of the ridge when I thought I heard a faint whistle. Turning towards the entrance of the bay I could see a tiny puff of steam floating away from the funnel of the little toy steamer, and as I watched there came a second little puff, followed by a faint whistle; this was the signal agreed upon for my recall. Glancing hurriedly round me, I exposed one film and then turned and fled.

For a time I kept along my previous track, but on reaching the foot of a long rise in the arête, I suddenly discovered that the steamer had left her anchorage and was steaming away up the fjord. Abandoning the arête, I turned straight down the W. face of the mountain, thinking it better to risk a precipitous but rapid descent than run the chance of a lingering death from starvation.

My troubles soon began: the couloir down which I started became rapidly steeper; the snow into which I plunged up to my knees gave no support, and showed an evident intention of breaking away; and a little further down the sudden acceleration of a leg which I had tentatively advanced, showed the dreaded presence of underlying ice. There was no choice but to continue the descent by the rotten rock ridge on my right. This involved great delay; armfuls of *débris* had to be pushed away, and a little platform constructed for each step: even then there was no feeling of security.

Suddenly the buttress I was descending stopped short at

the junction of two couloirs. Like those further to the N., which I had avoided in the morning, they were swept by avalanches from the corniced arête above, and presented a steep surface of treacherous ice. Retreat was impossible, so, taking an apprehensive glance up the wicked-looking gully above me, I began rapidly cutting steps with my hammer across the narrowest part of the couloir. I fear these steps would not have won approval from the editors of the Badminton book on 'Mountaineering,' in which we read that 'the greatest number' of strokes 'is required in cutting steps for a traverse of a very steep, ice-filled gully,' and, further, that 'a good guide has been known to take seventy strokes to fashion a step;' but I must own that my dominating impulse was to reach the far side of the couloir as quickly as possible. Once, when nearly across, a stone tobogganed gracefully past me, serving, if possible, to hasten my movements. But at last I was across, and after this the slope lessened, and in another 20 min. I had reached the scree slopes below.

For the first time since I left the arête I had leisure to look for the steamer: she was nowhere to be seen!

As I replaced my glasses after a fruitless examination of the bay I discovered that I had dropped the roll-holder attached to my camera. Searching carefully with the glasses along my line of route, I finally espied the truant box neatly balanced on the last point of the buttress I had quitted, and, of course, on the wrong side of the couloir. As the steamer had gone there was no further cause for hurry, but I hesitated before I decided to risk two more interviews with that abominable gully. However the disablement of one of my cameras at the very beginning of the expedition was too serious a loss to be accepted without a struggle, so, toiling up the rotten buttress once more, I managed to regain possession of the box. In returning, however, I dropped my fur cap while stooping to improve a step. It disappeared down the couloir, and there it lies, a careful search at the bottom having failed to reveal a trace of it.

As I jumped and waded along the five miles of swamp to the coast I recollected that I had eaten nothing since breakfast on the ship, and it was already seven o'clock. The reflection was not a cheering one. The steamer had gone, and Trevor-Battye and the artist had, I knew, returned long since to the ship. I looked about for a sleeping-place and for something to shoot, and thought of the stories of marooned mariners. Only the night before Trevor-Battye had recited to us a ballad of his own composition about a marooned whaler,

whose brain gave way under the strain of Arctic solitude. Some of the verses recurred to me, and seemed to describe very closely my own predicament.

> And who shall win when the fates begin to rustle their pinions black?
> For the bergs that ride with wind and tide had driven the vessel back,
> So that she lay ten miles away, low in a red sun's track.
>
> This was the thing which, wearying in hunger, and alone,
> Allan learned as he returned to drop on a barren stone,
> Sick with the sense of his impotence, and with doubt of the drear unknown.

Nor was the sequel which describes the finding of the marooned man any more cheering. It ran something like this :—

> And out of the ground a figure wound through the roof of a lair of snow,
> Weird as the theme of a graveyard dream, gaunt as a gallows crow,
> And rocked itself on an icy shelf, moaningly and slow.
>
> It sucked at the heel of a dead grey seal, like some wild creature caged,
> And peered at the prize with puckered eyes, critical and aged,
> Glancing askew at the presence new, as jealously enraged.

With these rhymes running in my head I reached our landing-place on the coast, and there, to my great relief, I found our boat, and the artist still sketching. It appears the boat had been sent to wait for me, and the artist had taken the opportunity of returning to finish his picture. My first enquiry was for food, but there was none to be had, the party having returned to the ship to dine; but I espied a half-empty mug of beer, which had been standing in the sun since the morning; this I finished without ceremony and with great satisfaction. After an hour's pull, of which I shirked most of my share, we reached the ship, and I did ample justice to a cold supper, having been nearly 12 hrs. without food.

The next two days were occupied in landing stores and ponies and establishing a camp in Advent Bay. On June 22 Conway and I started with one man and two pony sledges to establish a camp a few miles inland and explore the country in the direction of Low Sound Bay. Our chief difficulty arose from the boggy character of the ground and the prevalent fog. The ground proved very bad going for the ponies, and one or other of them was frequently engulfed up to the shoulders in liquid mud or melting snow-drifts, and the light sledges we had brought were soon worn through. We managed, however, with considerable difficulty to transport two Mummery tents and a supply of food and fodder to a knoll on the S. side of Advent Vale, about 10 miles from the coast. Here we camped for four days, during which we explored the high

ground to the S.W., the culminating point of which we christened Fox Peak. We had originally intended to cross with the ponies to Low Sound Bay, but after a preliminary inspection we gave up the idea, and made the journey alone with knapsacks, existing during the 30 hrs. we were away on slabs of emergency food. The passes by which we crossed were named respectively Fox Pass and Bolter Pass.* On our return to camp we were joined by Dr. Gregory and Pederson, a hunter whom we had brought with us from Norway. For two days we continued up the valley, and the third day we turned N. over Brent Pass to the Sassendal.

During our journey across the island most of Conway's time was occupied in making the map, so that I received the somewhat honorary appointment of master of the horse; the burden of the post was, however, greatly reduced by the assistance I received from Dr. Gregory whenever the caravan became hopelessly immersed. Another appointment which fell frequently to my lot was that of minister of the interior. This post was not of quite so honorary a character as the other, as it enabled me to choose what I liked best for dinner—that is to say, to decide whether we should sup off a blue or a red ration cartridge, and whether it should be served as a soup or a porridge. Luckily my companions were not fastidious. In Conway's case, spending as he did his days in surveying, he was thoroughly accustomed to a plain table, and Dr. Gregory kindly said he much preferred my filleted reindeer to *ragoût* of crocodile or even hippopotamus steaks.

After a delay of nearly a week at Waterfall Camp, in the Sassendal, occasioned by the breakdown of our sledges, we started across for the E. coast. The last portion of the journey we performed without the sledges, as it involved the crossing of the Ivory Gate, over which it would have been impossible to drag the ponies. The watershed of the island is situated somewhere under this glacier close to the E. coast, and after crossing to Agardh Bay we were able to return to our camp the same night.

Two days were sufficient to bring us back from here to Waterfall Camp, where the cook celebrated the occasion by the addition of a plum pudding to our ordinary fare. This had been provided by the kind forethought of Lady Conway, and in order to do it justice an attempt was made to serve it with brandy sauce. Unfortunately the other ingredients to

* See map illustrating Sir Martin Conway's paper, *Geographical Journal*, May 1897.

hand consisted only of margarine in an advanced stage of decomposition, and beetroot sugar, and although we stirred it with great vigour and added arrowroot to thicken it, the brandy continued to remain proudly aloof, so we drank the brandy and eat the solid part, which we thought had a curious resemblance to toffee.

The next day the party separated; Conway and Dr. Gregory continued down the valley to Sassen Bay, while I remained at Waterfall Camp to assist in conveying the sledges back to Advent Bay on their return.

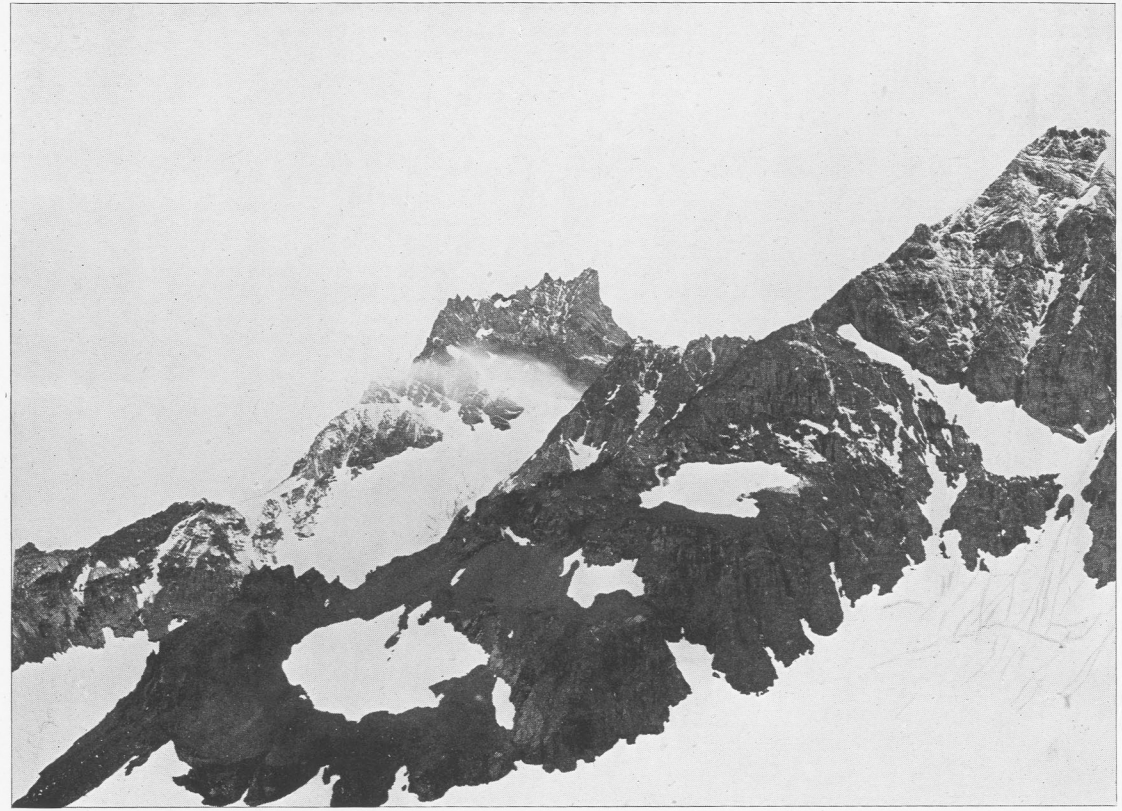
I had, therefore, two days at my disposal before they could return. The first day I spent in collecting reptile remains from the Triassic rocks on the Trident; the second day I decided to devote to an exploration of the glacier system in the neighbourhood of the Baldhead; so, packing up my tent for Carl to pick up in the evening, I walked across Brent Pass to the head of Advent Vale. For quite a long way I was accompanied by a little snow bunting, who hopped along beside me for half a mile without the slightest trace of fear, singing his sweet little song while I whistled him an obbligato. As I waded the countless streams which rippled over the moraine-strewn flat at the foot of Booming Glacier, I realised that in order to penetrate as far as possible to the S. it would be better to abandon the ascent of the Baldhead, and follow a higher ridge which runs further E. into the heart of the glacier system from which Booming Glacier takes its rise. Stumbling over the loose moraine and wading ankle deep in liquid clay, I reached the foot of a tributary glacier coming down from the S.W. This had once formed a feeder to the larger glacier, and was responsible for the old lateral moraine over which I had come. This glacier has now shrunk back into its own valley, leaving a narrow passage between its own retreating snout and the overhanging side of its advancing neighbour. A glance at the piles of ice recently fallen across this passage made me resolve to keep to the lateral moraine on which I stood, and to attempt the crossing of the smaller glacier some distance above its snout. This involved a clamber upwards over loose and boggy moraine of the most villainous composition, recalling a wet but happy day I once spent studying the formation of mud glaciers on the cliffs of Alum Bay; indeed, the stuff was nothing more nor less than a boulder clay in process of formation. On reaching the left side of the glacier I had some difficulty in finding a place where I could safely cross it, as the surface drainage which flowed to this side had excavated a channel for itself along

the edge of the ice. This was too wide to jump where it was open; besides, there was nothing to land on on the other side except a steep ice-wall, and where, partly roofed, in the snow was in much too treacherous a condition to trust to. By following it up some distance, however, I secured a footing on the glacier, and was soon across; the same difficulty had again to be overcome in descending from it on the S. side.

Starting up the ridge, I discovered that I had by no means exhausted the dilapidated peaks on the island, for the arête was simply a pile of débris, but the remarkable thing was the size of the fragments, the majority of which I could scarcely lift. These consisted of several large slabs of yellow sandstone, many of them 2 or 3 ft. square and over an inch in thickness, piled in a loose heap as if they had just been tipped out of a cart. During the whole ascent I never found a fragment of solid rock, and when I endeavoured to trace a fossilliferous fragment I had picked up to its parent rock by moving off the loose slabs I had finally to give up the quest in despair, as I was afraid that if I continued to remove everything that was loose I should eventually have no mountain left of which to chronicle the ascent. Indeed, the answer of the Irishman in reply to a tourist who had asked the height of a hill, that it was 3,000 ft. to go up and 1,000 to come down, would not then have been an inaccurate description of Booming Peak.

Portions of the arête were, however, covered with snow, and these afforded a welcome relief, though in places so steep and hard as to require step-cutting. Though a dull and tedious climb, the ridge afforded me the view I sought; it commanded the whole of the basin and feeders of Booming Glacier and the now disconnected tributary flowing from the S.W. slopes of the Baldhead. Immediately below stretched the curious and interesting surface of the main ice stream with its swollen and serrated margin rising high above the centre, resembling nothing so much as the row of finger biscuits on the edge of a bowl of trifle. The evident manner in which the glacier was advancing and forcing its way up over the old lateral moraine, was most interesting. The more rapid motion of the upper layers caused the sides to overhang in perpendicular cliffs, from the top of which avalanches of ice were perpetually crashing on to the floor of the valley below.

This raised and broken edge could be traced for some distance up both sides of the glacier, presenting a marked con-



Edmund J. Garwood, photo.

Swan Electric Engraving Co.

THE RANGE OF HORNSUND'S TIND.

Seen from Bastion Ridge.

trast to the sloping convex snout of the retreating Baldhead tributary.

This is not the place to discuss the present climatic changes of Spitzbergen, but it may be noted that from this glacier we have evidence that the general advance shown by so many of the Spitzbergen glaciers does not of necessity prove an increase of glacial conditions in these latitudes.

After descending to the foot of the ridge I debated whether to re-cross the Baldhead Glacier or risk the shorter and easier passage between the two glaciers. Being tired and hungry I decided in favour of the quicker route, and skirting close round the foot of the smaller snout, I scrambled over the fallen blocks of ice until I was forced to climb on to the old lateral moraine to avoid walking under the over-hanging séracs which threatened to fall at any minute. After wading the interminable streams separating me from the camp I reached Carl and the ponies at 3 A.M. without mishap.

Carl was asleep, and the ponies had strayed out of sight, having been, as usual when left with that master mind, insecurely tethered; having long since used up both pairs of reins and all our light Alpine rope for this purpose, he had probably nothing left with which to fasten them up. The next two days I was occupied in getting Carl and the sledges down to Advent Bay in time for the post boat.

During this journey, whilst temporarily absent exploring an alternative route, Carl succeeded in losing my hammer and ice-axe off the sledge. The loss of one of our ice-axes was badly felt when we camped, as the only substitute I could find for a tent pole was my bamboo camera-stand.

The next day we reached Advent Bay and a few days afterwards were joined by the rest of our party.

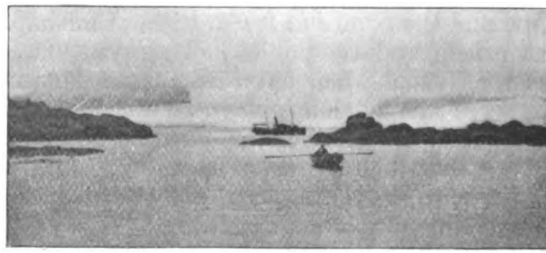
Hornsund Tind, or Mount Hedgehog.

On our arrival at Advent Bay after our voyage round the coast, finding that three days must elapse before our ship returned to Norway, and my services being no longer required to drive Carl and the ponies (all of whom I was rejoiced to find had been shipped off to Norway) I proceeded to put into effect a project which I had long cherished of running down to the south of the island and exploring Hornsund, and, if possible, ascending Hornsund Tind. This, at least, was the excuse I gave for my departure; the real reason being that I preferred to be absent when Conway was presented with the bill I had run up for luncheons at the tourist hut, during my

three days in Advent Bay when I had returned to the coast, after living for five weeks on emergency food in the interior.

Conway was sorry he could not come with me, but generously lent me his boots, saying, that in order to finish his map he must once more see the sun. As we had previously only seen the sun on five days during our stay of seven weeks, I marvelled at his faith in that coy luminary until I caught his glance wandering from my little pile of provisions, consisting chiefly of salt reindeer, ship's bread, and emergency food, to the hotel, containing—but I know what he was thinking of, and I thought much the same, and nothing but the vision of that bill would have driven me off again on that undulating launch.

Trevor-Battye had, however, agreed to accompany me, so, piling the deck of the little 'Expres' with as much coal as she could carry in sacks and barrels, we started off on the



HORN SOUND.

evening of August 14 in a drizzling fog, taking with us ice-master Bottolfsen and a crew of three men.

After an uncomfortable voyage of 18 hrs. down the coast we arrived at Hornsund in a thick mist, and anchored among some rocks, out of reach of a stream of drifting icebergs. We spent a day waiting for the weather, and were prepared to sit it out, but the weather seemed equally determined, and, as our provisions were limited, we agreed to start next day in spite of the fog.

The next morning we spent in making preparations. None of us had much to boast of in the way of boots. I was wearing Conway's, which were a quarter of an inch too short for me. Trevor-Battye had some old shooting-boots with small mud nails, while we rigged Bottolfsen up in some ancient sea-boots, into which we hammered some cricket spikes which we discovered in Trevor-Battye's old canvas waders. There was still another man to provide for, but we only intended to take him as far as our sleeping place, so I told him to take an

extra pair of socks to put over his boots. He did so, but as he put them on immediately we landed, he arrived at the edge of the ice with a pair of frilled woollen spats, and became rather an anxiety on the glacier. Bottolfsen, having visions of sport, insisted on carrying a gun, in spite of our attempts to dissuade him. Leaving the launch at 3 P.M., we landed in the south-east corner of the bay which lies about halfway along the southern margin of Hornsund. Shouldering a tent and a rug, and provisions for twenty-four hours, we started nearly due S. over the flat-raised beach, which gradually merged inland into the terminal moraine of a large glacier.

The previous afternoon I had ascended a small hill near the coast, in order, if possible, to obtain a view of our peak, but everything over 500 ft. or 600 ft. high was buried in fog, and I could only see the snout of a glacier which appeared to

THE START.

fill the upper part of a valley. This ran in the direction in which, judging by the chart, we expected Hornsund's Tind to lie.

In the absence therefore of more definite information we decided to ascend this valley, steering generally in a S.E. direction on the chance of stumbling on our mountain somewhere up in the fog.

After examining the relics of an old blubber factory on the coast, we started up the right side of the valley, sometimes over débris slopes, and sometimes over an old lateral moraine, until we reached the edge of the glacier. On the way we passed over a small medial moraine composed entirely of grey marble, veined with pink, contributed by a small glacier issuing from a steep-sided gorge to the E. Here we mounted on to the glacier, and, entering at the same time into the zone of fog, steered by compass in a general S.E. direction. It was not long before we became involved in a labyrinth of crevasses. These ran, generally speaking, at right angles to our line of route, and being prevented by the fog from seeing

more than a short distance ahead, our progress became slower and more laborious.

My companions had scarcely any previous knowledge of glacier work, and it was with increasing anxiety that I watched our friend the cook with the woollen spats across each succeeding crevasse. After some time spent in endeavouring to reach the other side of the glacier we decided on retracing our steps to the moraine we had left. On reaching this we continued for some distance along it until forced once more on to the ice. Here, however, the gradient was less steep, and the crevasses consequently fewer and narrower; but the surface was snow-covered, and the bridges treacherous in the extreme. In these latitudes as long as the sun is perpetually above the horizon the temperature in the valleys rarely sinks below the freezing point, and the snow left unmelted from the previous winter is usually rotten and unsafe; thick bridges, therefore, which in the Alps would bear a considerable weight, even at mid-day, here yield readily to a prod of the axe. This rendered additional care necessary, and we found it unsafe to jump even narrow crevasses on account of the untrustworthy nature of the landing afforded by their edges.

As we advanced diagonally up the glacier the fog thickened, and presently it began to snow. Matters looked rather hopeless, so we sat down on the snow and ate our emergency food, and discussed the situation. After a short halt we pushed on again, having decided to continue in a S.E. direction until we reached the watershed of the island, or until stopped by impassable crevasses. Imperceptibly the fog thickened, until one could scarcely see the next man on the rope, and although the ground at our feet was so indistinct that the white lines, which indicated the snow-filled cracks of the névé crevasses, were not always discernible, the glare reflected from the fog and snow was almost blinding. It was impossible to see at all with glasses, and the strain on the eyes was most trying. I felt a curious mesmeric drowsiness stealing over me which I had previously experienced in a slight degree in Switzerland after a long day on the snow. We had all been affected by this feeling when crossing the Ivory Glacier, but on this occasion the strain on the eyes was greater, and the feeling more intense.

For some distance we followed the tracks of a fox, hoping they would lead us to the moraine, but presently we found ourselves again amongst open crevasses which we endeavoured to outflank. After skirting along their edges for some time Trevor-Battye, who was behind me, and keeping me straight,

as far as possible, by compass, suddenly announced that we were heading due N., and would soon be returning on our tracks, so retracing our steps we turned the crevasses on the far side and regained the more level plateau; we subsequently discovered that the crevasses ran in a circular manner round an upraised dome of ice, due doubtless to a projection in the floor of the valley at this point, and, but for the compass, we might have wandered round the dome till the fog cleared.

We continued cautiously up the plateau after this, prodding at every step until we estimated that we had come a distance of over 5 miles from the coast, and the ground appeared to drop slightly in front of us. We halted to consult, and had just agreed that we must have passed the watershed and be descending on to the east coast when the fog cleared for a moment in front, revealing, within a stone's throw of us, a precipitous wall of rock fully 3,000 ft. in height. The top was still hidden in the fog, but what we saw convinced us that this was certainly part of the mountain of which we were in search. At the same time we discovered a rocky island on our right rising out of the glacier, and decided to camp on it for the night. We had scarcely taken a bearing of it when the fog closed down on us again as thick as before. We reached it, however, at 8.30 without further accident than the temporary loss of a leg in a crevasse, and, raking together such stray stones and earth as we could find, pitched our camp on a rocky ledge and searched for water. But not a drop could we find, and eventually we gave up the quest in despair and filled our cooking pot with snow. Three mortal hours and a half did it take our little spirit stove to melt and boil sufficient water to mix with our ration cartridges, and at 12.30 midnight we lay down in a heap on the ground and tried to shiver ourselves to sleep. We had only been able to carry up one thin ship's blanket between us, and the cold was considerable. During the night the wind rose and snow fell for some hours, and the cold made it impossible to sleep. After fidgetting incessantly for a couple of hours the cook, who was sleeping across our feet, got up, declaring his intention of returning forthwith to the ship. As he would certainly have tumbled into a crevasse before he had gone 100 yds. we used our eloquence to dissuade him, and eventually compromised matters by allowing him to wedge himself in beside us, though we were already tightly packed. It now became difficult even to breathe; turning round was utterly out of the question. At 6.30 I could stand the position no

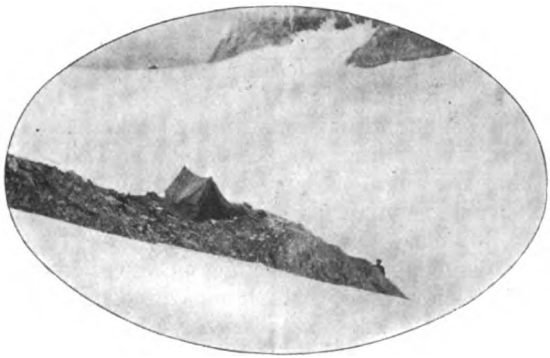
longer, and sounded the *réveil* by a sneeze, which effectually aroused my companions. The weather was precisely the same as the night before, thick fog and a slight snowfall. Occasionally we could see an outline of the foot of the mountain and our tracks over the névé, nearly obliterated by fresh snow. The thermometer registered 9° of frost, but it must have been considerably colder than this during the night. At 9.30 it was still snowing hard, but about 10 o'clock the fog cleared slightly, and Bottolfsen very pluckily volunteered to go back to the ship for provisions and spirit. To my surprise the cook willingly agreed to accompany him, and we watched them disappear down our tracks until the fog hid them from sight. Then, with a sigh of content, Trevor-Battye and I wrapped ourselves in the blanket and dozed till 4 P.M. We were roused by an unusual glow in the tent, and, looking out, found the sun shining and most of the mountains free from fog. Scrambling into our boots we ascended to the highest point of the ridge on which we had pitched our camp. The view was very fine; banks of cloud were rolling away over the sea, and through them shone the sun. We could see the whole of yesterday's route, and away down in the bay a little black speck indicated the position of the launch. In front of us rose the black and precipitous face of Hornsund's Tind, forming a wall nearly 2 miles in length, which terminated in a nearly horizontal arête. Here and there a few small gensdarmes protruded. The summit of the mountain rose from the southern end of this arête, where it crossed the western buttress which runs down steeply towards our camp. Before reaching the névé, however, this rises again into an irregular arête connected with the rib on which we were encamped.

This ridge running round to the N.W. ends in the little peak on the shore of the bay which I had ascended during our stay in Hornsund, and forms the watershed of the district. The basin thus formed is occupied by the glacier which we had ascended from the bay. To the S. of this ridge the ground falls gradually to a low, swampy tract of raised beach connected with an indentation in the coast-line to the S. This is badly delineated on the chart, and the axis of Hornsund Tind, which runs nearly N. and S., is placed on the chart running in an E. and W. direction.

After photographing the peak and planning a line of ascent, I left Trevor-Battye to sketch, and returned to camp to look for the men who were bringing our supper. I scanned the glacier in vain, and cursed my stupidity in

allowing the men to take the whole of our 60-ft. rope, leaving us imprisoned on an island of rock, surrounded by névé crevasses covered with fresh snow. As I watched for the men the fog gradually crept up, and before long it settled down upon us as thick as ever, and I realised that our chance of making the ascent was gone.

I was musing on the hollowness of life when my attention was attracted by a moving object on the other side of the tent. At first I thought it was a bear, but I presently discovered that it was our men returning from the opposite direction to that in which I was looking for them. In spite of my injunctions not to leave our track, they had tried a short cut, which had landed them in the middle of the nest of crevasses surrounding our camp. Their appearance was



Our Camp on Bastion Ridge.

decidedly ludicrous. Bottolfsen, who had made the acquaintance of the interior of five crevasses on his way up, was plastered up to the eyes with snow; he was hung all over with an odd assortment of objects—cooking tins, biscuit boxes, &c.—like the White Knight in 'Alice through the Looking Glass.' These had originally been contained, he told me, in a blanket on his back, but they had 'strayed' during his temporary visits below ground.

Summoning Trevor-Battye, who arrived shivering with cold and the paints frozen solid on his canvas, we started the tedious operation of boiling snow for supper. About 11 P.M. we saw that it was hopeless to start that night; the wind was rising, and it was snowing heavily, so we resigned ourselves to fate, and tried to sleep. Presently the wind increased to a gale, and we had to turn out and lay big stones round the floor of the tent to prevent it being blown bodily away.

We looked out at 5 A.M.; it was still snowing, and nothing was visible but a great whiteness. At 10 we cooked some coffee, and the wind, which had previously moderated somewhat, again increased to a gale. Bottolfsen cheered us with Arctic yarns, and we inspected the weather at intervals. At 12.30 we performed our ablutions, and had some lunch. The ablutions were scanty, owing to the absence of water, and consisted chiefly of a rub with snow; what the French would call 'Nettoyage à sec.'

We took stock of our remaining provisions—not a difficult operation, as they consisted of one tin of Irish stew and a ration cartridge, a few biscuits and chocolates, and some slabs of emergency food.

It was suggested that as soon as it cleared a little we should make tracks for the ship, but I was loth to abandon the expedition as long as we had food, and stated my intention of at all events reaching the foot of the mountain, and obtaining specimens of the rock. So at 8 P.M. we put the remains of our provisions in our pockets, wrapped ourselves up in everything we possessed, and started for the peak, leaving the engineer buried under the tent, from which we had abstracted our ice axes, with orders to begin melting snow when he heard us shout.

At first we kept up Bastion Ridge, as we called our camping ground, to the snow saddle which separated us from the main W.S.W. arête. By crossing exactly along the top of the saddle we avoided a gaping Bergschrund which circled the head of the glacier basin.

As the only mountaineer of the party it fell to my lot to lead, and wishing to avoid as much step-cutting as possible, I kept to the top of the arête, but my companions did not fancy the rocks, which were smooth and hard, so we descended to the edge of the snowfield which falls on the south side of the ridge, keeping along this as far as the depression at the foot of the western buttress, which I proposed to ascend. On reaching this col the fog cleared for a moment to the north and we had a glimpse of the head of Hornsund. The sun was sinking very near the horizon and glowed like a ball of molten metal, while the icebergs in the bay caught the glint of orange light, reflecting it in flashes on to the surface of the water; the whole was vignetted in fog whose margin was lit up with a crimson glow, making a most exquisite picture. It was the only view we had, for the rest of the day we could scarcely see more than a few yards ahead.

After Trevor-Battye had made a rough sketch we began the

ascent of the buttress, skirting always round the margin of the snowfield, which gradually narrowed to a steep couloir.

As I got tired of kicking steps in boots which were too short for me, I again took to the rocks, but a growl or two from my companions sent me back to the snow. We were now turning up into the narrow part of the couloir, and the steps became harder to kick and soon had to be cut. Gradually the surface of the old snow changed into névé ice, and finally to blue ice; in places this was covered with as much as a foot of fresh snow which had avalanched from the steep sides of the couloir, and made step-cutting more difficult. At length we reached the foot of the final tooth and with some difficulty gained a footing on the rocks. These were very smooth and plastered with ice, and the covering of fresh snow obliterated all handholds.

After proceeding a short distance, Trevor-Battye declared that he had had enough and proposed our return. I glanced at Bottolfsen, who said nothing, but looked unutterable things.

On a fine day half an hour's climbing would probably have taken me to the top, but the mountain was in no state for solitary climbing, and the weather was as bad as it could be. It was snowing again, and only a few feet of the base of the tower were visible through the fog. There was nothing to gain by continuing the ascent, so I read my aneroid, which gave the height as 4,400 ft. Scoresby gives the height of the mountain, as surveyed from the coast, at 4,395 ft., and that of the more northerly peak as 3,306 ft., while the chart marks the summit at 4,480 ft. We agreed at the time that the tower rose about 70 or 80 ft. above the point where we stopped. I looked at my watch; it was just half an hour after midnight.

Turning back I found my companions had already begun to descend. When we had returned a short way I remembered a stick which we had brought up to leave as a memento of our ascent. We had sacrificed one of our few remaining tent-pegs, which we had squared, carving our names on three of the sides and the date on the fourth. This we deposited as safely as possible on the rocks and continued the descent.

All went well for a time, but the steps gradually became more difficult to find, and I changed places with Bottolfsen, who had hitherto been leading down. It was an awkward position, and Bottolfsen had no axe, only the broken fragment of the pole he had brought up. I lent him my axe afterwards and tried the pole, and I can only say that his performance coming last down the upper part of the couloir was

exceedingly creditable. Indeed, the whole behaviour of my two companions was most plucky throughout the expedition. Neither of them had previously ascended a snow mountain, and their perseverance under the conditions in which we found the peak redounded greatly to their credit. I know that their chief reason for accompanying me was pure good nature, and, not being mountain enthusiasts, they must have found the ascent tedious and trying in the extreme.

Coming down was not much more rapid work than ascending, though it was vastly easier for me; in the end, however, we reached the snow col a little before 5 o'clock. Here the fog was so thick that further advance was fraught with considerable risk. It was essential that the saddle should be crossed along the top, any deviation to one side or the other would inevitably have landed us in one of the bergschrunds which swept round the head of each snow-basin, nearly joining on the saddle which we had to cross, where they were only a few yards apart.

Not a landmark could be seen, and we cast about on the edge of the col for our old tracks, but the snow, which had fallen during our ascent, had completely obliterated our footsteps, and after turning in every direction until we lost our bearings, we were forced to return on our track to the rocks. No other resource being left, we set our compass in the general direction of Bastion Ridge, and plunged into the unknown.

After some minutes of considerable anxiety, expecting at each step to plunge headlong through the lip of a bergschrund, I noticed marks on the snow at my feet; stooping down to examine them, I found that I was walking directly in our former tracks. Yelling with all our might to the imprisoned engineer, we hurried down Bastion Ridge, and were soon under the friendly shelter of the tent, where we arrived at 5.20 A.M.

Eating up our emergency food, which we had been too miserable to consume on the peak, we washed it down with unsweetened coffee. Just as we had finished, Trevor-Battye, with an expression of intense pride, drew from his pocket a fragment of the rind of an old Dutch cheese which he had bought on the ship in Advent Bay. This he generously divided between us, and then our thoughts turned to a smoke, but our tobacco was finished, and we had only one match left. Raking up the ashes in our pipes we struck our last lucifer in breathless silence and solemnly handed it round.

After four hours' sleep we started down to the coast. The fog had lifted slightly, and we had no difficulty in finding our

way to the boat. Here we learned that the captain had almost given us up in despair, and that the steamer, which we had hoped to catch on its way to Norway, had sailed two days before, after waiting for five hours in the bay.

As our provisions were practically exhausted there was no use in remaining where we were, so getting up steam, during which process we made a short boat expedition up the bay, we set out across the five hundred miles of Arctic sea which still separated us from Tromsö and civilisation.

The voyage was decidedly lively, though not really rough; our little launch was swept by wave after wave, and we had frequently to slacken to half speed to avoid diving underneath altogether. Matters in our little cabin reached a climax when the water, which was rushing about on deck, *ricocheted* down our companion and plunged in one stupendous leap (as they say in the advertisements of waterfalls) on to our cabin floor, converting it into a swimming bath.

The boat was rolling heavily at the time, and, before we could oust the unwelcome intruder, an avalanche of miscellaneous commodities shot over my head from the shelf above. On the top of this a table, whose equilibrium we had hitherto implicitly relied on, distributed its contents impartially into the bath. The collection swimming about by this time was decidedly comic; birds, biscuit tins, bread, margarine, boots, note books, and onions jostled each other at every lurch, while a tumbler of cod liver oil, which Trevor-Battye had brought as a specific against colds, floated in amber globules on the surface of the water.

In fishing the things out I came across my watch, which had already lost its glass in the step-cutting on the previous day; its immersion in sea water had completely finished it, and nothing would induce it to go. In his book on Africa, Dr. Gregory, I remember, speaks of the treatment he recommends for watches that refuse to go: he oils them, pats them, and finally says hymns over them. Mine had been thoroughly soaked in cod liver oil, and I patted it vigorously, but, as Dr. Gregory was not present to sing hymns over it, the charm failed to work. After this we barricaded the deck with our casks and sacks of coal, and, eventually, after three and a half days at sea, we made Tromsö harbour.

Thus ended rather an adventurous expedition which brought us back after our enforced starvation with the best appetites that we had ever enjoyed, enabling us to do ample justice to the banquet given next evening to Dr. Nansen, who, we found, had just safely returned from his marvellous voyage.

As regards the future of Spitzbergen as a climbing centre it is difficult to prophesy. The traverse of Hornsund Tind should always be an interesting expedition; but, judging from the accounts of all who have sailed up this coast, the mountain is exceedingly liable to be enveloped in fog. Further north, on King Charles's Foreland, sharp peaks of upwards of 4,000 ft. can be found, while still further north the mountains surrounding Cross Bay and Magdalena Bay contain many miniature Matterhorns which should afford good sport; but the interior of the country, and the E. coast, at least, as far as we saw it, offer but scant attractions to the mountaineer.

It must, however, be remembered that the country itself, with its ever-changing lights and perpetual summer day, its massive glaciers and floating icebergs, cannot but prove attractive to those members of the Club who love the Alps, even on off days; and few I think would fail to yield to the fascination of these Arctic lands, a fascination which, once felt, it is difficult if not impossible ever to shake off.

The Dom in January.

By SYDNEY SPENCER.

(Read before the Alpine Club, April 6, 1897.)

THACKERAY tells us in 'The Newcomes' that there may be nothing new under and including the sun; yet it looks fresh to us every morning. The same may be well applied to the great peaks of an Alpine range; for he is no