

Work and Adventures of the Northern Party of Captain Scott's Antarctic Expedition,

1910-1913

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## WORK AND ADVENTURES OF THE NORTHERN PARTY OF CAPTAIN SCOTT'S ANTARCTIC EXPEDITION, 1910-1913.\*

By RAYMOND E. PRIESTLEY.

CAPTAIN SCOTT had intended from the beginning of his preparations to have a separate and smaller scientific party to attempt to explore King Edward's Land, and thus the Eastern Party came into existence. The name of the party was afterwards altered in consequence of change of position of their wintering station with regard to the home base.

On January 20, 1912, we said good-bye to the Southern Depôt party, and on the 27th the Terra Nova left McMurdo sound on her cruise to find us a home. The attempt to reach King Edward's Land was a failure owing to the presence of much heavy pack to the east of Cape Colbeck. We were finally compelled to abandon any hope of exploring this region when, on February 3, the Terra Nova steamed into the Bay of Whales and found the Fram moored to the sea ice and Amundsen already established in winter quarters there.

It was finally decided that we should adapt Borchgrevink's old winter quarters at Cape Adare to our use, and our stores were accordingly landed there, and in a little over twenty-four hours we had said good-bye to the ship's party and the *Terra Nova* had sailed for home.

The winter passed much as every winter does in the Antarctic. There was a certain amount of work for all hands, just enough to keep every one contented, and certainly from the point of view of beauty Cape Adare would be hard to beat as a place of residence. Immediately opposite to us the Admiralty range towered to the height of 12,000 feet in Mounts Sabine,

<sup>\*</sup> Royal Geographical Society, November 10, 1913. Map, p. 116. No. I —JANUARY, 1914.]

Minto, and Adam, and from between the snowclad peaks of the nearer mountains steep and much-crevassed glaciers fell sharply to the sea. At the back of the hut Cape Adare rose to a height of 4500 feet, the black and red of its basalt contrasting sharply with the white of the snowdrifts which seamed its top and sides.

During the late autumn, before the sea ice set in finally, a magnificent swell beat on the northern shore of the beach, hurling large boulders of ice many yards up the sloping shores. That and the sea which broke on the southern edge of the beach during the blizzards which marked the period of the decline of the sun formed an icefoot of intricate formation which was in itself a perfect gallery of beauty.

In view of what happened next year, perhaps the most interesting feature of the first winter was that we lived much more on the country than had been proposed, for directly we arrived Campbell and Levick had condemned our mutton, and after this we relied entirely on seal and penguin for our fresh meat. I think it likely that that fact assisted us materially during the next year, when, for a time, our diet was for all practical purposes restricted to those two animals.

Directly the sun returned in the early spring our sledging season opened, and on July 28 Lieut. Campbell, Abbott, and myself left on a preliminary journey to the back of Robertson bay. This was the beginning of a series of sledge trips which totalled up in my case to nine weeks, all of which, except the last fortnight, may be classed as spring and winter sledging.

The chief results of these journeys were a new and accurate survey of Robertson bay, the collection of a large amount of geological and glaciological data, and the discovery of a new meteorological province on the west side of Robertson bay. Here the proportion of calm days during the period under our observation was over 190 out of 200, while at Cape Adare during the same period we experienced several gales, one of which at least lasted for ten days at hurricane force.

Any extended geographical exploration was completely prevented by one of these gales, which, on August 16, broke away the sea ice in a line from the north end of Cape Adare to just north of Cape Barrow, the north-western extremity of Robertson bay. When in September we sledged past this point we found the sea ice utterly untrustworthy for many miles together; indeed, so thin was it that Campbell and I, when looking for a site for our camp opposite Cape Scott, were able to push our ski-sticks through it in several places. Just north of this a glacier tongue extended 15 miles out into the sea, and we could see no place within sight where it would be possible to camp on land. Campbell therefore decided that we had better turn back and confine our future attentions to Robertson bay.

During October and November, therefore, several sledge parties were despatched to different parts of the bay, and a good photographic record of all the coast as far as was practicable was obtained by Dr. Levick, while

geological specimens were collected by myself, and Campbell added detail to his map.

After the middle of November the bay ice itself was becoming unfit for sledge travelling, and from then on we were confined to Cape Adare itself. We spent most of our time photographing and studying the habits of the penguins and preparing for our expected relief by the ship at the beginning of January, when we were to be carried down the coast and landed to survey the country immediately round Wood bay.

One of the effects of our disappointments at Cape Adare was to drive home the fact that it was not safe for a sledge party in the Antarctic to undertake any extended coast journey without a boat of some type or other. This remains to our minds one of the axioms of Antarctic sledging, in spite of the fact that several journeys of 200 or 300 miles have been made by various parties. There has as yet been no serious accident, but this does not imply that the luck will not one day change, and one party of which I was a member has already spent an uncomfortable twenty-four hours adrift on a floe in the Ross sea. This is the sort of thing that does not happen twice without a disaster.

Campbell, with his usual resource, contrived a substitute for a boat which on several occasions proved itself seaworthy, though fortunately it never had to be put to an extended test. This was a canvas covering made to fit tightly over a sledge. Another form was later devised of larger size, so as to give greater freeboard. In the latter "kayak" the canvas covering was made large enough to admit of the insertion of a rolled-up sleeping-bag at either end of the sledge, and in this case it proved possible for the occupants to stand up and walk about with ease, and the boat would have taken several hundred pounds of gear in addition to its crew. The canvas was then soaked in colza oil, and was thus made watertight. These boat covers, when rolled up, occupied very little space on the sledge, and weighed only fifteen to twenty pounds each. We all made several trips in these "kayaks," and found them very trustworthy. It might be possible, by following out these lines, to make a very safe and quite portable boat for sledge travelling, and this is a matter that might well occupy the attention of any future leader of an Antarctic expedition.

On January 4 the ship was sighted from our observation camp on the top of Cape Adare, and two days later, in spite of some trouble with the pack, we were all on board and steamed away south on our way to new ground. Pack again prevented Lieut. Pennell from landing us where we wished to go, and we were obliged to disembark in Terra Nova bay, a little north of the island whose shoreward edge forms the triple indentation which was discovered by the *Nimrod* when picking up Professor David's party, and was named by Shackleton Evans' coves.

This ends the summary of our first year's work, which I have purposely cut short in order to reserve the greater portion of the time allotted to me

to describe the unique experiences through which we passed during our second winter at Inexpressible island.\* This has a special interest, as it is seldom that a party has been reduced in the Antarctic to primitive conditions for the greater part of a year, and is therefore useful as showing exactly how far men may rely on their power to keep themselves alive on the southern continent with the minimum of artificial help.

We had prepared a large depôt at Cape Adare which was to have been landed with us here, but it was necessary to sledge all our gear about half a mile over sea ice before it would have been possible to depôt it, and as Campbell did not wish to delay the ship, he decided to land only such spare food as could be taken in one journey by ourselves and a sledge party from the ship's crew. In the light of after events this proved to be a grave mistake, but it was one which I think any one would have made under the circumstances. We had no precedent for supposing that there would be any difficulty in picking us up as early in the season as was intended, and, indeed, we believed that, of all places on the coast of Victoria Land, this position in the lee of the Drygalski barrier was the most accessible. So, under the normal circumstances, it is, as was again proved by the ease with which the Terra Nova steamed in and out the following year when we picked up our specimens from the depôt at Hell's Gate.

From January 8 to February 15 we spent a very pleasant six weeks exploring the glaciers which coalesce to form the piedmont on which we landed. I think that, given ample time, it would not be difficult for a party to get down into Wood bay by way of the Boomerang glacier. This glacier, up which I took a rope party to within a couple of miles of where it debouches on an ice plain that may or may not be part of the Great Plateau, is a tributary of the Campbell † glacier. In the year we were there the glacier was so heavily snow-covered that it would have been a long and laborious business to reach the top with loaded sledges, and this task was quite beyond our powers in the time allowed to us. certainly ranks with the Granite harbour and the Ferrar-Taylor districts for interest, and it is a pity that Captain Scott's original plans were prevented from being carried out by the abnormal ice season, and so Griffith Taylor's and Debenham's party were unable to examine the environment of Mount Nansen, which we were compelled to leave for them by reason of our instructions.

<sup>\*</sup> When discussing what name to give to the island on which we spent such an uncomfortable winter, we had great difficulty in deciding on one which would at once express our feelings with regard to the island and also be permissible in modern literature. We passed in review through our minds all the names we could think of that had already been given in the Antarctic, and the name "Inaccessible island," given by Captain Scott to one of the Dellbridge islands in McMurdo sound, suggested the one that we finally adopted.

<sup>†</sup> This glacier was first seen by Prof. David on his journey to the Magnetic Pole. He gave it the name "Campbell" glacier in 1913, as a tribute to Lieut. Campbell's work during the present expedition.



SPEED TRIALS OF THE ADÉLIE AT CAPE ADARE.



CAMPBELL TESTING HIS IMPROVED MODEL OF SLEDGE-BOAT, THE GREAT WESTERN.



AFTER THE WINTER AT INEXPRESSIBLE ISLAND. ABBOTT, CAMPBELL, AND DICKASON.



PRIESTLEY, LEVICK, AND BROWNING.

On February 17 we were back at the Hell's Gate moraine, awaiting the return of the Terra Nova, and it was from that date that that particular part of the Earth commenced to justify the name which we subsequently gave to it. Until the 29th one almost continuous cold plateau gale swept across the piedmont, to be succeeded during the following winter by gale after gale nearly always from the same general direction, west-south-west to west-north-west, and with no single interval of calm exceeding twenty-four hours to break the monotony until we started down the coast on our final sledge journey on September 30. This continuous cold gale has to be experienced before its merciless power can be realized, and as I describe the next few months they will, I fear, lose much of their significance by my failure to conjure up the atmosphere of infernal, never-ending frost-biting wind.

On February 24 our sledging provisions were due to come to an end, with the exception of a few biscuits and a little permican. We had already, since the beginning of the gale, commenced to economize, and in the tent of my unit, Campbell, Dickason, and myself, we had been living on one meal a day; but it was evident that, in case of the attempt to relieve us failing, it was necessary to reorganize the distribution of the food. On the 23rd, Campbell asked me to take over the complete charge of the latter, and to take what steps I liked to reduce the ration with the idea of making our depôt last out until we were able to relieve ourselves. After some discussion we decided to make the problematical date of our starting south August 20, and I was to make the biscuits last out until then, and leave as much of biscuit, pemmican, chocolate, sugar, and cocoa as would give a month's provisions on half sledging rations for the journey. This left us, for the winter, 5 cases of biscuit, 18 pounds of chocolate, 28 pounds of sugar, a little tea saved from our recent sledging journey, and a few tins of cocoa.

The ration finally decided on took effect from March 17 till the end of August, and later on had to be slightly modified to make the food last out till the end of September, but with these slight exceptions the daily ration we lived on for the six months which followed was: alternately two and one biscuit a day; twelve, afterwards reduced to eight, lumps of sugar every Sunday; one stick of chocolate (1½ oz.) every Saturday and every alternate Wednesday; a few raisins on birthdays and the last day of each month; and three teaspoonsful of cocoa five days a week, three teaspoonsful of tea on Sundays, and either the leaves reboiled on Monday or hot water solus. Besides this we had about half as much seal and blubber as we needed. This shortage of food, although one of the most unpleasant features of the winter, was perhaps more of a blessing than struck us at the time. I am convinced that our good general health during the first half of the winter was largely due to the fact that we did not get overmuch of a diet which would have proved much too nourishing had we had as much bulk as our stomachs desired to satisfy their crayings.

On the 29th our long imprisonment in our tents ceased, and we were able to set about preparations for the winter.

Campbell's first step was to move our unit over to the shores of Inexpressible island. Here was situated the drift out of which we proposed to dig our future home. He left Levick, Abbott, and Browning encamped at the depôt, as from there they had a better view of the direction from which we hoped for relief. He gave them instructions to kill any seals they might see, to keep an occasional look-out at night, and to come over in the daytime to assist us at the cave.

It is fortunate that he was so prompt in his decision to start laying in a stock of seal and penguin-meat, for, although during the early summer Evans Coves are swarming with seals, it was already so late that we only secured the minimum number necessary to tide us over the winter, and the majority of the penguins had already finished their autumn moult and left for more hospitable climes.

In all we succeeded, before the winter set in, in securing fifteen seals and one hundred and twenty penguins, and, with the exception of five emperor penguins we added to our larder in early April, we saw no other life till towards the end of July, when our stock was practically exhausted.

While the attention of half the party was directed towards stocking our food depôts, the other three were engaged in tunnelling into the only drift of any size on Inexpressible island.

This work continued steadily until March 22, by which time the pick and shovel work was completed, and we were able to turn our attention to insulating the floors and wall and finishing off the walls of the tunnel. The model of the igloo at Earl's Court gives a very good idea of the result of our labours. A passage 10 yards or more long, and divided in the middle by a door of biscuit cases and snow blocks, gave access to the living-room proper, and at the same time by reducing the possibility of a draught added very much to the comfort, if not to the security, of our position. The door of the living-room was also composed of three biscuit cases, and the outer door of the passage, which gave us more trouble than anything owing to its liability to allow the entrance of drift, finally resolved itself into a raised hatch with a bamboo frame with the sack hung perpendicularly instead of horizontally as in our first attempts.

This last item provided us with work off and on till the end of August, and was until then never satisfactory.

The living-room was lined halfway up its height on all sides, except immediately opposite the fireplace, with snow blocks cut out of the softer portion of the drift and about 12 by 9 by 30 inches in size. We had originally intended to complete the snow-block wall to meet the roof on all sides, but before it reached the necessary height we found the insulation of the hut sufficient to make it habitable, and as we appreciated the value of the partial wall as a shelf it was never finished.

In one corner of the hut a shallow trench a yard square was dug, and

this was paved with eight large flattish boulders and was used as a fireplace. This acted excellently until the end of August, by which time the ice formed from the drips from the walls and ceiling of the fireplace had overflowed the granite boulders, and the cook of the day frequently had to remove his fire in order to bale out the fireplace, while if the stove was left in place long after the fire had been put out it had to be chipped out of the fireplace with an ice-axe.

Our chief triumph over discomfort, however, proved to be the floor. Providentially the beach which fringed the particular cove we were encamped in was lined above high-water mark with large quantities of seaweed which had probably been washed up when some easterly gale or gales had banked up the waters of the bay. We found that a layer of this several inches deep not only gave us as comfortable a mattress as we could wish, but also added 50 per cent. to the warmth of the hut. I think that the first day I felt there really was a good prospect of pulling through was the day I first got into my bag with a hard day's work behind me and found that this seaweed flooring far exceeded all our most sanguine hopes. It certainly was the most comfortable night I had spent since early in February.

Ventilation was another problem we did not overcome until late in the winter. When first built, the hut had no chimney at all, and for some time we were very chary of weakening the roof by boring a hole in it. All the smoke from the blubber stove had to meander out at a height of about 21 feet from the ground, and it was only possible to exist inside by carefully refraining from lifting one's head above this height. As for the poor cook, he stood it as long as he could, and would rush out into the passage every few minutes and cough his heart up, and then return and give his mate a chance to get a breath of fresh air. After a week or two of this, it was unanimously decided that a chimney must be made, and as practical hutbuilder, I picked one out according to a joint design. This chimney, which was easily plugged at first by a small piece of penguinskin, ablated so steadily during the winter that finally one of the messman's most unpleasant duties was the endeavour to plug it up with a wad of refuse, which was as much as he could lift and full of grease, and "Placing the Plug" has been immortalized in song and diary as one of the most strenuous of Antarctic exercises.

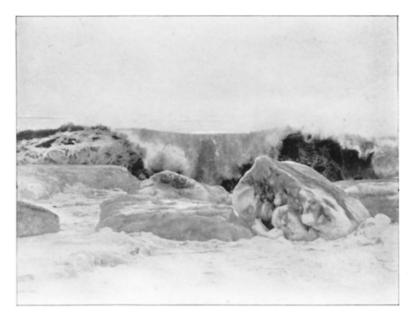
During the early days of the chimney, it was satisfactory except on the rare occasions when a drift-bearing wind blew from the south-east. Then ventilation became a farce, both chimney and shaft were blocked up, and on two occasions at least we were as near asphyxiation as I ever care to be. On one occasion, stove, lamps, and fire went out; the primus followed, and when Dickason tried to light the primus with a match the match-head glowed but refused to fire.

After this, whenever the drift was bad, we kept watch and watch for two hours each during the night, and never allowed the blubber readinglamps to go out. ۶

The question of light was one of the problems that caused us most anxiety before we began to experiment seriously, and yet was perhaps the most easily conquered of all. I well remember the inception of the first blubber lamp. It had been one of the early miserable days before we settled down for the winter, and we had all day been toiling hither and thither transporting food and blubber from the scene of the kill to the depôts. The work was carrying heavy loads over huge boulders and in a biting wind which was so gusty that one had to be on the qui vive the whole time, and even then as often as one was hurled backward in a gust one fell forward in a lull. Dickason had been left behind that day to look after the tent, which was so torn we were afraid of losing it, and when Campbell and I arrived tired out with our struggle with the wind, he produced some titbits of blubber he had fried for us, and, what raised our spirits much more, he showed us the first reading-lamp—an Oxo tin full of blubber, with a wick made from a strand of the binding of one of his finneskoe. It burned beautifully with a small but quite clear flame, and one of our greatest prospective difficulties was overcome. These lamps, with some slight changes, such as the substitution of a tin bridge for the safety-pin which had supported the wick, were our only sources of illumination during the winter that followed.

More important, and a far longer process, was the evolution of a blubber stove for cooking. It was early apparent that our oil, though far in excess of our other stores, would not stand the cooking of even one meal a day at half ration. In consequence of this we began our experiments seriously as soon as we moved into our cave, being deterred from burning blubber in the tents for fear of having them burnt over our heads. The earliest method again proved most satisfactory in the long run, and nothing beat our first simple stove made from the lower portion of a one-gallon oil tin with flanges left an inch or two higher on which to stand the aluminium cooker. At first we tried burning the refined oil by itself, endeavouring by turns to cook the dinner and try out the oil over the same fire. This proved unsatisfactory, and a second fire was instituted solely for the purpose of frying blubber and trying out the oil for the cooking fire and reading-lamps.

The next advance lay in the multiplication of wicks, but this again proved of little use: either there was no fire or, if the oil got low and became hot, there was too much fire, and at times, when we forgot for the moment that our house was made of ice, we began to fear that it would be burnt over our heads. Finally Levick hit on the great idea of using old dried seal-bones, of which there were large numbers on the beach, as fire bricks on which to burn the oil. This proved a huge success, and when pieces of blubber were stuck on the end of a marlinspike projecting over the stove, our latest fire became almost self-supporting, and it proved an easy job for the cooks to try out enough oil for the reading-lamps, cook the evening meal, and melt the water for the next morning's meal during his hours of



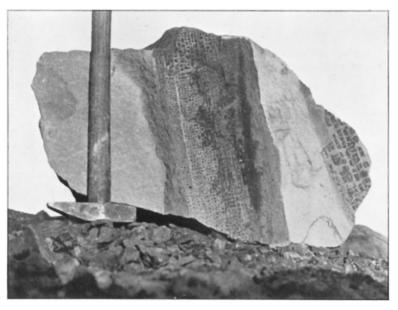
SURF BREAKING ON THE NORTH BEACH AT CAPE ADARE.



BOULDERS HURLED MANY YARDS UP THE SLOPING BEACH BY THE WAVES.



FOSSIL WOOD FROM THE PRIESTLEY GLACIER.



IMPRESSION OF A BRANCH FROM THE PRIESTLEY GLACIER.

duty from 11 a.m. to 6.30 p.m. Thus it will be seen that our whole attention during the months of April, May, and part of June was fully occupied with perfecting details of domestic economy, so that we never had much time to think of anything outside our own position.

Let me try to describe what a day's work meant to us in those early weeks. Two men were told off respectively as cook and messman, and it was their duty to carry out all the domestic routine for their "day on." Their task was to cook and prepare our meals. This sounds little enough, but imagine the hut imperfectly lighted by two blubber lamps each of one match-power or less. In this "darkness made visible" the pioneer messman had to squat on the floor and chip meat off the partially-butchered carcase of a seal with the help of my geological hammer and chisel. He had then to grope about for the scraps over the greasy seal-skin that paved our threshold. I do not even now like to think of the miscellaneous assortment of filth which must have found its way into our hoosh in those early days.

In addition to the discomfort caused by the absence of light, the messman suffered severely from the cold, for he was compelled to sit in the draught from the door. It is a fact that in the later days when the meat was thawed in the "oven" to the consistency of cheese and could be cut with a knife, it was a common thing for the messman to cut his hand and not know he was not cutting seal meat until he saw the blood.

These are only a sample of the difficulties which made preparing two meals an unusually hard and wearing day's work. The chief trouble of the cook was caused by the fumes from the fractional distillation of the blubber oil used in the cooking stove. These caused acute irritation and inflammation of the eyes and nose, and occasionally the messman would have to go to the relief of the cook and tend the fire, while the latter sat with his eyes closed and the tears streaming down his face, endeavouring to shape in his mind some expression worthy to give vent to his feelings. The remaining four men tackled the out-of-door work for the day, and their chief troubles were the wind, and the traverse of the huge boulders between the shore and the drift. Once the wind had upset you during this passage, the load you were carrying—joints of meat, penguins, or a hundredweight or so of blubber—successfully held you down until you had recovered your breath and lost your temper. Usually one's temper remained lost even when one's balance was recovered.

Butchering a seal, again, was no comfort in draughty wind-clothes and temperatures well below zero, and the numbness of our hands was the cause of many cuts. Abbott on one occasion severed the tendons, and lost the use of three fingers through a combination of blunt knife and tough seal-hide.

Perhaps the worst time of all, however, until the month of sickness towards the end of the winter, was the first month we spent in our threadbare tents exposed to the incessant fury of the equinoctial gales. Our

tents were patched in many places, and were threadbare at the seams; our bags were beginning to show signs of wear also, and were letting in the draught at several places; and we were ill-fed and weak, and had on clothes which were only intended for summer sledging. We were in a very bad way for a party about to commence a struggle for existence under adverse conditions, and our discomfort culminated on March 18, the day after Campbell, Dickason, and myself had moved into the snow cave.

On that day Levick's party had their tent-poles smashed over their heads in a particularly violent gust, and were obliged to pile stones on their gear and come over to the cave without their sleeping-bags. The night that followed is, I think, another of the things we shall never forget.

The next trouble to take us by the throat was one which we never had a hope of overcoming. We had always been hungry since we were on half rations, but about the end of April the desire for more and different food became painful, and this pain became progressively worse until the close of the winter, when seals once more began to appear. The trouble was twofold: one craving was for more abundant food, and was in a measure satisfied when towards the end of August two seals were killed and I was able to increase the ration. After this date we were never short of sea meat again, and were able to eat our fill. The other craving was, however, in my opinion far worse, and was never satisfied until we broached Griffith Taylor's depôt at Cape Roberts. This was the craving for a change of food, and this, more than anything else, was, in Browning's case, within an ace of becoming a matter of life and death. We tried various methods of flavouring our food, some with much success, others with none at all. The medical comforts were brought into requisition, and citric acid tabloids in our hot water drink on Tuesdays were a great success, but ginger tabloids in the hoosh proved useless, and a mustard plaister left behind it only a pervading taste of linseed. Besides these official attempts, on two occasions at least, to the disgust of the company, the messman for the day unofficially flavoured the hoosh, needless to say by accident. The first was when Campbell lost two feet of tarred rope that he was using as a spill, and this made a very pronounced creosote hoosh; and the other was when Abbott forgot to remove the penguin flipper with which he was cleaning out the pot, and incidentally forgot to remove the scrapings also. It is remarkable what a lot of flavour can be got out of a penguin's flipper by stewing it for half an hour.

At different times I suppose Campbell, Abbott, and Levick consumed in their hoosh quite a large quantity of the dried seaweed that strewed the beach, but it had been so long on the beach and so trodden on by penguins that I never permitted its inclusion in the regular ration. The only two really successful variants we were able to use were the meal of fish from a seal's stomach, which was the most savoury of all meals we had in the ten months, and seal's brain, which did not taste at

all like seal, and gave the hoosh a strong flavour approaching that of cereals.

In any discussion of our food it should be mentioned that our supply of salt ran out before the end of March, and that after this we were obliged to have recourse to sea-water and sea ice. This innovation at first caused acute attacks of diarrhœa to the majority of the party, but, except in the case of Browning, who towards the end of the winter became so bad that he was obliged to make his own hoosh with fresh water, we all soon recovered from this; and in the case of the unit to which I was attached, we grew to like the flavour so much that even when we had picked up Griffith Taylor's depôt we still used sea-water in our hoosh in preference to Cerebos salt.

Every Saturday evening we held a singsong, when every man participated to the best of his ability. On Sundays we managed to rake together at least a dozen hymns and a couple of psalms, and Campbell read us a chapter of the New Testament, of which we had a pocket edition. The other three books we possessed, 'David Copperfield,' 'Simon the Jester,' and Balfour's 'Life of Stevenson,' were successively read, one chapter a night, by Levick. Every subject of conversation we had was thrashed out again and again till it was pretty well threadbare, and the only things we were careful to avoid were any arguments on questions which either of us had much at heart.

Towards the end of August ptomaine poisoning made its appearance, and for the first time since the tent days depression temporarily settled on the party. Every one except Campbell developed severe diarrhea, and we all became rapidly weaker. It was three or four days before we were able to settle with any certainty on the causes of this epidemic. The seal's liver we had been eating immediately before the outbreak was undoubtedly strong tasting, though we could not see any reason why it should be so unless the seal was diseased. The main cause of the trouble, however, we believe now to have been undoubtedly the filthy condition of the biscuit-tin we had been using to thaw out the joints over the blubber fire. From the very beginning of the winter it had proved impossible to keep clean either ourselves or the cooking utensils we used. As a rule one penguin was cut up every day for the morning's hoosh, and the skin of this beast was the messman's and cook's perquisite, but was usually so encrusted with smoke from the fires as to be of very little use. The blubber and the blubber smoke saturated and clogged everything, including the joints of meat in the warming tin or "oven," as we called it. This "oven" gradually got dirtier and dirtier through this and through the oozing of blood and snow water from the joints, and in the bottom of the tin a choice collection of bacteria must have been breeding, and the ptomaines they formed were taken into the hoosh on the seal meat. Fortunately, after a week or ten days' illness we got fresh seals and a fresh biscuit tin, and so were able to do away with the tainted meat and "oven." Almost immediately the disease lost its grip, and in a week or so all of us except Dickason and Browning were none the worse but for the weakness it left in its train. Dickason was still suffering until the return to half sledging-ration fortified him enough to resist the poison, and Browning, as I have already mentioned, was not well for weeks, but it is of course difficult to say in his case when his attack of poisoning ceased, as it was superimposed on his original trouble.

Soon after Midwinter Day Campbell decided to start down the coast much later than he had intended, and accordingly for the whole of July I was obliged to knock off the biscuit ration so that we should be able to have one biscuit a day during the month immediately before the commencement of the sledging journey. This ptomaine poisoning and the consequent weakness delayed the start still more. During August we were reduced entirely to a meat diet, and for the whole of September our ration outside meat was reduced to one biscuit a day and no luxuries. In spite of these deprivations, we soon picked up strength on the full ration of seal meat and blubber, and were fortunate enough to get several more emperors, thus making our hoosh more appetizing. During this last month Levick put us through a course of Swedish exercises every day, and this proved of inestimable value, for, besides strengthening us generally, it took the curve which we knew as the "igloo back" out of our spines. This "igloo back" was caused by the constant stooping to adapt ourselves to a house which was nowhere over 5 feet 6 inches high, and where it was impossible ever to stand upright. All through the winter Levick's care of our health had been assiduous, and Browning in particular undoubtedly owes his life to this attention.

On August 10, according to Campbell's calculations, the sun was due to return, and by climbing the ridge in the lee of which was the drift we had made our home he did catch sight of it for a few minutes on the 13th. The rest of us did not see him until the 20th, for the wind was, as usual, too strong to permit of our going out more than was actually necessary. Our excursions during the whole of the winter were limited, with the exception of a few short turns up and down a lake near the cave, to trips down to the icefoot for seal meat, penguins, blubber, bones, and seaweed, and to our depôt on the Hell's Gate piedmont for oil and bamboos for roofing the shaft.

Towards the end of September four of us were feeling quite fit, and there seemed no prospect of improvement in Dickason and Browning, so that Campbell decided to start down the coast in an attempt to reach Cape Evans. We were fortunately favoured with fine weather while making our preparations to leave, for, although the wind still blew, it was much reduced in force, and work out-of-doors was more bearable than it had been since the previous summer.

From each seal we had killed during the winter I had put aside 20 or 30 pounds of the undercut, which we cut up during the last few weeks of

our stay in the igloo into cubes about half an inch in section. We prepared eight bags, four for each unit, each bag containing forty-two mugs of this meat and being a week's ration for three men. We proposed to have breakfast and dinner and a piece of raw blubber and meat for lunch. This routine was carried out until we broached the Cape Robert's depôt, with the single exception that once past the Drygalski, when we found we were able to travel down on the sea ice, we spared enough oil to lightly cook the lunch steak and blubber with the morning's hoosh. In addition to the meat, we also had, as I have already mentioned earlier in the narrative, half rations for one month of biscuit, pemmican, sugar, and cocoa.

The initial stage of the journey was across the Drygalski Barrier tongue, which Professor David had given such a bad character that it had loomed largely in our imaginations all the winter as a most formidable obstacle. This proved, however, not nearly so bad as it had been painted, or rather we must have struck a good route over the Barrier, for, with the exception of one quite well-bridged crevasse 170 paces across and several barrancas or steep ice waves some 50 feet from crest to trough, we had little trouble, and made quite a respectable pace across the ice until, on October 10, we sighted Mount Erebus from its southern edge. The sight of that old friend put new life into all of us, and, although we had some very heavy pulling through intricate pressure ice before we had left the Nordenskiöld behind us and had reached what might be called the home stretch, we had only to glance to the southward and see the well-known form of the most historic Antarctic mountain to feel that the hard work was not in vain, but that we were really approaching comfort once more.

By the time we reached Granite harbour, Browning's condition was causing us grave anxiety, nothing Levick could do seemed to cause him any relief, and we were compelled to increase his cereal ration at the expense of our own. His troubles, too, were soon to end, however, for on October 28 we sighted the flagstaff which marked the site of the Western Party's depôt, and from the time we broached that cairn the Northern Party's privations were at an end. If there is anything in telepathy, Griffith Taylor and his men must have slept easily indeed that night, for surely no one was ever more grateful than we were for this food. In addition to our first full meal for nearly nine months, we received, through Griff's letter to Lieut. Pennell, news of the safety of the ship, and so were relieved of the ever-present anxiety lest she should have met disaster through the détour she had made to land us at Evans coves.

The rest of the journey now resolved itself into a mere "depôt crawl," for in the 70 miles remaining we picked up two depôts, one at Cape Bernacchi, also left by the Western Party, and one colossal one at Butter Point, which had been laid by the ship, and our spirits remained steadily up until the news we received at Hut Point threw us completely off our balance and we knew ourselves for what we were: six men very tired and worn out and fit for nothing much but a good rest.

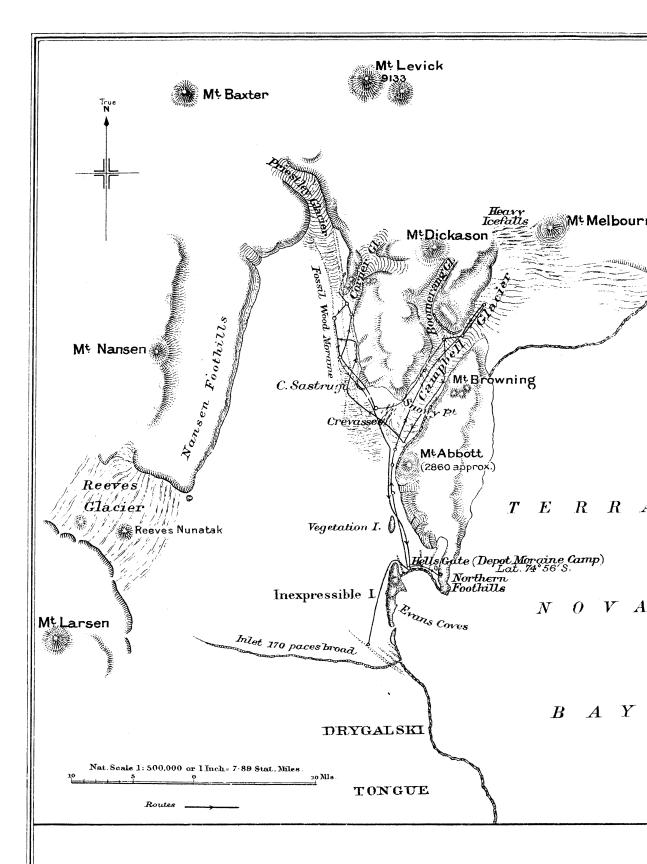
This ends the history of the Northern Party as a separate unit. It will be recognized by all of you that it is not really my place to set this story before you, but Commander Campbell was unable to do so. This does, however, give me an opportunity to place on record the debt that we of the Northern Party owe to him for his unfailing cheerfulness and fertility of resource, which went far towards bringing the party through a winter which is almost without parallel in the history of Antarctic exploration.

The President (before the paper): We will now turn from the presentation \* to the main work of this evening. I should perhaps begin by recalling to your mind the incidents which we are about to hear narrated. Many of you, perhaps most of you, will have been present at the Albert Hall, at the great meeting last summer. when we heard the account of the whole expedition in its many ramifications, given to us in most moving and eloquent terms by Commander Evans, and on that occasion you will recall that mention was made of the remarkable achievement of the northern party—the men who, under Commander Campbell, were separated from their comrades and spent an entire winter in the ice and snow under conditions enough to test the courage and spirit of any man, conditions which they were enabled to surmount, partly by their own endurance and resource, partly by the intrepid example of their commander. It is the story of that party that Mr. Priestley is going to narrate to us at greater length this evening. Mr. Priestley's record is as follows: In 1907 he went out to join Sir Ernest Shackleton's Antarctic Expedition, and remained in the Antarctic till March 1909, his special work being in geology, meteorology, and biology. After his return he spent eighteen months in Sydney, helping to work out the Shackleton geological collections. He then joined Scott's second expedition, and, because of his previous experience in the Antarctic, was attached to the subsidiary party, of which I have spoken, and of which he was the junior officer in rank Besides his scientific work he had charge of the rations while the party lived under sledging conditions. Commander Campbell, the commander of the party, was also not without experience of ice and snow, which he had studied in Norway before he joined Scott's expedition. As a naval officer, he had served in the Mediterranean and Pacific, and had had experience in the merchant service before he joined the navy.

You will remember Scott was anxious to establish a station on King Edward VII. Land, at the other end of the Great Ice Barrier from McMurdo sound. This project failed owing to the state of the ice, and the party was diverted towards the northern coast of Victoria Land, the intention being to land as far north of Cape Adare as possible. It is the adventures of this party and the work it accomplished that Mr. Priestley will describe to-night. The party was under Commander Campbell, and besides Priestley it included Surgeon Murray Levick and Petty-officers Abbott, Browning, and Dickason.

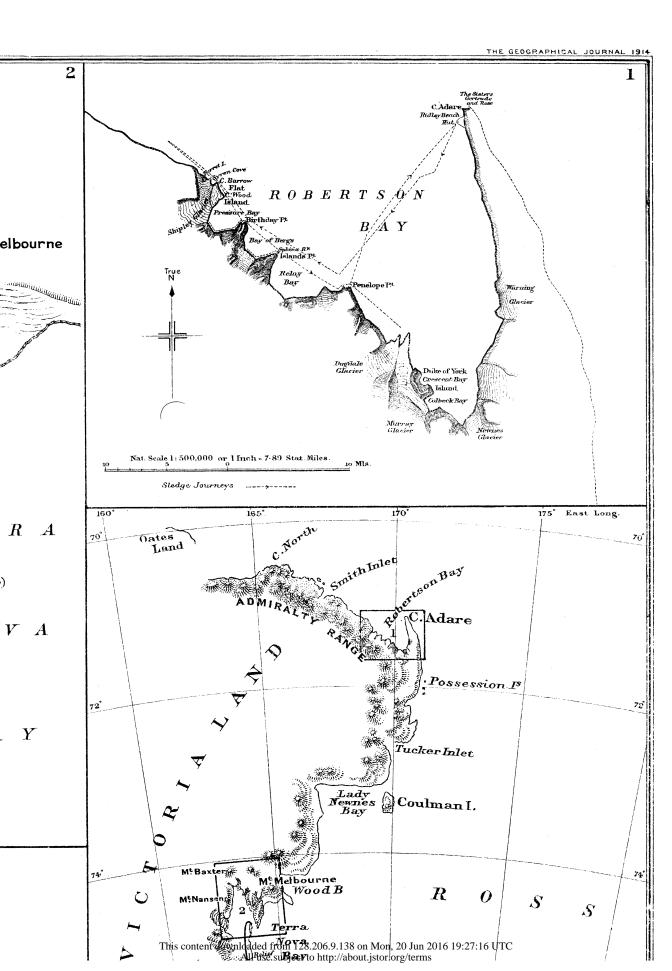
Admiral Sir Lewis Beaumont (after the paper): I am very glad indeed to be asked to bear testimony to the great interest of this paper. When we first heard of the safety of this party, I am sure it must have been an immense relief to everybody to think that the great catastrophe had not been greater still. You now know that their safety was due to the steady courage and

<sup>\*</sup> See Geographical Journal, December, 1913, p. 550.



### BRITISH ANTARCTIC EXPEDITION

1910-13.



1910 - 13.

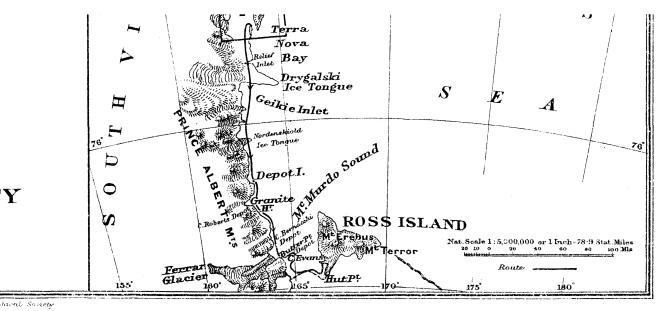
SKETCH MAP to illustrate the paper by

RAYMOND E. PRIESTLEY

### THE WORK OF THE NORTHERN PARTY

These plans are principally from the surveys of the Expedition, but must be considered as only provisional

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BRITISH ANTARCTIC EXPEDITION PRIESTLEY.