

THE JOURNAL OF
THOMAS HANS ORDE-LEES
FROM
THE IMPERIAL TRANS-ANTARCTIC EXPEDITION

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Thomas Hans Orde-Lees, 1877 - 1958
Photo: by Frank Hurley, Aboard *Endurance*,
February 7, 1915

EDITOR'S NOTE

On my way to Antarctica for the first time in early 1995, I made a detour to the Alexander Turnbull Library (ATL) in Wellington, New Zealand. I wanted to see the *Endurance* journals of motor expert Thomas Orde-Lees and carpenter Harry McNeish. While I was there, the kind librarian was spectacularly helpful and mentioned I could “borrow this material.”

A few months later, I received, on loan, a microfilm copy of Orde-Lees' diary. I planned to skim through the diary and take notes on Shackleton's leadership strategies and the group dynamics but the diary was a jumble of formats and not in chronological order.

With limited time on the loan, I decided to print out the diary and transcribe it - a project that filled six month's worth of evening and weekend hours. Along the way, I learned that a large section of Orde-Lees' *Endurance* journal was at Dartmouth College.

The project expanded with the purchase of a microfilm copy of photographer Frank Hurley's diary from The Mitchell Library in Sydney, Australia and multiple trips to the University of Cambridge to take notes on Frank Worsley's journal and other papers in the Scott Polar Research Institute's extensive collection.

I thought these transcripts would sit on my bookshelves gathering dust but, unexpectedly, this project led to connecting with a community of like-minded friends all over the world and much wider interest than I anticipated.

Before the microfilm arrived from New Zealand, I imagined that transcribing a journal was a simple project of simply copying whatever was on the page. It's more complicated.

People make mistakes, they cross things out, they misspell words. Orde-Lees transferred large sections of his journal from the first person - he wrote the journal as an extended letter to his wife - to the third person so Sir Ernest could make use of it while writing his own account of the *Endurance* expedition.

As the transcriber, I decided no one was interested in seemingly endless variations of the spelling of “Tru Milk” or that in the early 20th century “to-day” and “to-morrow” were spelled with hyphens. To my mind, spelling and grammar were a distraction from the content. Where Orde-Lees crossed something out and rewrote it, whenever possible, I used the original.

There is gold buried in the pages of Orde-Lees’ journal. For example, on August 29, 1915, he wrote, “I know that in reading all the other books on polar exploration nothing interests me more than the character of the leaders, but naturally one cannot always form a very concise opinion from the narrative written by the leader himself. I hope therefore that this impression of Sir Ernest by an intimate acquaintance will be of some interest to those who read it.”

As you’ll see, throughout his diary, Orde-Lees comments extensively on Shackleton’s character and leadership practices. By the time of the *Endurance* expedition, Shackleton had already been acclaimed throughout the world as a great leader for the success of his *Nimrod* expedition.

Many thanks to the Alexander Turnbull Library and to the Dartmouth College Library for permission to make this transcript available to readers.

And apologies for uncaught glitches in the transcription.

Margot Morrell
June 9, 2021

LETTER TO SIR ERNEST SHACKLETON FROM THOMAS ORDE-LEES:

First person has been eliminated throughout except in a few instances of personal experiences and opinions which could not have very well otherwise. These are however all indicated by a red line in margin.

In a few cases the name Lees is mentioned as if the writing was by another party, merely to avoid the first person. In a very few cases another name had been substituted for my own but always where no offense could possibly be imputed.

The principle on which I have "worked" this is to use my own name where ever the story is at my own expense and another name at random where the incident is one which reflects any little credit upon the principal actor, but I have obviated complications and repudiations as much as possible by using the terms "one member" or "a certain member". The members post in the expedition is repeated a good deal (e.g. Rickinson our chief engineer, James our physicist and so on) because it is my experience that in reading a polar book one does not grasp the whole of the staff until a long way into the book.

I have included all comments of mine about yourself because although principally eulogistic they were written "on the spot" and expressed my real sentiments at the time and I have seen no reason to in any way modify them since, as far as I am concerned, you can substitute other names for mine in every case.

You will notice that I have had the temerity to insert passages verbatim which I now realize are an injustice to you, but to omit them would be to deprive the record of one of its salient features, the fact that it was written at a time when one's judgment was

warped by distress and anxiety. I offer my apologies Sir if I have in many cases over stepped the mark which I appreciate should exist between master and servant.

I find that I have introduced myself far more than is desirable. I beg you not to think that this is done for the glory of figuring prominently in the book. On the contrary, I hope you will delete as much of it as you can, observing that what I have written is respectfully submitted to you for you to work upon as you please. On the other hand: I have done an enormous amount of transposing from first to third person so that should you ultimately be pressed for time you can introduce whole passages verbatim should you think fit where the matter is of the kind that you yourself would write about and expressed sufficiently well in something approaching your own style.

To expunge the whole of my personal experiences and anecdotes would be to rob the matter of any little humour it may possess and to eliminate the individuality which I know used sometimes to amuse you.

If there is anything else you require written up such as an introductory historical chapter I have that too. I should be only too pleased to do it at a guaranteed rate of 3000 to 4000 words a day, or at double that rate in a case of urgency. I should also be very glad of a job on indexing the book which I thoroughly understand how to do.

I again beg you to bear in mind that the sentiments expressed in the narrative were mostly written under stress of circumstances and do not in most cases represent my present views at all.

I am, as you well know, entirely at your service, without any claim for remuneration, and if you should wish for any rearrangement of

the m.s. other than the chronological one submitted I shall be only too pleased to devote my whole time and energies to modifying it in accordance with your requirements.

PREFACE BY THOMAS ORDE-LEES

This diary is essentially a record of the personal experiences, duties & opinions of the writer, hence its egotism. It does not purport to be a narrative of the expedition of which the writer was but a humble member & a novice to boot.

Impartiality has been aimed at but, possibly not achieved.

The inner life of an expedition has been fully detailed & for that reason, it is requested that much of what is written will be treated by the reader as strictly confidential.

It stands to reason that in a small community of men, many of them of very definite personalities, cooped up in a very small space for a very long time, & living under artificial conditions, if not actual privations, little differences will, from time to time, occur and I have herein made a point of setting forth those in which I was personally concerned. It must not be supposed that others did not occur in other quarters. Many did but with very few exceptions "splits" were not of long duration. Most of us were experienced enough to see the folly of quarreling.

Similarly, the writer was not the only one by any means to incur at times the displeasure of our sorely tried leader.

The writer was so often told that he was a pessimist that it would be well for the reader to bear this in mind when reading the

various speculations as to our ultimate destination after the loss of the ship.

BACKGROUND ON EXPLORATION OF THE SOUTH POLAR REGION

Prior to 1841, knowledge of the great continent of Antarctica was practically confined to a few distant glimpses of a part of its coastline in the sector lying roughly opposite the Cape of Good Hope, between the meridians of 30 degrees E. and 60 degrees E., namely the discovery of Enderby Land by Mr. John Biscoe R.N. in 1831 and of Kemp Land by Kemp two years later and of Adelaide (not Adelie) Land in Long. 72 W. by Biscoe in 1832, though the northern part of the peninsular of Grahams Land was known to Nathaniel Palmer in 1822, but whether it had not been previously sighted by American whalers is uncertain and except for a further discovery of land to the east of Enderby Land by Wilkes and independently by Dumont D'Urville in 1839-40 nothing as to the extent of the continent was known.

In 1841, Sir James Ross made his startling discovery of the Ross Sea, since used as the base for all expeditions that have had the pole itself for their objective.

The impossibility of gaining closer acquaintanceship with the land had always been frustrated by the supposed impossibility of pushing sailing ships into the ice. But Ross bravely disproved this contention by forcing his two ships into the ice pack, and to his surprise emerging into an open sea to the South of it.

Ross's great discoveries established with a tolerable degree of certainty the existence of a vast south polar continent, which subsequent researches have determined as being nearly 5,000,000 square miles in extent and almost exactly filling the Antarctic

circle, thus forming a striking contrast to the arctic circle which contains an ocean closely surrounded by land.

The attention of explorers has been so occupied in the attempt to reach the pole that systematic Antarctic exploration has been directed towards the Ross Sea only almost continuously since Ross's time.

It was however as early as 1825 that James Weddell, a master, R.N., had made a wonderful southern voyage in two lightly constructed sailing vessels, one a cutter of only 65 tons, and had succeeded in penetrating as far south as Lat. 74, 15 in Long. 84, 17 W. without sighting land, nor strange to say, encountering ice, and but for lack of time and provisions could have gone considerably further.

This voyage proved that there was a great indentation or gulf in this vicinity and it has since been known under the name of its daring and successful navigator.

Details of the much earlier attempts of the great circumnavigator Cook, of Bellingshausen, the Russian explorer, and a few others worthy of note need not enter into place here as having little bearing on the region visited by the Imperial Trans-Antarctic Expedition and; moreover, will be found exhausted treated in Mills's "Siege of the South Pole"; suffice it then to say the Shetland Islands, to which group Elephant Island belongs, were first reported in 1819 by William Smith, master of the trading brig "Williams", bound from Monte Video to Valparaiso. In 1820 Edward Bransfield (or, as Weddell calls him Barnsfield) in the same ship discovered the strait named after him between the South Shetland Group and the mainland of Graham's land and appears to have been the first to give the latter a name which he did in honour of the 1st Lord of the Admiralty of that time, which also

accounts for the name of the Sandwich Group named after the more celebrated Lord Sandwich.

Elephant Island has merely been named from the circumstance that large members of sea-elephants were found upon its shores, but there seems no reason why its original name of Barrows Island as charted by Weddell in commemoration of Sir John Barrow for forty years secretary of the Admiralty and one of the greatest advocates of polar exploration should not be restored to it.

After Weddell's remarkable voyage, the Weddell sea area was neglected until Ross in 1843 reached a point 71, 30' S., 14, 51' W. and came within an ace of discovering Coats Land which it remained for Dr. Bruce to do sixty years later.

In 1894 Captain Larsen, a Norwegian whaling captain, made his way south along the eastern coast of Graham's Land to Lat. 68, 10' in Long. 60 W.

Dr. Otto Nordenskiöld was the commander of the first expedition to winter in the Weddell Sea area, which he did at Snow Hill Island in 64, 25' S. (north of the Antarctic circle). His relief ship the Antarctic, under Captain Larsen, was crushed in the ice about twenty miles S. E. of Paulet Island which was reached by the crew in boats and where they remained until rescued by the Argentine cruiser Uruguay.

A voyage of much promise was carried out in 1910-1912 by a German explorer, Lt. Filchner, who reached a point in the Weddell Sea far south of Weddell's furthest in Lat. 77, 50' and finding the junction of a great ice barrier running N. W. and S. E. with the continuation of Coats Land named by him Prince Regent Luitpold

Land running N. E. to S. W. and assumed therefore to be the highest latitude of the Weddell Sea.

Lt. Filchner's intention was to spend the winter in this neighbourhood but "strafing" began amongst the members of the expedition and he had perforce to sacrifice his ambitions and head his ship for the north. Captain Vahsel, the captain of the ship died at the most southerly point reached.

The ship made a good course to the north amongst the ice for some way but was beset in Lat. --- S. and carried thence by the ice drift almost due north until she "broke out" in Lat. --- S. in ----- 19-- and reached South Georgia whence she had set out.

PLAN OF THE IMPERIAL TRANS-ANTARCTIC EXPEDITION

Filchner had named his most southerly point Vahsel Bucht to commemorate the name of his captain and it was this point that Sir Ernest Shackleton proposed to use as his base depot for the great trans-continental journey that he had conceived.

It was indeed a bold project, and, as everyone will agree, one fraught with far greater difficulties than had ever been contended with before.

First there was the immense journey in the ship through at least a thousand miles of pack ice in order to reach the base, then the journey of nearly 900 miles to the pole over entirely unknown country and finally the difficult march down the Beardmore Glacier from the Pole to the Ross Sea, where it had been arranged that a party in the good ship Aurora recently released from Sir Douglas Mawson's expedition should meet the trans-Antarctic

party and prepare the way for them by laying depots up to the head of the Beardmore Glacier.

The magnitude of such an undertaking can best be conceived when it is realized that it involves a march of no less than 1800 miles of polar travelling which would have to be completed within the short season of four months at most; so that it would be necessary to maintain a daily average of fifteen miles a day, this it was hoped to do by means of dog sledges and an initial impetus was to be given by means of motor sledges.

One of these latter had been partly tried in Norway before the expedition sailed and had given promising results though in its final form it had been impossible to try it, the other type was taken out without trial but experiments were conducted on the sea ice, several structural defects revealed themselves and although there was no doubt the type was correct in principle it was impossible to form an opinion, under such different conditions as sea ice offers compared with the surface of a barrier, as to whether of not the tractor type of motor sledge as it was termed would have performed useful work or not.

Owing to the limited scope for its use it was finally converted into a motor winch, in which capacity it gave, on the whole, good service and much experience was gained in the use of water-cooled internal combustion engines in temperatures below zero.

Dogs, as a means of polar travel are so well known, that reliability was there by ensured and there is no doubt that they would have been in every way superior to ponies which Sir Ernest Shackleton had taken on his previous trip as had also Captain Scott on his last expedition.

This co-operation of two ships and two parties simultaneously on the two sides of the South Polar continent was an advance in Antarctic exploration never previously attempted.

It was intended to have shore parties of twelve men and ten men at the Weddell Sea and Ross Sea bases respectively of whom six from the Weddell Sea side would make the trans-continental journey.

The whole of the party on the Ross Sea side would be occupied in laying depots for the cross-country party to pick up.

It was Sir Ernest's intention to arrive at Vahsel Bucht in the Antarctic summer, probably January, of 1915 go into winter quarters there and start out on the long march as early as spring would permit, the beginning of the November it was hoped.

The six members remaining behind were to make marches of exploration to both the --- and the west and survey that totally unknown district.

Both ships were to return and either winter in temperate ports or make oceanographical voyages in the meantime.

The project was conceived with the utmost care and care and planned out to the minutest detail every regard was made to the protection of life and limb and the general health of the party, unlimited attention was given to the all important matter of diet and the polar equipment and scientific instruments were all of the latest type and well nigh perfect; in fact nothing was left to chance except the ice a factor which no amount of prevision could regulate and just how it frustrated the whole plan of the expedition the following pages reveal.

S.Y. ENDURANCE

The ship was originally named the *Polar Star* which Sir Ernest altered to *Endurance*. She was stoutly built with sides over a foot thick and foot square section beams across for every four feet of her length, which construction was executed to render her absolutely immune from the severest pressure to which she could ever be subjected. Her bows were immensely strong and sheathed with iron for cutting through the ice. In all her dimensions she was of the stoutest possible construction consistent with the provision of the necessary stowage space and accommodation.

She was comfortably, though by no means luxuriously fitted out, and, as in all polar ships it was a tight squeeze to fit in all the members of the expedition and the ship's company.

She was a three-masted barquentine having square rig on her foremast and trysail and gaff topsails on the main and mizzen and of course the characteristic barrel-crows nest at the main mast-head without which no polar ship is complete. Her best speed under sail seldom exceeded six knots and under steam nine at the very most.

For some six weeks she lay along side the West India Docks and was the object of an enormous amount of public attention, people flocking down in great crowds all and every day to see over the little vessel.

SUPPLIES

Shortly before sailing, the little polar hut purchased in Norway was erected for testing purposes on the quayside and Sir Ernest Shackleton held a little reception in it one day.

Queen Alexandra and the Dowager Empress of Russia also evinced great interest in the ship. Many of the public had opportunities of seeing the interesting aero-driven motor sledge undergoing its final trials by being made fast to a large lifeboat in the dock which it drove through the water at a considerable speed entirely by means of its air-propeller.

The motor sledges were constructed by the Motor Despatch Co. of Southwark Bridge Rd. whose engineer, Mr. Girling, threw himself heart and soul into the work. The aero sledge was the design of Captain Lees whilst Mr. Girling was responsible for the motor-tractors. The former was taken for its trials to Finse in Norway where Sir Ernest and four members also tested the hoop tents, the sledging rations and other gear destined to be used on the expedition. The advice of such experts as Mr. F.W. Lanchester and Colonel O'Gorman was also obtained.

Little difficulty was experienced in the selection of the provisions all of which were supplied by Messrs. Morton's the well known shipping providers and the amounts were based on previous experience and sufficient to last for two years.

A few articles were obtained from firms specializing in that article such as flour from Messrs. Herdman and Co. of Edinburgh, spirits from Messrs. Sanderson, baking powder, custard powders, etc., Messrs. Bird, soups, Messrs. Lusty, cocoa and chocolates Messrs. Carson of Shortwood, Bristol, jams, Messrs. Hartley, milk powder Trumilk Co., sugar West Indian Produce Association, and meat

extract from Messrs. Bovril which firm also supplied the bulk of the sledging rations although their meat extract at least in its well known form, did not form any essential part of the rations. Some of their Bovril cubes and Virol were taken as a supplement to the sledging rations and formed some of the very scanty luxuries which eventually reached Elephant Island.

These rations formed the subject of no end of painstaking experimentation on the part of Colonel Beveridge R.A.M.C. who with Sir Ernest's assistance finally arrived at what was probably one of the best polar dietaries ever devised.

Instead of the usual pemmican, which consists of ground desiccated meat and fat in equal amounts, it was originally intended to make up a pemmican, or polar ration, having a purely vegetable composition, but still containing the requisite dietetic constituents in their proper proportions, namely proteins one part, fat one part and carbohydrates two and a half parts respectively. This was accomplished without much difficulty and its dietetic value arrived at by means of calorimeter tests, but when used for human consumption in Norway it was found to be unpalatable, in fact it may be said that it was altogether too scientific but the substitution of Bovril meat protein for the vegetable ingredient immediately raised it to the rank of appetising foods and finally it came to be appreciated (at Elephant Island) to an extraordinary degree.

The biscuit element of the sledging rations was supplied by Huntley & Palmers famous Antarctic brand and the Trumilk Co. of Altrincham, Cheshire supplied their wonderful specialty full cream powdered milk, made up into neat little 8 oz. and 1 1/2 oz. packets.

Cerebos Ltd. supplied the salt and Bovril Ltd. packed it as also they did the Trumilk and their own Bovril ration which was made

up in 8 oz. blocks, 100 in a box, and splendidly packed in waterproof tinlined Venesta wood cases.

The importance of perfect packing cannot be too energetically insisted upon. Several manufacturers disregarded this, others who took the trouble to use tinlined cases did not succeed in making them watertight and we suffered several serious losses from this cause when the ship was wrecked. Where men's lives depend on it, negligence in this respect is inexcusable.

As a proof of the excellence of Messrs. Morton's provisions which were practically all in hermetically sealed tins or bottles the only things found defective amongst the hundred thousand tins were two 7 lb. tins of oatmeal slightly musty and one small tin of potted meat bad, rather a wonderful record.

Whilst the expedition was being got ready a certain firm of Nougat makers sent a sample gift of their wares.

This Sir Ernest submitted to Colonel Beveridge for analysis and the latter then pronounced it as having a very high food value, and said that if more fat could be introduced into it it would become an almost perfectly proportioned dietary article. This was easily achieved by the use of sesame oil and the resulting nougat was made up into 6 oz. blocks packed ten in a box, Trumilk powder being used as the packing material, and ten boxes in a case and was designated Polar Nut Food.

The rations per man on the sledging journey were intended to be used as follows:

Breakfast: One 8 oz. block Bovril ration, two biscuits, 1 1/2 ozs. Trumilk (enough to make 3/4 pint with water)

Luncheon: One 6 oz. block Nut Food two (or three) biscuits

Supper: Practically the same as breakfast except that one half of the Bovril rations were marked supper rations and had an extra ounce of fat in them bringing their weight up to 9 ozs., the object of the extra fat being to maintain the bodily heat better during the night fat being the essentially heat producing element of a normal diet.

It was also intended to occasionally substitute cubes of Bovril meat-extract for the milk by way of a change, and some highly concentrated flavourings such as onion, celery, etc. were taken for the purpose of flavouring the Bovril ration which was practically always used made up into a hoosh ("portmanteau-word" for a combination of a hash and a stew) by the simple process of immersing it in water and bringing it to the boil and which had comparatively little flavour of its own, containing besides the Bovril protein nothing but lard, milk and ground oatmeal.

By itself with sugar it was delicious but a slight variation in flavour now and again is a matter of far greater psychological importance than might at first appear. So keen are explorers to obtain these little changes that when hard pressed it is quite a common thing for them to flavour their food with drugs from the medical outfit such as peppermint, ginger, citric acid, and so on and a supply of pepper or curry powder is always a valuable asset on a long journey where no considerable change can be made in the food en route.

The total amount of sledging rations taken was as follows:

Quantity No. of Cases	Article	How packed
2500 25	8 oz. Bovril rations	100 per case

xxx x	6 oz. Antarctic Biscuits	330 per case
1400 14	6 oz. Nut Food blocks	100 per case
300 3	8 oz. packets Trumilk	100 per case
500 1	1/4 oz. Bovril cubes	500 per case
400 1	3/4 oz. pkts. Cerebos Salt	400 per case
32 1	1 lb. tin Virol	32 per case
500 1	1 lb. blocks meat pemmican	50 per case

The meat pemmican was manufactured by the well known Danish firm of Beauvais and was only taken as a stand-by but it made an extraordinarily good thick soup and eventually came in very handy. In dismissing the all important food question special mention must be made of the polar chocolate manufactured by Messrs. Carson Ltd. and the very high class fancy chocolates they supplied.

POLAR CLOTHING

Polar clothing has been brought to such a pitch of perfection largely by Nansen's improvements that nothing except a few minor modifications, principally in the Burberry gabardine windproof suits was considered necessary. This wonderful material has been so well tried and repeatedly used that no polar expedition would dream of going without suits made of it.

They entirely replace fur clothing and are more hygienic, lighter, more durable and cheaper. Their value lies in their windproofness which prevents the wind from passing through the pores of one's woollen clothing and causing the body to lose heat. Ordinarily the air percolates freely through the materials of everyday life as can easily be tested by holding a portion of a jacket against the mouth and blowing through it. In a wind the air passes through very rapidly and if it is cold the heat of the body is used up in warming this air and the well known sensation of cold is experienced. This is readily exemplified on any mild calm day when one feels comfortable warm standing still but as soon as one is rapidly transported through the air in a motor-car one becomes cold.

This well known fact is so widely recognized that one always allows for it by putting on extra if not actually windproof clothing on going for a drive in an open car but the exact cause of the need for it is not always appreciated.

Burberry gabardine is as thin and light as ordinary calico and its chief recommendation is that it does not impede the movements of the body by its weight or stiffness as would any thick material. In itself, of course, it entirely lacks the property that we quite wrongly term "warmth", and in appearance looks about the last sort of material likely to form an ideal overall suit for polar exploration, but things are not always what they seem and it remains far and away the most serviceable article of clothing for polar exploration.

It may be thought that in writing the above that one is under an obligation to give the firm mentioned a gratuitous advertisement, but the discriminating reader will observe that material manufactured on the same principle by any other makers would be equally satisfactory, and the fact that Messrs. Burberry produce

this article and have invariably been asked by all recent explorers to supply it may be as much of an accident as it is a token of the latter's appreciation of a good thing for their particular purpose. One wishes then emphatically to eulogise the gabardine without any reference to the other articles and materials manufactured by this well known firm.

Messrs. Burberry also manufactured for us boots to the pattern of those designed by Captain Roald Amundsen, which were made to measure so as to accommodate no less than five pairs of socks, a very necessary foot equipment in extreme low temperatures. Naturally these boots looked perfectly enormous, they had "Durox" indestructible leather soles, soft leather golosh and fine cloth uppers which extended up the leg some way, they were made fast with a pair of soft webbing thongs and instead of an opening or tongue down the front they had a gusset which folded over. They were very serviceable and stood no end of hard wear and, by most members, were preferred to any for general outside use; their only disadvantages were that the uppers were inclined to get wet and retain the moisture and although Amundsen apparently used his constantly for skiing we did not find them very convenient for this purpose; it is just possible that his may have had stiffer, or even block, toes, as our experience was that the toe strap of the skis pressed through the boot onto the toes thus rendering them somewhat liable to frostbite and also the foot seemed to have too much play inside the boot for convenient skiing.

Other types of boots taken were long solid felt full length leg boots, short felt half boots fastening with a clip and of course plenty of the indispensable finnesko or fur boots made entirely of reindeer skin with the hair on sole and all. For walking in snow in low temperatures nothing can equal these primitive foot coverings manufactured by the Laplanders; the hair being on the outside

repels the snow as nothing else will, but unfortunately finnesko do not last very long, on the other hand being quite light and cheap several spare pairs can be carried in the place of and at the same cost as a pair of stout boots.

Most members also had a pair of ordinary ski-boots of their own, but such boots were seldom worn, except in the height of summer for fear of frostbite.

Warm underclothing and thick woollen jerseys were obtained from Jaeger Co. who also supplied blankets and ordinary sleeping bags whilst reindeer skin sleeping bags were obtained from Norway.

The hair of the reindeer is almost in the nature of a close fur and of necessity seems to have special heat insulating properties not found in ordinary furs.

Members provided their own ordinary thick suits but except for the trousers these were not much worn.

The ordinary costume worn on board generally consisted of two pairs of Shetland socks one suit of thick "combinations" one thick shirt, one thick jersey, one ordinary pair of trousers. On going out one invariably donned a woollen Balaclava helmet pulled down over the ears and a pair of felt mits (fingerless gloves); if it was cold one might add a comforter or even a jacket, if very cold a pair of fur mits over the felt ones and if windy or going for a run on a sledge irrespective of whether it was cold or not one invariably put on one's Burberry suit.

With regard to the sleeping bags in order to obviate the well known trouble due to the insensible perspiration and the breath condensing and freezing on the inner surface of the bag tight

woollen replaceable linings were taken but no exact opportunity occurred of testing this principle to see whether it achieved the desired object.

An ample supply of clothing enough for all the members of the shore party was taken, but when the ship became beset and the ship's company perforce compelled to winter robbing Peter to pay Paul became inevitable and of certain articles there was barely enough to go round.

Every precaution was taken to ensure that the members of the crew received an adequate supply and several members of the shore party had to forego certain articles here and there to provide for the requirements of the fo'c'sle, Sir Ernest being the first to deny himself on their account. If there was a choice of two similar articles the sailors were particularly given the better of the two.

DOGS

The dog-harness was an exact copy of the pattern used by Amundsen consisting of a miniature horse-collar, girth, traces and swingle-tree. The advice of an expert Canadian dog-driver was taken on many little points.

One hundred huskie-dogs were obtained from the Hudson Bay Company and were brought from Canada to England by three experienced drivers, who did not, however, accompany the expedition. In England the dogs were quarantined at Messrs. Spratts kennels and at the Lost Dogs Home at Hackbridge.

Seventy were allocated for the Weddell Sea trans-Antarctic party and the remaining thirty were for the depot-laying party on the Ross Sea side.

Messrs. Spratt supplied an enormous quantity of their dog biscuit but for the trans-Antarctic journey an immense quantity of special dog-pemmican made of ground desiccated coarse meat and fat was put up by Bovril Ltd. in hermetically sealed 1 lb. tins forty tins to a case. It came to pass that we were only too thankful that we had this dog pemmican with us as it was quite wholesome as human food though the actual meat itself as far as we were concerned might have been cat, or for that matter tiger, it would have been equally acceptable to hungry men.

SLEDGES, SKIS, TOOLS AND SCIENTIFIC INSTRUMENTS

All the sledges and skis and most of the rest of the Norwegian gear, came from Hagens the well known Christiania firm.

Ice-axes alpine rope, etc., were obtained from the equally well known English firm of Beale, Shaftesbury Avenue.

Tools came from Messrs. Fastnut of Newgate St., and Melhuish of Chancery Lane, and a lathe from Drummond Bros. of Guildford; ice-picks, etc., from the Hardy Pick Co., purchases and pulleys from Messrs. Morris of -----.

Cary Porter Pall Mall supplied the majority of scientific instruments, Smith and Son the chronometers, and Messrs. Stewart of Henley on Thames an electric lighting set, the Chloride Co. their Exide storage batteries; Messrs. Bullivant the well known wire manufacturers contributed their specialties, Messrs. Blackburn aeropropellers, Messrs. Lane ditto, Lett's diaries,

Kolynos Ltd. toothpaste, Carborundum Co. their useful specialties, Wakefield Ltd. castrol oil.

By dint of a system of strenuous speeding up things gradually resolved themselves into shape and early on the morning of Aug. 1st 1914 S.Y. Endurance slipped quietly out of the West India Dock.

OUTBREAK OF WORLD WAR I

War between Germany and France had barely been declared and the inclusion of this country in the fight was considered unlikely on that day. The gravity of the situation was nowhere realized and so it was without any feelings of compunction that the expedition started from these shores, but events developed with such alarming rapidity that by the time Margate was reached things had up on such a serious aspect that the mobilization of the fleet had been ordered.

Faced with a dilemma the members took counsel of their leader and after much debating as to the proper and honourable course it was determined to submit the matter to H.M. the King for instructions. His Majesty's reply was as follows: (missing)

It must be remembered that the expedition had been in active preparation for over six months, that most of the members had been selected three or four months previously to the date appointed for sailing and that the greater part of the equipment would have been totally wasted had the project been wholly abandoned.

With regard to the personnel, many of whom were members of H.M. service and therefore liable to be called up on mobilization it

is only fair to them to remind the reader that it was essential that they should act unanimously and that as each one had been specially trained for his particular post, substitutes even if obtainable at such short notice would be likely to impair the efficiency of the expedition and therefore the resignation of even two or three members; although they might not have been altogether indispensable in themselves; would have caused either the abandonment or at least the delay of the expedition, the latter of which might have culminated in the former circumstances owing to the shortness of the "open" summer season in the Antarctic.

Sir Ernest, as he always does, was quite ready to accept the situation. He immediately offered the ship complete with all her stores and crew to the Admiralty and he specifically informed each member that he was at liberty to act exactly as he liked and under no obligation whatever to remain with the expedition.

Many were the confabulations and finally it was not without mingled feelings that the members unanimously announced their intention of standing by the expedition and if there are still some few critics who are ready to condemn this decision they will not deny that every member suffered in the cause of science something at least comparable to that of his fellow countryman in the trenches in the cause of his country, nor have the members of the Imperial Trans-Antarctic Expedition been slow to espouse the cause of their country on their return. Several of them were voluntarily performing active service within a fortnight of their return; having reported themselves for duty on the day of their arrival in England, and at the time of writing (May 1917) one at least has given his life on the Western Front.

SUMMARY OF INCIDENTS, 1914 - 1916

1914

Aug. 1st - Left London.

Oct 26th - Endurance left Buenos Ayres.

Nov. 5th - Arrived South Georgia.

Dec. 5th - Left South Georgia.

Dec. 7th - Passed through Sandwich Group & sighted the "pack ice", Lat.57,26, Lg.27,16

Dec. 15th - Daylight all night (but not the midnight sun). In pack.

Dec. 20th - Played football on the ice. Lat. 61,30, Lg. 18,8 W.

Dec. 29th - Held up by ice.

Dec. 31st - Antarctic circle crossed.

1915

Jan. 6th - Dogs exercised.

Jan. 10th - Coat's Land sighted. Position of ship Lat. 72,2, Lg. 15.57 W.

Jan. 12th - In a bay in Coat's Land.

Jan. 15th - Iceberg 4 miles long seen. Flock of seals.

Jan. 16th - In Glacier Bay, Coat's Land.

Jan. 19th - Dredge, 250 fathoms. Lat. 76,27, Long 29,46 W.

Endurance permanently beset.

Jan. 21st - Rudder jammed by ice.

Jan. 25th - Big lead open ahead. Attempt to reach it under steam fails.

Feb. 1st - Last attempt to cut ship out and reach frozen lead ahead.

Feb. 2nd - Seven seals got in one day.

Feb. 5th - Endurance temporarily free but fires banked. Temperature -2.

Mar. 14th - Hold converted into cubicles. Rum barrel buried in the coal.

Mar. 19th - Got eight seals.

Mar. 22nd - Igloos built.
Mar. 24th - Motor sledge used for hauling in dredge; haul consists of one amphipod only.
Mar. 29th - Wireless aerial rigged. Never gave any results.
Mar. 31st - Temp. +8.
Apr. 4th - Temp. -20. Pigs killed (both of them).
Apr. 7th - Some cracks in ice.
Apr. 8th - Heavy snow.
Apr. 9th - Fog, drifting due W., Lat. 76,58, Long. 34,37 W.
Apr. 16th - Drifting towards immense grounded berg.
Apr. 18th - Lat. 76,0, Long. 41,04 W., 190 fathoms.
Apr. 21st - Temp. +20.
Apr. 28th - Temp. -24.
May 1st - Sun sets.
May 7th - Parselene. Dredge hauled in by hand.
May 8th - Sun seen again owing to great refraction. Sounding 152 fathoms.
May 16th - Centre of cyclone passes over ship. Drift 25 miles south.
May 17th - Floe rotates 45 degrees. Lat. 75,24, Long. 37 W.
May 31st - Temperature drops from +8 at 10:30 a.m. to -8 at noon. (= 16 degrees).
June 3rd - Distant pressure heard.
June 6th - Temp. -27. Lat. 74,39, Long. 45,11. Rudder kept clear.
June 7th - Dog team races.
June 23rd - Wild v. Hurley
June 24th - Drift 10 miles in 24 hours. Chronometers corrected.
July 1st - Dredging 255 fathoms. Lat. 74,8, Long 48,0 W. Darkest day.
July 10th - Drifting over site of "Morrell Land". Numerous cracks.
July 14th - Severe blizzard. Temperature -33. Dogs buried.
July 24th - Lat. 73,4, Long. 48,12 W.
July 31st - Ship continually shaken by pressure. Sledging provisions placed on deck. Sun seen by refraction. Lat. 72,37, Long. 48,0 W.

Aug. 1st - First serious pressure on ship accompanied by breaking up of ice.

Aug. 2nd - Wind 50 m.p.h., ship permanently listed in ice at 5 degrees.

Aug. 4th - Sun returns. Drift 60 miles in 3 days to Lat. 71,35, Long. 48,19 W.

Aug. 27th - Pressure on ship commences with a loud report at 3:30 a.m. First seal heard blowing in water. Lat. 70,0, Long. 50,13 W.

Sept. 1st. - Pressure. Ship continually creaking. Engine room plates buckled.

Sept. 4th - Crack along ship's ride, but ship remains listed held in 40 ft. thick ice.

Sept. 10th - Temp. rises from -20 to +20 in 24 hrs.

Sept. 13th - Drop from +20 to -15 in 24 hrs.

Sept. 16th - Temp. -31. Planet Mercury visible.

Sept. 19th - Long lead opens. We reach Weddell's furthest south.

Sept. 24th - First seal shot since winter.

Sept. 30th - Severe oblique pressure on ship. Masts shaken.

Oct. 4th - Hockey resumed. Daylight saving put into operation.

Oct. 10th - Thaw on board. Temp. +24. Cabins resumed.

Oct. 15th - Ship released and sails up a lead for 3/4 mile.

Oct. 16th - Beginning of final period of intermittent pressure.

Oct. 17th - Pressure raises stern out of water. Ship's side pressed in 6 inches. Attempt to relieve pressure by cutting trench.

Oct. 18th - Boiler filled. Pressure throws ship on to her "beam end".

Oct. 20th - Steam raised. Ship closely beset again.

Oct. 24th - Position almost stationary for 6 weeks. Pressure wrenches stern-post out and causes leak. Pumps at work. Trenches cut in floe.

Oct. 26th - Ship raised and strained by severe pressure. Boats lowered on to ice.

Oct. 27th - Ship abandoned. Total wreck. Lat. 69,5, Long. 57,32.

Oct. 28th - Camp on ice-floe which cracks at 2:30 a.m. Main mast falls 11:00 a.m.

Oct. 29th - Prepare to march to Robertson Island. Dump all gear.

Oct. 30th - Commence march 3 p.m. pioneers cutting track. March 1/2 mile only.

Oct. 31st - March a mile. Snow too deep. 2 dog teams pull one boat.

Nov. 1st - March abandoned. Ocean camp decided upon.

Nov. 2nd - Much gear, but no provisions brought up from ship.

Nov. 3rd - Galley built. Low diet. Dog pemmican used for human consumption.

Nov. 4th - Hole cut in deck of ship. 3 tons of provisions salvaged.

Nov. 6th - S. blizzard. Stove constructed out of ash-shoat.

Nov. 8th - Drift N. 31 miles in 3 days. "Look out" erected.

Nov. 10th - Temp. -1. First baby seal. 300 miles from Snow Hill.

Nov. 21st - Temp. +37. Gunwales of boats raised. Endurance sunk. Lat. 68,39, Long. 52,26 W.

Dec. 9th - Boat launched and loaded for trial.

Dec. 10th - Blizzard. 250 miles to Paulet Is.

Dec. 12th - Lat. 67,0.

Dec. 22nd - Sir Ernest goes out reconnoitering and decides to march NW.

Dec. 23rd - March 4 a.m. Camp one mile from Ocean Camp.

Dec. 23rd - Dec. 28th - On the march. Ice too broken to proceed 28th. Average rate of march 1 1/2 miles per day.

Dec. 29th - Steps retraced to firmer floe. Patience Camp 8 miles from Ocean Camp.

1916

Jan. 14th - Patience Camp shifted back another half mile. First journey to Ocean Camp. Dogs shot for lack of seal meat.

Jan. 20th - Three days severe blizzard commences. Lat. still 67,0.

Jan. 22nd - Blizzard ceases. Drift of 84 miles N. in 3 days.

Jan. 30th - Second trip to Ocean Camp; which remains in same position.

Feb. 2nd - The third boat fetched from Ocean Camp.

Feb. 15th - Blubber short. Dog pemmican bannocks instituted.

Feb. 17th - Bergs in movement. Floe rotates. Adelies abundant.

Feb. 24th - 100 miles from Snow Hill. Blubber first used for eating.

Mar. 9th - Terns & Cape pigeon seen. Lat. 64,0.

Mar. 17th - Tea & flour finished. Some pressure at Patience Camp.

Mar. 21st - Seal meat & blubber short. Hot luncheon discontinued.

Mar. 22nd - Large berg travels through pack just missing Patience Camp.

Mar. 23rd - Louis Phillippe Land sighted. Seals very scarce.

Mar. 27th - Floe cracks in half. Look out made from two sledges.

Mar. 30th - Floe splits again. Double watches kept.

Mar. 31st - Sea leopard shot and fist from its stomach eaten. Large flocks of Adelies.

Apr. 1st - Floe splits again. Lat. 62,33. 100 miles from Elephant Is.

Apr. 4th - Another sea leopard and last two dog teams shot.

Apr. 5th - We eat dog. 24 miles drift in 24 hrs.

Apr. 6th - Clarence Is. sighted. Marked swell observed.

Apr. 7th - Floe splits again. Boats temporarily cut off.

Apr. 8th - Bigger swell. Camp is now on very small piece of ice.

Apr. 9th - Floe splits for the last time. Boats launched. Commence boat journey & camp on small floe which split.

Apr. 10th - Camp for night on "Rocking Floe".

Apr. 11th - Unable to get away from floe until 11 a.m. Lie to all night.

Apr. 12th - Tie up to floe & make hot milk 8 a.m. Lie to all night.

Apr. 13th - Oars & boats caked with ice during night. Lie to all night.

Apr. 14th - Fine day. No water, distressed by thirst. Sail all night.

Apr. 15th - Arrive at Cape Valentine, Elephant Island.

Apr. 17th - Row to Cape Wild in beginning of a blizzard.

Almost continuous blizzard from 18th to 22nd inclusive.

Apr. 24th - Sir Ernest & 5 men sail for South Georgia in "James Caird." Work on ice-cave commenced.

Apr. 28th - Ice-cave abandoned. Hut built of two boats.

May 2nd - Beset by close pack until 9th inst. inclusive.

May 9th - 950 penguins come up between 9th & 12th, but one 103 killed.

May 20th - Beset by pack until 31st inst. inclusive.

June 12th - Beset by pack until 20th inst. inclusive.

June 15th - Blackborow's toes amputated.

July - Beset by pack, 5th - 6th, 12th - 14th, 18th - 21st, 24th all inclusive.

July 15th - Big fall from glacier creates 40 ft. wave & threatens hut.

July 16th - Fight of 300 cormorants.

Aug. - Beset by pack, 1st - 5th, 17th - 26th, all inclusive.

Aug. 22nd - Nothing but partly putrid seal meat left.

Aug. 30th - Relieved by Chilian tug boat, Yelcho.

Sep. 2nd - Arrived Punta Arenas.

Dates of severe blizzards at Elephant Island:

April 18, 19, 20, 21, 22, 30.

May 8, 12, 17, 18, 31st.

June 1, 2, 10, 27, 30.

July 3, 7, 19, 21.

Aug. nil.

INTRODUCTION BY THOMAS ORDE-LEES

Every leader of a polar expedition has said that the moment that the ship leaves the last port of call the hardest work of the expedition is done; that is probably because the adventurous nature finds the strenuous physical labour of marching over frozen snow fields so much more congenial than the tiresome job of sitting at an office desk all day dictating letters and interviewing callers, and our case was no exception to the rule.

Sir Ernest Shackleton and his second in command assisted by only two other members of the expedition toiled ceaselessly from morning till night in an airy office above Regent St. often far into the night and not infrequently into the early hours of the morning too in order to ensure that all that human care and intelligence could do to make the equipment as perfect as possible would be done.

The obtaining of the necessary funds, the greatest bugbear of all, had first to be overcome, but Sir Ernest's popularity as an explorer is such that soon after the announcement of the expedition checks began to arrive afterwards that success in this respect was assured by the munificence of Sir James Caird, who subscribed the enormous amount of 20,000 pounds sterling. To Dudley Docker and Dame Stancomb-Wills, CBE the expedition is under a debt of extreme gratitude.

The equipment may be said to have been divided into seven main parts:

1. The ship and her fittings
2. The provisions
3. Clothing, tents and bedding and dog harnesses
4. Sledges, skis and Norwegian goods and hut
5. Motor sledges, machinery and tools
6. Dogs
7. Scientific instruments and medical stores

Sir Ernest attended to Nos. 1 and 6, Mr. Wild took on No. 2 and part of No. 4. Mr. Marston fairly revelled in No. 3 and the remainder of No. 4, and Captain Lees was responsible for No. 5. No. 7 was relegated to the doctors and scientists as they joined up with the expedition shortly before sailing.

The choice of a ship fell on a smart little new polar craft still on the docks in Norway where she had been designed by polar experts, one of whom was Captain Adrien de Gerlache the leader of the Belgian Antarctic expedition in 1898, for the purpose of making sporting cruises in the Arctic for profit.

No end of kind friends sent elegant gifts. Mr. Bickerton presented the thin paper edition of the Encyclopedia Britannica, one of the most useful gifts on the expedition and one for which we have especial cause to be truly grateful when marooned on Elephant Island.

Mr. Facer of Northampton, an enthusiastic supporter of polar expeditions, lent us the whole of his unique polar library the total loss of which, save one book which the writer smuggled back to him, we deeply deplore.

Mr. Ponting of cinematograph fame sent cake and wine, Lady Shackleton gave some much appreciated gifts of sweets, and others sent games, books, artificial flowers, cakes, sweets, pictures, etc., etc.

On the ship, before arriving in Buenos Aires

Capt. Worsley RNR, the skipper, a New Zealander, very nice		
Lt. Hudson, navigator, well educated	"	"
Mr. Greenstreet, 2nd mate, fairly well educated,	"	"
Mr. Cheetham, 3rd mate, fairly uneducated	"	"
Mr. Tom Crean, 4th mate, " "	"	"
Mr. Clark, marine biologist, Scotch, gloomy	"	"
Mr. Hussey, meteorologist, very young	"	"
Dr. McIlroy, has been in ships a good deal	"	"
Dr. Macklin, Scotch, very hard working	"	"
Mr. Rickinson, chief engineer	"	"

Mr. Kerr, 2nd engineer, very quiet, humble origin " "
Mr. McNeish, an ill mannered brute!

Crean was on Scott's expedition and Cheetham has been in ship to the Antarctic frequently but never landed as shore party. All the above feed in the saloon. There are 4 tables. I chose to sit at the same table as Cheetham and McNeish because I thought a little unrefined company would be good training for hut life, but I must say that McNeish is a tough proposition. First he sucks his teeth loudly than he produces a match, carefully sharpens it and proceeds to perform various dental operations, occasionally he expectorates through the window and at scooping up peas with a knife he is a perfect juggler. His conversation ----- any way we get on pretty well but - I feel sure I "get on his nerves" as much as he does on mine.

Life in a ship is full of surprises since writing above I have been up aloft in pitch dark to take in the mizzen top sail as it is my watch and the captain thought we were carrying too much sail to be safe. It is certainly no trouble to me rather the reverse, but it is a peculiar situation as I have told you before.

Antarctic Alphabet

A's the Antarctic, its austral skies snowing,
B's are its blizzards so bitterly blowing,
C's for 4th Officer Crean and for Cheetham,
They're two of the best and I wish you could meet 'em.
D is the dirt that we wash off the decks.*
E's the Endurance - a yoke on the necks.
Of McIlroy, Macklin, Clark, Hussey and Lees who as F's form the
Foo foo gang down on its knees.**
G is for Greenstreet, the teacher who taught it to scrub.
H is Hudson, whoever would have thought it.***
I's the idea in the Imperial Trans-Antarctic Expeditionary plans.

J's for the "job" that makes the ship go.
K is for Kerr who works it below.
L is our Leader both sailor and knight.
M's for George Marston so merry and bright.
N is for no one as far as I know.
And there's only the oily, old ocean for O,
P is the plankton - biologists plunder.
R is for Rickinson, he is a ripper,
That's also what S is for so is the Skipper.
T's are the trade winds, too tired to trade.
U's unsatisfactory progress we've made.
V's the vile language that U made us use.
W's "Wild" so are we for some news.
X is for Xmas, it's coming some day,
and it may be here yet 'ere we get to B.A.
Y is what we are for we are a Yacht.
Z is the zeal that inspires the whole lot.

* "Dirt" this is a particular hit at the ship's officers who make us work.

** "Foo foo gang" an opprobrious term applied to us passengers, same as is used for Chinese coolies.

*** A line for a chorus we all sing whenever Hudson tells a rather tall yarn which is pretty often.

THOMAS ORDE-LEES'

IMPERIAL TRANS-ANTARCTIC EXPEDITION JOURNAL

PART ONE - PLYMOUTH TO ANTARCTICA

Saturday, 8 August, 1914

Had a good night, was very tired, slept in the large 8 berth cabin with Hussey, Marston & Clark. Rather a scramble this morning getting up, no one could find anything. All rather dirty. We have to get everything for ourselves, etc. Sausages for breakfast. The very worst West country weather, blowing hard and drizzling rain. The ship was alongside Millbay wharf when we went on board and she left there sharp at noon today with Sir Ernest on board. Just a very small crowd to see us off, but enthusiastic enough. Just before sailing I went ashore and bought 2 lbs. of dry biscuits and 2 yards of cheap calico for purposes of sea sickness.

Sir Ernest slept at Duke of Cornwall's Hotel, he offered me a bed there very kindly, but I declined as I thought it best to get into the routine as quickly as possible. Before we got outside Plymouth breakwater, Sir Ernest left the ship in a picket boat lent him by the Commander in Chief. He returned to London, I suppose, meanwhile we proceeded to Cawsand Bay where we have anchored for the night as we are not quite ready to go to sea yet. I understand that there are one or two things to be done to the anchors, etc. This only suspends the agony. For agony I know there is going to be for me for the weather outside is apparently very rough. It is blowing a gale, cold & misty. How I am going to get all the way to the Antarctic in this tiny ship I don't know. I expect I shall die of exhaustion long before I get to Buenos Ayres. It is bad enough in

a battle ship but in this minute thing I must die. I am beginning to funk it as usual & wish I had not come. I don't see the use of Polar exploration at all.

There is still time to get ashore, I am half inclined to seize the opportunity & go. We have had a small torpedo boat cruising round us all day & her captain came aboard to see ours.

There are signs of war all round. The boom is out across the entrance to the Hamoaze (naval harbour) & battleships keep steaming in & out and searchlights at night. We are to leave here at 3 a.m. in the morning. Very tired and homesick.

Monday, 10 August, 1914

Very seasick and homesick. Ship does everything but sink which is the only thing I pray for, to put me out of my misery, unless a large German battleship comes along and rescues us. It was suicidal of me to come along on the mad jaunt.

Tuesday, 11 August, 1914

Still bad but not so rough, so not so sick. Staggered into breakfast - greasy pork sausages - staggered back out. Partook some good soup at luncheon, grateful for it. Spoke to someone who had the audacity to say I looked very well. Moped about until tea time, smelt kipper, so went to bed.

Wednesday, 12 August, 1914

Don't know where we are, care less. Big heavy swell but that nasty corkscrew motion has stopped. Seem to be getting over my seasickness, but I don't trust myself at all. I suppose that it is only that it is calmer. Appeared at all meals and eat a little at some.

Thursday, 13 August, 1914

Certainly feeling better but still very giddy. I can think of nothing else but sea sickness at present. I wish I could think Imperially. Very big, steady swell, as long as the motion is slow one can stand it - I believe it is that nasty sort of quick, choppy corkscrew motion that knocks one down. So I find we have got to work! The crew of the ship is insufficient for her needs as a sailing ship and so whenever she is under sail and a sail requires altering in any way we, the scientists, six of us, have to pull on the ropes. I suppose I shall be up aloft next. Rope pulling makes the hands sore and the ropes are exceedingly dirty and tarry but it is good exercise and as we have got to do it "there's an end on it." The weather is getting warm.

Friday, 14 August, 1914

Still feel a little funny but quite able to do my work. I signed on the ship's books as Motor Mechanic and my official pay is one shilling a month, but that is only technical, of course, for out of that one would have to pay 1/4 insurance tax! We have been sailing only all day on a starboard tack in a N.W. direction. Am eating better but sparingly. It got quite calm in the afternoon so I went down into the hold and restowed a lot of our shore party gear. Day's run only 52 miles to the good.

Saturday, 15 August 1914

It is nice and calm, feeling quite all right. Wouldn't like to trust myself in rough weather though yet. Took a sounding in 2050 fathoms = 3 miles exactly. Also did some trawling later on as we got over a bank of shallow water only about 500 ft. deep. Caught only a few starfish and other common things. I still have fits of depression (or homesickness) it seems such a long time before we shall be home again. On the other hand it is a terribly trying time

to have to leave home with the war on. One does feel anxious. So many things might happen. It is very trying to be without papers or even wireless.

Sunday, 16 August 1914

A nice, fine day. We are still sailing only with a good, big swell. We are somewhere in the Bay and it is behaving itself unusually well. If we get nothing worse than this, I have nothing to fear. We had a short service today; I read prayers and we sang a couple of hymns. We have to do all our own work in our cabins and in cabins with 3 in it we are taking it in weekly turns to keep it clean; keep the wash-stand supplied with water, etc. There are also the outside passages to keep clean and we are taking this in turns. It is my turn in the cabin this week

One of our best men, Tom Crean, who was with Capt. Scott, and got the Albert Medal for saving Commander Evans's life, fell down and broke his wrist the other day on board and is laid up with it. Minor accidents are frequent. I had a very narrow shave this morning from getting my head bashed in. We were all pulling a halyard, and someone was singing a chantey, when the rope broke and the block came down very forcibly and just grazed my face. But a miss is as good as a mile every time. Slept all afternoon.

Monday, 17 August, 1914

One of our jobs consists in scrubbing the decks in the morning. This is work I should not mind a bit except for the disgusting way everyone spits all over the deck, which would not be tolerated for a moment in a man o' war. Still it has got to be done, and one can always have a bath afterwards, and I suppose it is good for one from a disciplinary point of view. In the saloon we have 4 little separate tables, as you know, and I have made a point of sitting at

the same table as the 4th Officer who was a sailor on Scott's Expedition and the carpenter who is a perfect pig in every way, but I have done this because I think it is a good thing to try and accommodate oneself to ideas and ways less refined than one's own, though with the exception of Tom Crean and the cook we shall all be of the refined educated class in the hut.

We have a good deal of pumping to do for whenever the ship is steaming she seems to leak a lot and sometimes it takes us 3/4 hour to pump it out. We are up at 6 a.m. every morning scrubbing decks. We are to call at Madeira as I told you, I do hope that we shall get lots of letters and papers there.

Tuesday, 18 August, 1914

We are still sailing along with a fair breeze. It is very warm, but not uncomfortable. We are all dressed in vests only for underclothing doing most of our work in vest without jacket on, putting on jacket for meals only. There is a big swell but I seem to have got over my seasickness completely and have little further anxiety. Sorry to keep on mentioning about it but it is always with me and a matter for great astonishment on my part that I have got over it, for this voyage at least.

Work today, opened up a canvas covered crate of tents to see that they were all right, repacked them and painted the crate.

Overhauled engine of motorboat.

Wednesday, 19 August, 1914

A fine hot day. We are now living exclusively on tinned food having quite exhausted our supply of fresh meat, which we have been able to keep until now in our refrigerator. It was so calm

today that we have now got up steam or else we never should get to Madeira at all as we have only been doing about 80 miles a day or 3 1/2 miles an hour! We took another sounding today 1970 fathoms, 2 1/2 miles and lost the whole of the wire. I finished off the motorboat engine.

Thursday, 20 August, 1914

Took two soundings this morning early of 1883 and 2200 fathoms 2 and 2 1/2 miles and lost the wire again on the second one. It got very rough this evening and I don't feel quite well. Looking forward to getting into Madeira tomorrow anyhow, and letters perhaps.

Wednesday, 2 September, 1914

(Illegible)...We started lime juice yesterday it is very acceptable to me for neither smoking nor drinking, I am denied some of the pleasures that the others have, for they have tobacco and cigarettes free and beer and whiskey in the evenings. I wish I had a few sweets or chocolates sometimes. We shall have plenty south. Saw some distant smoke today. A flying fish has just come on board. Just off to bed, 7:40 p.m.

Saturday, 5 September, 1914

Weather and too many dogs to look after and sledging gear to get ready. We do look forward to getting down to the ice or at least Marston and I do. We were out talking about it today. There are some very unrefined people in the ship as officers, men who have risen from sailors and although they are fine men in their way and reliable at their work their ideas with regard to propriety are so different to ours that it really is a little trying and their language at meals is a bit too strong, accustomed as I am to hearing expletives.

At noon we passed St. Vincent Island, Cape Verde Is. passing about 100 yds. off the mouth of the harbour and I achieved my project of sending you a postcard in a bottle. I threw it out to a fishing boat who picked it up, but whether they post it or not remains to be seen, if they do it will be unique, because it is the only sort of communication we had there and it was sent from a ship which had been a week at sea and it was only a chance that we happened to pass so close. It cheered me up a lot to see, them pick up the bottle. Please let me know whether you get the card. It is a picture of a Madeira sledge with oxen, back written in red ink and front in black ink. I am afraid I shall not hear whether you got this card or not until we have actually completed our sledge journey (December 1915) unless you happen to mention it specially in one of your letters to B.A. I know that it is impossible for me to get an answer to anything now that I may write about until Dec. 1915.

The Captain is a remarkably nice man, a New Zealander.

Sunday, 6 September, 1914

A real day of rest for which I was truly thankful as it has been very hot indeed today with a light following breeze at about the same speed as the ship so that the air on the ship seemed stationary and we got all the heat from the engines. It must be terrifically hot in the engine room, one of the stokers (there are only 3) was brought up in a faint today. It is cooler now. I always write this about 7:20 p.m. As long as there is a breeze of some sort one does not feel the heat so much, but the air is very moist here and one always feels moist heat much more than dry heat. The temperature is about 85 degrees.

I tell you all my doings because I think they will interest you but you must not think that I am the only one who does any work.

They all do it in turn, some more, some less and I do just as I would at home i.e. potter about, waste time, tidy up and find something to do in my stand off time. Got up 6 a.m. closed ports, as engines have been working since yesterday noon there was no pumping to do, so I cleared up and brushed out the saloon, filled the tanks and as the steward is on the sick list with a poisoned hand, I laid the tables and cleared up for all meals today and Marston did the nasty job of washing up the things - a job I dislike intensely. I am off the passages thank goodness and I must say my successor displayed an energy which put me in the shade! He washed the whole of the passages over with water and a mop this morning! I only brushed them daily with a soap and water washing on Saturday.

There was a rumour this morning that we were to have a short service and some of us put on our yachting suits but instead of service we had to furl all sail i.e. roll the sails up and I got my nice suit rather dirty up the mast furling the top gallant sail, which was a pity.

Monday, 7 September, 1914

A very rough day - a short confused sea, ship pitching and rolling very quickly in every direction. It has affected me very slightly, giving me a slight headache and loss of appetite, nothing else, but I think it shows that a huge sea would affect me after a good deal of calm weather. My health on this trip had been a matter of continual interest and surprise to me, which accounts for my writing so much about it. You will understand though that this is a purely personal diary.

I think when I get down to the ice I shall keep a somewhat similar record, as it may come in handy for book writing and lecturing later on and I will send it to you before I come home if there is

the opportunity to do so. This however will be the last piece of writing you will get from me for quite a long time, except a letter from the Falkland Islands, but of course I shall always seize any opportunity to communicate with you if there is one, but it is quite certain that once we do land on the ice and the ship has left there will be no chance of communicating with you for at least 9 months. We expect to land on the ice about Xmas day 1914. The ship would leave Jany - Feby then return to B.A. or New Zealand and post our letters then she will return for us about Xmas 1915 and take us off about March 1916 so you will hear nothing from June 1915 until April 1916 and we shall be home about two months later.

After closing my diary last night a strong wind suddenly sprang up and within a minute or so of writing the last word I was up at the top of the mast loosing the top gallant sail. It is rather a curious sensation being up aloft in the pitch dark with the ship rolling and pitching.

(Illegible)

There is a strong wind (a S.W. Monsoon) and we have been under sail since about 2 a.m. I am getting quite handy with the sails now and am beginning to know the different ropes - halyards, braces, sheets, staysails, outhauls, tripping lines and so on and something called a vang ride I have to pull but don't quite know why yet or what happens. Most of the ropes run up the mast and then through a block (or pulley) to their work so that it is difficult to follow just where they go or what they do amongst the dozens of other ropes. When we pull on the ropes they are taken off the belaying pin and passed through a snatch block on deck so that several people can get on to them at once and all pull like a tug of war team. The bosun or Mr. Marston or someone always sings a chanty - usually some unprintable sailor song but we go with a swing and help one to keep time with the work. This sailing ship

experience is all most interesting. Very few officers in the Navy even know anything about it. We are sailing on the port tack now, i.e. the wind is on our star-board or right-hand side and so the ship is heeled over at a most uncomfortable angle making walking very difficult.

Friday, 11 September, 1914

There are only three of us, Mr. Marston, Mr. Hussey and myself, in the large scientists cabin. Mrs. Chippy has more character than most dogs. She even climbs the rigging at times right up to the mast. She is always ready to play at fighting and "talks" and answers her name just like a dog.

Saturday, 12 September, 1914

I daresay you will think it very cranky of me but I kept 5 letters which I received from home at Madeira unopened so that I could have a little mild excitement at sea on this long trip to B.A. when we have no news. I shall soon be opening these and if they contain any questions which should have been answered before you will know why you have not received answers already. I shall probably do the same with my letters at B.A.

Sunday, 13 September, 1914

Sunday. No church. I think they ought to have it for the sake of keeping up institutions. Lollled about all day except 2 p.m. to 4 p.m. when I did my watch on the wheel. Rough and cool with head wind. Ship is pitching tremendously as she is running into a big head sea with swells. I don't feel quite fit - rather a headache and feeling a little depressed, so opened one of my letters to cheer me up a bit. It was a bill! Feel more depressed. Have taken

a dose of sea sick solution, feeling better. Getting rougher I think. Hope not.

I have the middle watch tonight - 12 to 4 a.m. We go to bed and only get up if required. We are generally roused but never really required as far as I can see. But all merchant service and Naval officers can think of nothing else but their ship and think everyone else ought to take the same amount of interest in the beastly ship. They are most inconsiderate people and have no respect for "passengers" and their night's rest.

We have been so much blown off our course that we shall not be able to visit St. Paul's rocks at all which is a pity as they are of great geological interest, being made of a rock occurring nowhere else in the world. Darwin visited there. Very few people have done so. I am very disappointed. Anyhow, my timetable is helplessly "out", as we are still 200 miles north of the equator. We only did 140 miles in the last 24 hours under steam! An extraordinary thing happened during the night. The tabby cat, Mrs. Chippy, jumped overboard through one of the cabin portholes. The officer on watch, Lt. Hudson, heard her screams and turned the ship smartly round and picked her up. She must have been in the water 10 minutes or more.

Monday, 14 September, 1914

Calm again, feeling exceptionally well. The Captain has cut down the supply of cocoa altogether which is a little hard on me as I have been drinking nothing else up to date. He says that it is required for the ship when in the Antarctic and that too much is being consumed now. I daresay he is right, but it is a little hard, isn't it?

It has been a most beautiful day and one of the coolest we have had since leaving Madeira and yet at this moment we are right on the Equator itself. There is a gentle head wind blowing and I am sitting in the wardroom with a jacket on as well as a vest which is unusual.

Tuesday, 13 October, 1914

Worked on cargo from 6 a.m. to 4 p.m. Hurley our cinematographer arrived. He was with the recent Mawson Expedition. He seems a very nice & amusing companion with the regular Australian accent.

Mr. & Mrs. Hall & a friend came on board to look round the ship & asked me to tea & dinner. We had tea at a cafe' & dinner at their house which they keep as a sort of superior boarding house taking in 4 young men lodgers. With these I soon made friends and had a pleasant evening. We discussed the value of Mate' as a beverage for Polar work. I had recommended this mate' to Sir E. in London, but little knew that B.A. was the county of its origin. Mr. Hall has worked for 30 - 40 years in the "Camp" as a rancher, but he is so polished & refined that one would take him to be a retired Colonel.

Wednesday, 14 October, 1914

Very heavy & extra dirty work getting out the last of the cargo, we get absolutely black with coal dust, but are beginning to make a really good "stow" of it & are gaining room to get in the extra gear. The weather turned colder in the morning. About 2 p.m. we had to hurriedly lower & man the whale boat & go to the rescue of the motor boat which was on its way back from La Negra with the officers and was leaking water to such an extent that it stopped the engine working. We got her in tow only just in time

& trans-shipped some of the luggage & the chief engineer; she was very low in the water & would soon have sunk. We had a hard pull against a rapidly increasing headwind and by the time we got back to the ship the wind had increased to hurricane force bringing with it a dust storm so thick that one could only see a few yards. It was intensely unpleasant as our eyes & hair became cringed up with dust in a very few minutes & we had to work through it to hoist the two boats. By the time we had finished we were all thickly coated with dust & the ship was full of it. I have never seen anything like it before. It lasted about 3 hours & then turned to rain.

We are taking it in turn to go out to the lighter in pairs for 24 hours each and look after the dogs; as Hussey went out this morning I borrowed his banjo and deputized for him at the concert. I played rottenly but was treated royally. They gave us a nice tea afterwards.

There is a fine billiard room attached to the mission and a good reading room and they run it as a sort of Christian club. It must be very nice for decent minded sailor men (and there are a few) to have a nice place like this to go to, so very homely and cheerful. There is also a sailors home where we are to be entertained to a supper on Monday next. We expect Sir Ernest to arrive about Friday next.

The crew, or at least 10 out of the 12 are behaving most disloyally, going out every day on the drink and leaving us, the staff, to do all the work. This shows something wrong somewhere, but it will all be put right when Sir Ernest arrives, thank goodness.

Sunday, 18 October, 1914

After Church I went to the Palace Hotel to see Sir Ernest who arrived by the S.S. Uruguay yesterday, and stayed with him talking and writing letters until 1 p.m. He told me all the news and his plans for our forthcoming journey. We sat in his bedroom drinking ginger ale and coffee. He certainly endears himself to me more and more every time I meet him.

Monday, 19 October, 1914

Another hard day's work, nominally in charge of dogs for the day but had to turn to and get the motor sledges out of their cases on board the lighter; one of the cases is about the size of a cottage and it took several hours work to break it open without damaging the wood. The case alone cost 7.10.0 sterling and it was so large that one side of it was used to make a new deck extending from the roof of the ward-room to the quarter deck as to have more room for the dogs. There are four other enormous cases containing motor sledges or parts of them, propeller, etc., but I expect I shall be able to unpack some of them before getting them on board. We are getting the kennels on board by degrees but it is awkward and difficult work.

Fed and watered dogs and washed them up.

It is rather chilly to-day. The weather has been unsettled ever since the thunder storm.

We were all invited to a representative luncheon today given by the English Colony here, but Sir Ernest could not let us go as there is still so much work to be done. We are also invited to a sing-song on board S. S. Uruguay tonight. They are all going except myself as I have to stay with the dogs, thank goodness, but I got someone else to look out for me from 7 to 8:30 p.m. and went and dined with Rev. Brady and Mr. Mackie, the British Consul

General, just a simple dinner in Mr. Brady's flat. Everyone here lives in flats and there are some very fine blocks of flats. They call them Departments.

Friday, 30 October, 1914

We are really living like pigs, though the actual food is rather better. I mean, of course, the way we get it served up. We have nothing but enamel plates and cups now and it seems quite the ordinary thing now to do what at first one could not help feeling some disinclination to.

For instance we drink our lime juice at luncheon out of enameled mugs and we never have more than one plate at meals except pudding at luncheon. At breakfast we have our bacon or fish on the same plate as we had our porridge in, this we follow with jam, treacle or occasionally honey taking care to balance this on the edge of the plate. In fact one soon becomes skilled in the art of contriving to keep a clean patch on the one plate for each course. We sit 4 at a table and easily make one teaspoon do duty for the four. We help ourselves direct from the butter dish and so on in ways too nauseating to mention. It is extraordinary how quickly one relapses into barbarism.

We have a small refrigerator on board. It seems a curious thing to have in a polar ship but it has been very useful just now as we have been able to take a good supply of carcasses, sufficient to last us to the ice at any rate, when we shall be able to get Seal and Penguins for fresh meat.

The fresh meat now is a great improvement on the tinned food diet which we had exclusively the whole way from England to Buenos Aires and which became very trying.

Our usual menu is as follows: - Breakfast,- Porridge, then either fried lumps of meat, bacon or tinned fish.

Tuesday, 3 November, 1914

The ship is rolling frightfully and there has just been a grand shower of cooking utensils in the galley. How the cook cooks is a mystery. Of course there is a huge sort of grid iron on the top of the stove into which the various pots can be put and it is made adjustable so that it can take any size pot.

I am diligently studying cooking as Sir Ernest dismissed our Shore Party cook, because he was hopelessly incompetent and he says he relies upon me to do the cooking and teach others. I am very glad I have learnt bread-making from the cook.

It is splendid having Sir Ernest on board, everything works like clockwork and one knows "just where one is". Mr. Wild, the second in command, actually tells us off for our duties and Sir Ernest settles any little difficulties.

We have had some of our Arctic clothing served out. We all have fine thick brown jerseys and woolen helmets, sea-boots and oil skins. You would never recognize me standing at the wheel dressed like a lifeboat man. The only thing I have not got is gloves, never wearing them at home I brought none with me.

At present I am wearing socks, trousers, flannel shirt, brown jersey, coat and waist-coat. I must soon put on vest and drawers if this weather gets colder. I must now go and call the remainder of the watch to wash down the decks.

I see it is my wheel too, noon to 2 p.m. It is rolling now something awful I have to wedge myself into my corner to be able to write at all.

Wednesday, 4 November, 1914

Last night we had a short smoking concert in our cabin everyone was present. Sir Ernest, Mr. Wild, Marston (the artist), Hurley (cinematographer), Tom Crean, the sailor who was with Scott, Dr. McIlroy, Dr. Macklin, Clark (biologist), Wordie (geologist) James (physicist), Hussey (meteorologist), and myself comprising the shore party and Captain Worsley, Lts. Hudson and Greenstreet R.N.R. the ships officers. Marston and Wild who were both on Shackleton's last expedition, were the principal vocal contributors to the program. Hussey played the banjo as accompanist which he does beautifully and I the Ocarina - vilely.

Today I spent the whole morning in the coal bunkers with Wild, the chief engineer and two others, "trimming" the coal - shifting it along to the stoke hold door. This afternoon I had a good bath and did my washing at the same time, 1 shirt, 1 pair socks, 5 handkerchiefs, 1 pillow slip, 4 hand towels, and 1 bath ditto. The bath ditto is a job to wash. I would willingly give a laundry 6d to do it. I must admit washer-women earn their money except perhaps in Buenos Aires where I was charged 1/6 for the following: 2 white shirts, 1 pr white trousers, 2 singlets, 4 collars, 2 soft collars and 3 pair socks; which gives you an idea of the prices of things in B.A.

We have done 186 miles today. We quite expected to have done more as we have all sail set. We now have only 150 to go to South Georgia, however, and shall be in by noon tomorrow at the latest.

We had a fearful scrum at dinner today; a big roll sent about five of us flying into the middle of the room with plates, mugs. etc., such a mess, but I was not among the scrimmage this time, merely an amused spectator.

We have already met a good many penguins swimming about and there are always several Albatross, blue-petrels, whale-birds and Cape-pigeon-petrels accompanying us; we have seen a good many whales too.

Thursday, 5 November, 1914

Such a night; everything in our cabin flying about and incessant cursing and swearing from the six unhappy occupants. We have eight bunks in our tiny cabin which is 9 ft. by 9 ft. but only six of the bunks are occupied by people; the other two are, or rather were, full of scientific instruments, cameras now piled up in a muddled heap on the floor.

Saturday, 5 December, 1914

We have been ready to leave South Georgia for the last week but Sir Ernest has been waiting for the arrival of a steamer - the "Harpoon" - from B.A. which would bring us our last news of the war, etc. As she had not arrived by today, Sir E. decided to leave forth-with and at 9 a.m. we set sail for the Antarctic, the goal of my life's ambitions. Shortly before sailing two little live pigs arrived on board and were accommodated with a neat little pen.

What thoughts are ours, setting out thus at such a time, with no chance of news from dear ones at home who are passing through the greatest national crisis of modern times.

What may we expect to learn on our return. The map of Europe may be greatly altered but God grant that England may stand where she is this day and that all those dear to me may be spared from any privations or sufferings.

It is a fine day and the sea is not very rough though I have been sea sick three times, but I have learned to take it philosophically and it will soon be over.

We passed our first iceberg - a beauty about noon. This is the first real large berg I have ever seen.

The sea got rougher in the afternoon and I got worse.

The upper deck is heavily encumbered with coal; there is coal everywhere and at present it completely blocks the main deck between the cabins and the wardroom.

Wednesday, 9 December, 1914

Sea quite calm, and I am feeling much better. Less cold. No ice about. No sun. About 3 p.m. we suddenly ran into loose pack, tried to get through it, got jammed and did not get out of it until 7 p.m. Some snow.

Thursday, 10 December, 1914

A most beautiful sunny day and fairly calm but a big swell. Wrapped in a warm overcoat which Sir Ernest has kindly lent to all of us for the "man at the wheel" it was really quite pleasantly warm on watch this morning.

Being comparatively calm, I spent the afternoon in the hold arranging the stores and sorting them out, some of them having

got slightly mixed during the recent rough weather. My hold looks like a grocer's shop with the floor made up of two layers of packing cases and deep shelves all round filled with thousands of tins of every conceivable kind, Irish Stew, Salmon, Calf's head, Duck and peas (puzzle find the peas), boiled rabbit, curried ditto, mutton cutlets and all manner of things that I never have seen in tins before.

All our jams, presented by Sir Wm. Hartley, are in 1 lb. tins, the butter is in 4 lb. tins and we use 6 tins of jam and the 1 of butter daily - this for a complement of 28 hands all told.

Our cook, Mr. Green, is a baker - a ship's baker - by trade and the son of a Richmond confectioner. He makes excellent bread and is very ingenious at contriving savoury dishes from tinned meats, especially an excellent hash from a 7 lb. tin of corned beef. We use a great deal of compressed vegetables. These are of German preparation, and owing to the outbreak of war, we did not have to pay for them. These vegetables are really quite extraordinary. Packed in cubical tins about 3 inches each way, one tin when soaked out with water produce enough cabbage, carrots, beans, or whatever it may be for more than one hundred people to have ample helpings. They appear to be prepared by means of first drying out by evaporation every atom of moisture and then hydraulically compressing the residue into bricks or cakes. There are celery, onion, spinach, french beans, parsley and turnip besides those mentioned above, also mixed julienne for soups. The same manufacturers, Knorr, have also supplied highly concentrated soup squares but these are very similar to the Maggi preparations and like them, horse extract flavour predominates. The bulk of the tinned goods has been supplied by Messrs. Morton's Ltd. the well known shippers and packers and the whole consignment is well packed, but certain proprietary articles have been supplied by their respective manufacturers Bovril Ltd. West India Produce

Association who supplied the sugar and Carson's Ltd. the well known cocoa and chocolate manufacturers, the packing of whose goods could not have been excelled for security and compactness, the cocoa being packed fifty half pound tins in a water tight tin lined Venesta case, as light and strong as it is possible to make them. Moreover the excellence of the packing was only exceeded by the quality of the goods themselves.

Friday, 11 December 1914

Ran into loose pack of thick ice about midnight and have been steaming very slowly through it all day in magnificent weather, continually charging and splitting or pushing aside great slabs of snow covered ice varying in size but averaging about the size of the fountain ponds in Trafalgar Square, some of them flat and only a few inches above water others hummocky and as high as the ship's side and here and there a small berg.

This then is the pack, a sight it is worth coming so far to see, and even as I write, the book is constantly being jerked from under my pen as the ship takes the shock of charging each slab and we go along, scrunch, scrunch through the pack.

At this moment a particularly severe one has shaken everything in the room like an earthquake, whilst the grinding noise of the ice, rubbing along the ships side, bungs back to my mind a similar trip through the ice when H.M.S. Bonaventure was frozen in in North China during the Boxer Outbreak in 1900. Whilst at work down in the hold this afternoon and so close to the ships side near the waterline by the bows, one or two of the crashes were positively frightening; it sounded as if some of the pieces must stave in the ship's side, whilst the noise was like thunder. It is as light now that at 10 p.m. one can easily write by daylight but being tired will close this now and sooth my eyes in slumber.

Sunday, 13 December, 1914

The lighting effects amongst the ice are all superb, especially during the dusk of night for it never gets really dark, though we are still some 300 miles north of the Antarctic circle which marks the northern limit of the midnight sun in the Southern Hemisphere.

Seen at dusk the scattered pack looks like a fairy archipelago of vast white water lily leaves floating on a pond of the deepest azure, and then when the first faint glimmers of the rising sun glisten like sapphire topaz from the million minarets of the scattered hummocks the scene, indescribably lovely defies description or the painter's brush. It forces the most unromantic to pen poetic rhapsodies, whilst the sympathetically appreciative drink their fill and worship God through nature.

Nor are the quaint little penguins the least picturesque part of these soul stirring scenes. They pop up unexpectedly on to the floes close along side the ship and squawk protestingly as we pass by.

Monday, 14 December, 1914

We are again bumping away through the pack, always due South for we have reached our proper Easterly longitude 17 degrees which is roughly the same as the West Coast of Ireland, so that our day is almost the same as the day at home, only about one hour later, though we are having our dinner here so early, 12:30 p.m. that we are probably eating it at the identical time that those who are so dear to us at home are eating theirs. Just a little thing like his sometimes makes quite a lot of difference when one is far away from home and has little fits of homesickness; as I must

admit that I often do. I wish at this very moment that I could see what my little baby daughter is doing. It will be an intense joy to get news again and a greater still to get home, which we hope to do about June 1916. One can but look forward to that time with the keenest anticipation, but meanwhile plenty of hard work makes the time pass quickly enough; but a whole year and six months without any news and with war waging requires some patience to look forward to.

Tuesday, 15 December, 1914

.... The necessity for this arises from the fact that under the influence of the strong Southerly wind which has been blowing since last night the shape of our little pool is constantly altering owing to the shifting of the ice floes (floating slabs of ice) which form its sides, and if one of these were to jamb under our stern it might damage the propellor, so we have to keep working the engines and rudder to keep her "bow on" to the wind and her stern free from ice.

As a matter of fact whilst I was at the wheel, I nearly had the exciting experience of being "thrown over the wheel" for a floe did actually strike the rudder a terrific blow, and the wheel literally spun round with me holding on to it, but just as a complete somersault seemed inevitable I had the presence of foot to get that extremity on to the brake and check it, so preventing what might have been considerable damage to the steering gear. Sir Ernest was standing by me at the time and although he neither blamed nor complimented me on the feat he was good enough to congratulate me on a lucky escape!

Had I just failed to control things than I should have incurred Sir Ernest's severe displeasure if not his censure, though he is mighty good and forbearing at all times.

To serve such a leader is one of the greatest pleasures of the whole trip; he expects his orders to be literally and promptly obeyed but he knows one's limitations better than one does oneself and he invariably allows for them, he never expects one to do more than one is capable of, he trusts one implicitly and he always appears to be pleased with what one had done, this being though one may be overly aware that one had not done all or as well as he could have wished. Thus he gets the very best results out of all his staff. His adaptability to each of our views on our own particular subject and his tactful way of reconciling our views with his whilst giving us the impression that he is modifying his schemes to suit ours are amongst his most salient characteristics.

Wednesday, 16 December, 1914

...in the wheel each with a handle, one has therefore to make sixty spokes pass one's hand each time the helm is put hard over from one side to the other, and as this sometimes happens two or three times in a minute it entails fairly hard physical work; but it is, at the same time, valuable as physical exercise.

In a bigger ship there is nearly always steam steering gear so that the turning of the wheel does not involve any physical labour.

The glare on the ice today has been intense and were it not for our snow glasses I, at least, would have developed an attack of snow blindness, an intensely painful inflammation of the conjunctiva of the eye to which I am especially susceptible.

Our snow-glasses are exceptionally good. They are very well made (by Rowley, Manchester) and although the colour is so light that it scarcely impedes the vision at all, merely colouring the view a greenish yellow, the stain used in the glass is such that it

effectually filters out the ultra violet rays in the sunlight which are the cause of the trouble.

The warmth and brightness tempted most of us to do our washing, but I devoted all my energies to scrubbing out the wardroom. It is laid with linoleum. I had not scrubbed it since South Georgia and it was coated with a layer of whale oil grease and coal-dust, for there is still a lot of coal left on deck just outside the saloon door.

I simply hate scrubbing. I am able to put aside pride of caste in most things but I must say that I think scrubbing floors is not fair work for people who have been brought up in refinement.

On the other hand I think that under the present circumstances it has a desirable purpose as a disciplinary measure, it humbles one and knocks out of one any last remnants of false pride that one may have left in one, and for this reason I do it voluntarily and without being asked but always with mingled feelings of revulsion and self-abnegation. I expect I am very slow at it, for the saloon is only 12 ft. x 18 ft. and it takes me over an hour to do it really decently. I use two buckets one with soapy water and a scrubbing brush in it, the other empty to start with but with a house-flannel in it. First I scrub a piece about 4 ft. square then I "swill" it a bit with the house-flannel then I mop up the filthy liquor with the flannel which I wring out into the empty bucket and then soaked and rinsed in the soapy bucket, and so on but I often wonder whether I go about my menial duties in the orthodox way, though I never have a doubt that it is the most scientific way, but probably I expect that charwomen are little concerned with the scientific aspect of their metier so long as they can accomplish their task expeditiously and receive the stipulated remuneration therefore.

I often wonder whether if I were to wipe the linoleum over every morning with a damp cloth it would obviate altogether the necessity of scrubbing with soap and brush. I wish I could remember how "lino" is treated at home and regret now that I never took more notice of these domestic pursuits in years gone by, though I have vague memories of observing the application of beeswax or "Ronuh", but we have none of such substances here.

I fear that these soliloquies are not of much interest, but appreciative ravings about the pack are as likely to become monotonous as the pack itself.

I spent the afternoon at "storing" after I had done my scrubbing and had no sooner made a fine lot of open space in one of my storerooms than it was immediately discovered and filled up with crates of "spuds" (potatoes) from the bathroom.

Mad with rage I fled to the bathroom to avenge myself by having a bath but found that that indispensable utensil had been lost during the residence of the potatoes in the bath-room.

I consoled myself by repairing one of my old green slippers, thereby giving it a new lease of life, for they are on their last legs, or rather feet.

Thursday, 17 December, 1914

Still rather dull and overcast but not unpleasantly cold. We made fairly good progress through heavy pack all the morning. Stopped for an hour midday to make some adjustment to the engines.

Got into very heavy pack again in the afternoon and could only get through it by repeatedly charging at it at full speed, the first impact generally makes a "dock" in the ice the shape of the ship's

bows, the second splits it and the third forces it apart and crushes it up, but often it takes many more than three blows to break up the old hummocky stuff. We generally manage to get through anything up to about 3 ft. thick, but if it is thicker than that we have to go round or go back and try some other way.

Our course twists and turns about so much that it is often very difficult to go astern enough to get a fresh run at it and it is when going astern that the danger of the man at the wheel being thrown over it arises, for if the rudder comes against a piece of ice it knocks it over and the wheel spins round with terrific force unless one had the brake on. Our smallest member, Mr. Hussey, the meteorologist, a charming little person was thrown completely over the wheel today, fortunately without sustaining anything worse than a shaking.

The bows of this ship are, of course, especially strengthened and iron shod for the purpose of cutting the ice, and as they slope up very much they often run up onto the floes two feet or more when charging them and so break the floe by the direct weight of the ship.

We seem to be getting less and less open lakes and the floes are getting larger and larger, in fact the whole sea now looks like a vast frozen snowfield with only here and there little lakes and channels of water.

Some of the floes are certainly several square miles in area.

We passed an exceptionally beautiful iceberg in a small "lake" this evening. It just caught the glint of the sun in such a way that the most lovely blue permeated its fantastic translucent pinnacles, whilst its reflection in the perfectly still water was even more beautiful.

We got an Emperor Penguin this morning a fine bird nearly 3 ft. 6 in. high and weighing 58 lbs. a great addition to our larder. Poor thing it had to pay the penalty for its inquisitiveness for coming too near the ship.

They are very inquisitive and if one comes near when we are jammed in the ice, someone always jumps out on to the floe and catches it, for the silly creatures simply stand still and wait to be caught.

Friday, 18 December, 1914

Bright but overcast, a little cold and some snow showers.

Our progress is very slow, but we are in Lat. 62,41 now having made 35 miles yesterday. Sir Ernest must be anxious, though he entirely conceals it and appears to be as jovial as ever. He is up night and day and frequently up the mast in the crow's nest for there is nearly always an officer up there now scanning the horizon searching for patches of open water. We are now up against ice which we are often unable to break, in fact there are really no separate floes at all, the ocean seems like one great solid desert snowfield with patches of water here and there. How we get through it at all is a wonder, for our progress now is more like going overland across very rough country in a huge slow-moving steam wagon. We are not making a mile an hour. Sir Ernest had been expecting to reach an open sea, but it never comes. We are burning a good deal of our valuable coal and we cannot afford to stand still.

We got three fine crab-eater seals this morning. Mr. Wild shot them, some of us attended the subsequent butchering by way of instruction. It is awful, but it must be done.

We are now anchored by a floe for the night.

Saturday, 19 December, 1914

Very overcast and cold. We were anchored all night but at 9 a.m. got going again cutting through ice of medium thickness all the time, but I doubt if we had done more than a mile by noon when we gave it up again and have been stationary in the pack ever since. It was snowing all my wheel but I kept quite warm and the two hours passes fairly quickly.

The whole surface of the sea now is practically one continuous sheet of ice and what little progress we made is only by cutting through it. It is exactly like going over snow covered land, for the whole floe is covered with fairly deep snow. The floes are certainly many miles in extent.

I omitted to note yesterday that Mr. Wild was cutting my hair and had got it half done when he was sent for to shoot seals and after that there was no opportunity to get me finished until this evening so I have been going about - a grotesque object - half shorn, the butt of many remarks witty and otherwise.

We are eating lots of seal and penguin meat now and when well cooked it is delicious. We had seal steaks for breakfast, stewed Emperor Penguin for dinner and penguin hash for tea all three most excellent. Perhaps we should not set so much store by them if we had good roast beef and chicken to choose from, but I am sure that it would make a fine tinned food if it could be packed up in tins and sent home.

Sunday, 20 December, 1914

Sunday. Still blowing hard and we have been anchored against the floe all day in a small but gradually diminishing lake uneventfully except for a few exciting moments this afternoon when we saw a large piece of floating floe descending upon the stern of the ship, being driven forwards by the wind. We got under way at once and just managed to clear it as it bumped our stern which made a curious imprint on the floe.

It is very depressing remaining stationary so long, but Sir Ernest maintains his wonderfully buoyant spirits and betrays no trace of anxiety. He is so wonderfully hopeful all the time.

I have spent nearly all day down in the holds shifting cases and continuing the arrangement of my stores which is now nearing completion.

This evening some of them went out on the floe and played football, but I could not go as I had to get tea ready.

After tea I saw three Ringed Penguins out on the floe, and as we have no specimens of these I went after them but had to go nearly half a mile before I caught up with them when I was able to catch two of them. They peck pretty hard and also hit with their flippers with considerable force.

The sun came out late in the afternoon and the lighting effects on the hummocky ice were very pretty. It is very cold, about 20 degrees Fahr. (illegible)

Monday, 21 December, 1914

A magnificent bright day again and we have made the best run for many a day. It is cold but dry and in the sun it is delightfully warm. At the wheel this morning one of my ears was being burnt by the

sun whilst the other one in the shade was being frost-nipped by the cold wind.

At about 2 a.m. the ice began to open up a bit and we were soon under way, making slow headway through very tortuous "leads" towards some large takes which we can see on the horizon, and it was not until nearly noon that we reached them; thereafter we had a wonderful run through a succession of huge open "lakes" and are still going ahead fine. It really seems as if we are likely to get on a bit now, if not entirely through the pack, for the pack is mostly the sea ice which breaks away from the Antarctic continent every summer and drifts northward, and it is reasonable therefore to suppose that there is now an area of open water between it and the land, over which area it had drifted on always north, which is always called the "land-water".

Wednesday, 23 December, 1914

During the 24 hours ending noon today we had covered only 19 miles due to meeting with much heavy ice during the night.

Just as I closed my diary last night it took us an hour and a half to go about 20 yds. through an ice isthmus formed by the pressing together of the corners of two huge floes. How we get along at all in such a little ship is a marvel.

This morning we were up against a huge floe, probably ten square miles in extent and yet Sir Ernest found a way.

He is indefatigable, up all day and night on the bridge and in the crow's nest and yet always the most cheerful amongst us and finding time for a game of Bridge or Patience, of both of which he is very fond, and also able to spare the time to attend to the

hundred and over little details of each of our respective departments.

The more I know him the greater becomes my admiration for his ability as a leader. Although he is expert at nothing in particular, he is easily master of everything.

It was so warm during my wheel partly due to the physical work involved that I soon found it more comfortable to dispense with coat, hat, scarf and gloves.

This afternoon I got a tub and plenty of hot water and descended to the hold where I washed first my hair then myself and then my clothes.

Opportunities such as this are few and far between and I am feeling cleaner than I have felt for some time, and it is a great weight off my mind to get my clothes washed as they had begun to accumulate.

I wonder very much whether I go about it the right way and whether the little discoveries I make in these domestic arts are not after all merely the orthodox procedure of any domesticated housewife. Nevertheless these independent researches please me immensely, for instance we have discovered that after washing the things it is a good thing to rinse them out in a fresh supply of perfectly clean warm water, so that the rough dry appearance due to not being able to iron the clothes may be alleviated.

My costume is scantier than one might suppose, but whether it is due to the dryness of the air making the cold less noticeable or whether it is that I am getting acclimatized to it I cannot say; probably a little of both, but certainly I am all the time trying to acclimatize myself by wearing as little as possible. Last night,

except whilst at the wheel, I had on nothing but socks, trousers and a sweater. Today I have on socks, cellular knicker pants, short-sleeved summer undervest and brown sweater, and always my old green slippers, (nearly worn out now alas!) but when I go to the wheel I put on boots, woollen scarf, waistcoat, jacket, fur-lined turndown leather cap, and mits on my hands until these get warm.

I find too that when sitting down for any length of time one gets chilly and requires a jacket, but I hardly ever have any time to read or write except after tea.

It is now midnight and although the sun set about 1/2 hour ago I am able easily to write without a lamp in the saloon. I have just decorated the room with flags, etc., making escutcheons of them on the walls like this (drawing) and a festoon in the centre under the skylight. I do wish we had Miss Dixon's holly and mistletoe which she so kindly gave me and which got all spoiled in a locker when the saloon got flooded.



I have also made up a little Xmas present for each of the 18 wardroom officers using some very neat little sharpening stones, hoves, strops, etc., sent to us by the Carborundum Co. I have tied each one up in a little parcel with some coloured silk tape with which our bundles of sheets were originally tied up with, and have addressed each so I hope they will be a surprise.

I spent the afternoon getting up our Xmas fare.

We have been charging a piece of ice for the last 3 hours, but have just got through it.

Christmas Day, 1914

Xmas day at last, and spent under conditions so different from any Xmas I have ever spent before, but under conditions which it has been almost a lifelong ambition to experience.

When I look back it seems strange that I should be here at all, for I had no previous Antarctic experience and apparently but little to recommend me when I first applied to Sir Ernest, and I am quite aware that there must have been hundreds of more competent motor-mechanics than myself. I often wonder, even now, whether I come up to all Sir Ernest's requirements.

I certainly, unintentionally, incurred his displeasure a few days ago, by, as he put it, exceeding my duty.

The sailors had been hinting that they did not get their fair share of little luxuries, such as sauces etc., for by their agreement they are on the same rations as we are. I had always taken scrupulous care to see that they did get fair treatment, and recently Sir Ernest ordered me to give them one quarter of the contents of every case of delicacies I opened. The next day I opened a case of 24 bottles of Heinz's chutney, gave the bo'sun 1/2 doz. and asked him to initial the receipt of them in my issue book, or rather I gave the articles to another man and told him to tell the bo'sun this.

This man told the bo'sun that I wanted him to write out a receipt for the goods.

This seemed to hurt his feelings and he complained to the chief officer and by the time it reached Sir Ernest it was said that I wanted each man to sign for each course of his dinner every day, or some exaggeration of that sort. This was unfortunate but I did not think it worth wasting Sir Ernest's time with useless

explanations, especially as he was very nice about it, but he said that it was contrary to the spirit of the expedition and of the merchant service, but I could see that he was displeased and that he considered that I had made a blunder.

It seems such a trifle, yet I would have given a lot for it not to have occurred.

Of course I cannot get out of "service" ways. In the "service" it would have been far more serious to have omitted to have obtained a receipt.

Thus do we sometimes err in striving to do right.

But Xmas, Ah Xmas so full of thoughts for those so far away, but to know so well that most of them at this very moment are thinking of and talking about one brings lumps of consolation to one's throat.

Are they happy, I ask myself over and over again, do they suffer by this damnably conceived war, oh if they only knew how well and happy I am, in spite of bottles of chutney and bo'suns and receipts! But these are riddles which will not be solved 'ere another Xmas has passed and more, another six months or so as well, then all will once more be reunited.

I drink to the day then, true any beverage is only raspberry vinegar which our kind Norwegians friends gave us at South Georgia and which Sir Ernest and I and one or two others have substituted for whiskey this festive day, but Sir Ernest is splendid where intoxicants are concerned, he gauges exactly how much is suitable to the occasion - necessary to satisfy without permitting of unreasonable and objectionable indulgence, and he permits to be issued just so much and no more, hence we have general

satisfaction without those regrettable debauches that do so much to mar the solemnity of the celebration and the measure of the general enjoyment of the whole party.

The little gifts were greatly appreciated this morning and were genuine surprises as I contrived to conceal them under the coloured Japanese paper napkins with which I decorated the breakfast tables.

For breakfast we simply had tinned herrings in tomato sauce, followed by honey. For dinner we really had a terrific "blow-out", Tinned Turtle Soup, Tinned Whitebait, Tinned Jugged Hare, Plum pudding with lots of brandy on it (called Teetotallers Delight), crystallized fruits, Mince Pies, Figs and Dates. For tea, Sardines and Plum Cake and Brazil nuts. Altogether a glorious feed and I feel pleasantly painfully replete; but the clearing up - laying table with real starched napkins, folded bishop's mitre pattern, involved a lot of extra work. Unfortunately we had no crackers! nor could make any.

My wheel this morning was pleasant enough and we got heaps of open water with very few ice-isthmi and made splendid progress again - 71 miles in the 24 hrs. and are now in Lat. 65, 42 close on the Antarctic circle, but since noon we have very inconveniently been jambed up against impenetrable ice, waiting for it to open out but are now just getting a move on.

The saloon windows I am writing by are all covered with most beautiful ice-ferns. It is cold at night now, often below freezing.

Boxing Day 1914

A perfectly beastly day cold and dull, such a strong wind blowing that we are "hove to" against a floe all day and have only made 3

miles in the last 24 hours and that mostly to the Westward though we have been punching away to the Southward all night, wasting our valuable coal.

Yesterday I was railing in a general way at the abuse of intoxicants. I indigested something so badly last night that I am prone to believe that I overeat myself which is quite as disgusting, if not quite so degrading as drinking to excess, and I am not so sure that the glutton pays the forfeit next day as deeply with his "interior" as the toper does with his head.

We took a sounding and made it 2685 fathoms - nearly 3 miles deep. We took turns winding in the weight: it was hard work.

Several penguins and some seals about on the floes and a few of the beautiful pure white snow petrels. These and the brown petrels are the only flying birds to be seen now, but soon we ought to be seeing the skua gulls again - the scavengers of the Antarctic.

We were practically during the whole of my watch at the wheel this morning trying to get through one isthmus about 80 yards thick and did not succeed until we tried the above described method. As soon as the ship has cut a piece out and driven it astern there is plenty of room to work in.

Later on we got stuck tight in the floe after charging it and failing to split it. We had to get out onto the floe and work away with ice picks and shovels to free the ship, as the engines going full astern could not move her.

Whilst out on the floe I saw a penguin and gave chase, but it tobogganed off at a great rate over some dangerous looking black ice where I dared not follow and so we both saved our lives.

Sunday, 27 December, 1914

Another day of complete inaction, dull, cold and blowing hard. It is very cold in the cabins at night. The open pools around us have all frozen over and we appear to be freezing solid into a floe but I suppose it is all right. Marston, our artist, had been making a pair of experimental lambskin boots all day, with the wool inside and having wooden soles; he is very ingenious at "fashioning" things. He had made himself a very fine fur smock out of a nice piece of some South African fur which he brought with him. The wooden soles were sent to us by an old Lancashire clog-maker and should be a splendid insulator against cold.

We had rhubarb tart today - made from bottled rhubarb. It was a pleasant change and the unsweetened condensed milk that we had with it was almost equal to cream.

Monday, 28 December, 1914

Same as yesterday except that all hands, save me, filled coal bags with coal for shore party. This enforced standstill is getting very trying. The whole sea now appears to be one solid sheet of ice.

Wednesday, 30 December, 1914

A perfect "Swiss winter" day, warm in the sun with cold dry air. Progress show through tortuous "leads" and very small lakes all the morning but we got into some very large lakes in the afternoon and have been doing well but nearly compelled to take a S.E. instead of a southerly course.

This morning, owing to the rudder striking the ice whilst we were going astern, I succeeded in being thrown clean over the wheel, in spite of the fact that I had my foot on the brake and was expecting

trouble at the time. It is rather a point of honour not to let go of the wheel whatever happens, so I hung on as long as possible. I was thrown up quite high and my leg caught in the wire outhaul of the mizzen-boom which broke my fall and beyond a slight shaking I was not damaged at all, and able to immediately resume my post. Sir Ernest who was standing by me at the time, as soon as he saw that I had sustained no injury, was as much amused as he was surprised. We did 38 miles in the 24 hrs. ending noon today and are now in Lat. 66, 2, only 29 geographical miles from the "circle".

New Year's Eve 1914

It has been mostly a dull overcast day with a chilly Northerly wind blowing and snow squalls in the afternoon which I spent below for "our annual stock-taking", so as to arrive at some idea as to exactly how much provisions. Such an easy date to remember.

My thoughts this evening are again very much with those at home. The war causes us some anxiety, though I do not think that anything worse than a rise in the price of foods can affect non-combatants, but that would be bad enough if the rise was a serious one.

We have had much trouble with the ice this morning. During practically the whole of my watch this morning we were jammed in between two converging floes. Probably these floes were drifting along and each of them rotating towards each other and grinding their adjacent edges together, or it may have been that a drifting iceberg was pushing one of them against the other; anyhow we got tightly nipped and could not extricate ourselves for a long time. Immediately after we did get clear, the "dock" we had made closed with almost a snap and the sides of it crumpled up into pressure ice, showing clearly what great pressure there must have been on the ship! Sir Ernest seemed quite relieved

when he saw what we had got clear of, though he did not exhibit any undue apprehensiveness at the time.

Whilst we were stuck fast an Emperor penguin appeared on the scene only to appear later on the table, thanks to Lt. Hudson's Munchausian exploits as a penguin lurer. Later a whole troupe of young Adelie penguins came up to look at us; some discussion took place amongst them as to what the ship really was. This developed into an altercation and ended in a fight, meanwhile a stalking party was already heading off the combatants, but just when it seemed certain that the whole troupe were as good as cooked, they took alarm and to their heels, tobogganing off in all directions, with the result that the four explorers bagged three only of the troop, two again falling to the large but deft hands of our worthy navigator!

New Year's Day 1915

New Year's Day at last, exactly one year has elapsed since I first applied to Sir Ernest for a post on this expedition, though it is now some 18 years since I first heard Nansen lecture and read his book and came to the conclusion that I would go polar exploring one day.

It is also nearly 5 years ago since I applied to Captain Scott and was rejected by him after being on the fair way to being selected, so I understood.

How little did I think a year ago that I should actually be now so near to the pole as I am at this moment.

New Year reflections are always good but New Year resolutions are better but for the life of me I can't think of any resolve I can make which is at the same time a sacrifice and also easy enough to

be rigorously observed. There are so few temptations down here and I gave up the use of expletives at the commencement of the voyage, so I think I must really satisfy my noble intentions by resolving to be no worse than I have been in the past and if possible to order myself a little better if anything. I had thought of giving up sugar as a self-disciplinary measure but I have now postponed it to Lent for it is more of a penance than a New Year's resolution. Perhaps after all it will be enough if I make a determined effort to thoroughly wash the back of my neck low down every morning which is a thing one is a little inclined to overlook in these cold latitudes, washing as we do in cold water every morning, hot being unobtainable.

Last night the Scotch member insisted upon singing Auld Lang Syne at midnight and woke us all up, as all the respectable members had retired; but Scotchmen always are a nuisance at New Year and never have voices worth speaking of.

One of them had a Scotch bun (an indifferent sort of cake covered with pastry) and as it was mouldy throughout he was mighty generous with it.

59 miles is our recorded run for today and we are this evening in Lat. 68 degrees a good way south of Dr. Mawson's base which was just on the "circle" in Adelie Land.

It is odd that we never get two fine days running, and so much overcast weather.

We are to have a mild corroboree tonight.

Saturday, 2 January, 1915

The corroboree did not come off after all, thank goodness. I hate them. One is made to sing and I really sing rottenly. Then one is stunk out with tobacco smoke let alone alcoholic fumes. I suppose its all right for those who smoke and appreciate the liquor but for those who don't it is a nauseating penance. There is no doubt though that teetotalism and conviviality are somewhat incompatible and it is probably this that has mitigated more than any other factor against the abstainees' propaganda.

I verily believe that moderation is the best course socially if only people would stick at moderation and if only I could persuade myself that moderate indulgence was physically innocuous.

I confess to a liking for certain wines and for rum and some liqueurs, but as I think that the evidence is in favour of their being injurious to our constitution, and as it is no effort of self-denial to me whatever to abstain, I abstain.

...It is at these times that it is extremely entertaining to sit out at the end of the bow spit and watch the contest between mechanical power and the forces of nature. I have lighted the stove in the wardroom again today; this is only the second time we have felt the need of it and even now (as I am writing this) the temperature in the room is 62 degrees and that feels so very close and stuffy down here that I have had to open wide the skylight although I am clad only in socks, knickers, thin trousers, cotton summer vest and a brown jersey. There is not much doubt that the air is much drier here than in England and that it does not feel nearly so cold here as at home for the same temperature.

It is now 7 p.m. I have now cleared supper away an hour ago and nearby Sir Ernest is playing poker with Mr. Wild, Tom Crean, Dr. McIlroy, Captain Worsley (the captain) and the carpenter. When in South Georgia an admiring Norwegian Captain presented Sir

Ernest with a wonderful homemade walking stick made of hundreds of little whalebone washers threaded on to an iron rod - a perfectly impossible sort of thing except as a curio. Sir Ernest with his usual eye for utility dissembled the structure and now has as many counters as he is likely to require for this trip at any rate, and very nice ones too, but it is a case of "to what base uses" and I don't know what the Norwegian skipper would say if he got to hear about it!

We are entirely surrounded by icebergs - at a respectful distance, of course, for it is not good to get too near an iceberg especially too near two icebergs or worse still, between them, for they do all sorts of things such as cracking you between them like a nut, pushing you roughly against, or through the pack, or turning over on top of you.

We are now in Lat. 69, 45, nearly 70 degrees, only about 100 miles to the N.W. of Coats Land, so named by its discoverer Mr. Bruce of the Scottish National Antarctic Expedition in 1904 after Mr. Coats of sewing cotton fame who largely financed that expedition.

Sunday, 3 January, 1915

Blowing an awful gale which would be a terrific blizzard on land where there was loose powdered snow lying about to be picked up by the wind and blown along with it. It is more often the "drift" of loose dry snow from the ground getting whirled along with the wind than snow actually falling at the time that causes the blinding Antarctic blizzards.

As often as not the flying snow drift only extends in a layer to a few feet above the surface of the snow and sometimes even sledging parties have been marching with the whirling snow thick

about their legs and bodies but with their heads above the drift stratum and affected by nothing except the wind.

These blizzards are a "pleasure" in store for most of us, but I take it that they are very similar in a way to all kinds of dust and sand storms where solid particles are carried along in aerial suspension.

With such a wind as today we have been unable to negotiate the close pack and have spent most of the day "hove to" in open water or moving slowly from place to place looking for a shelter or anchored to a floe.

First we tried sheltering under the lee of a large low iceberg, probably a piece of "ice-foot" i.e. the ice that is built up by several years of accumulation on the shores of Antarctica and which only occasionally breaks away but is not quite large enough to be called "barrier".

Barrier ice is the ice which forms in the larger gulfs and is maintained and pushed forward by the debouchment of several or many glaciers which are in turn fed by the snows of the great polar plateau. Barrier ice may extend from the hypothetical coast line for hundreds of miles, as does in fact the Great Ice Barrier in the Ross Sea (for some 300 miles) and may therefore be many hundreds of years old. Pushed forward by the glaciers behind and a certain amount of plasticity (flattening out and spreading) of which ice in mass is known to be capable; it advances over the shelving ocean bed until reaching deeper water it finally calves off bergs by flotation or other causes. These barrier bergs are the principal kind met with in Antarctic seas, and are always characterized by their flat snow-covered tops until owing to their submerged portions melting in the comparatively warm water they become top heavy, capsize and then present all manner of fantastic forms. They are usually very large in area but seldom

more than 80 ft. above water, that being about the average height of the Great Ross Barrier from which a great many of them spring. As the underwater melting generally tends to shape them like a peg-top, they are usually more or less pyramidal if they happen to become completely inverted on capsizing, when owing to the proportionate reduction of the superimposed ice above water they may rise to 250 feet which was the estimated height of a conical berg we passed about midnight last night. Some of the smaller more fantastic bergs are doubtless calved by flotation from glaciers running direct into the open sea.

There are Antarctic glaciers which push out to sea as much as 150 miles before calving into bergs! Mr. Wild, our second-in-command, who was in charge of one of Dr. Mawson's bases actually built his hut, where he and his party wintered, on a glacier tongue 15 miles out to sea - a most daring thing to do!

I believe that all bergs in the Arctic are glacier-calved and that the tabular type so general here is unknown there.

The low barrier berg in the lee of which we sought shelter today was remarkable in one respect, for the presence of two "chimneys" about 20 ft. high above its general surface. They appeared to be made up of slabs of ice lying horizontally one on the other and rather resembling the well known "cheesewring" with the lower slabs eroded more than the top one as if by the drippings of thaw water from the top one but it is difficult to account for their presence there at all, though they were probably the result of pressure in some way; perhaps pieces of floe which had got pushed up there somehow.

We have been surrounded by bergs all day - quite fifty in sight at a time and this afternoon we were lying between two for some time only about 100 yards apart, one tabular, one conical. This was

closer than we have yet been to a berg and gave us some opportunity of examining their structure. They all have the appearance of being composed of consolidated snow, being bluish white and crystalline or rather granular like starch or marble.

Wherever there is any overhanging part it is always festooned with curtains of great icicles 6 ft. to 10 ft. long, exceedingly beautiful, especially where they adorn the portal of one of the frequent caverns whose translucent blue light illuminates them with shades of the deepest azure violet. All ice seen underwater is too of a delicately rich blue colour, almost a peacock blue, and it can only be the dullest imagination that does not run off into flights of fancy of mermaid grottoes, from gazing upon these lovely hues and forms.

Being a quiet day I again submitted to the self abnegating task of scrubbing the wardroom floor. That it was badly in need of it only made me the more reluctant to do it. The two pigs live exactly outside the door, in a small pen but they are let loose for a run in the mornings and often get into the wardroom; then there is all the coal still on deck just outside the door and with all the dogs on deck above a lot of refuse and dirt gets brought into the wardroom on peoples feet and though I brush it out thrice daily it never looks tidy.

Scrubbing, I am more than ever convinced is not gentleman's work; but enough said. I have just been reading in a magazine of a patent scrubbing machine which does 1000 square feet in half an hour. If only we had one here it would do this room in about 56 seconds! I must really remember to bring one next time and so preserve my refinement.

Darning socks employed the remainder of my leisure. This is work I do like, though I never have learned how to do it. Like other

unaccustomed tasks I do it very slowly. I use a double worsted and am most careful to pick up the alternate cross threads making a proper warp and web as seems correct. The only thing I do remember is that one ought to leave a little slack where one turns the direction of the needle in order to allow for "give" in washing, and I go about half an inch beyond the limits of the hole. Anyhow however imperfectly I do it it is better than bunching up the hole like the mouth of a sack and tying it up with a piece of string as I saw one of our members doing the other day!

I have made Sir Ernest a green baize cloth for playing cards on, having contrived it out of an old phonograph cover; it is made up of odd pieces but I iron out the seams and soaped them and it lays flat enough now. I managed to save enough to make a tool roll and a pair of mits for myself too.

We added another crabeater seal to our larder this morning.

We had very salty salt beef for dinner today.

Monday, 4 January, 1915

The very salt beef reappeared as hash at tea tonight, but as we are now getting South a bit again, no one complained bitterly.

It is extraordinary what a difference this makes on our dispositions. If we are at a stand-still everyone feels despondent and some are actually snappy, whilst a two hour wheel seems like four hours, but if we are steaming rapidly southward then everyone is good-tempered and contented. Sir Ernest alone is always cheery and optimistic be the weather what it may. He is the life and soul of the whole party; his presence amongst us puts new life into us, his absence leaves us doleful. Setbacks are his veriest instigation to renewed endeavours.

At noon today we were again in identically the same spot as we were yesterday, having been roaming about the whole 24 hours searching for shelter or a way of escape from the great ice-bound lake.

Tuesday, 5 January, 1915

(skips a page)...and deeper until at last it is nothing but a honeycombed slab almost wholly underwater. Its snow-covered surface is the last to melt for very little thawing takes place in the air. It is essentially the comparatively warm water, a degree or two above freezing point that melts the pack.

During the melting process the surface is sometimes very treacherous, for what may appear a compact snow surface may really be a whitened sepulcher of rotten perforated ice. For this reason we have to be very careful getting out onto the floes and Sir Ernest very often prohibits us doing so at all. The best guide is to note the thickness of the edge of the floe or at least its height out of water, which is much the same thing, and to beware of any depression or blackish areas in the floe.

We have passed hundreds of seals today, mostly crabeaters and a few sea leopards. These latter seals are very voracious, pugnacious and agile, killing and eating penguins.

The pack we are now passing through is exceedingly broken up by pressure and thrown into strong shaded relief by the sun now near the horizon, has all the appearance of some mighty ruined city whose marble remains have become half buried in the sand and bleached by the sun.

Having nothing to do this afternoon, I did a little washing, repaired my clothes, which are constantly getting torn and also generally

overhauled and repaired Sir Ernest's watch-coat. The buttonholes wanted redoing, I remembered how to do buttonhole stitch and made a better job of it than I expected. This will be eighteen pence and two pence for material!

We are in Lat. 70 this evening, working towards Coats Land. We should have been having the midnight sun this last week now but it is always so cloudy that we seldom see that luminary except through a bank of clouds; but he is condescending to shine a little now. It is, of course, bright daylight all night now.

They say that the seals and icebergs are indicative of open water. We hope so anyhow.

Wednesday, 6 January, 1915

(skips a page)...The difficulty was enhanced by the danger, we were all in, of the ice at the bottom of and around the pool giving way and immersing us all. I ended up holding lying on my back on the edge of the pool, holding back another dog - Samson - with my left hand, pulling Sailor's left hind leg with my right hand, pushing my left foot in Satan's mouth to make him leave go and with Clark whacking me hard on the knee with a long bamboo. I think everyone was pretty much the same, but one hasn't time to take note of details in these "scraps". They are always so sudden and strenuous.

Someone, Marston, I think, however, had hold of Sailor's tail and was pulling for all he was worth and how the tail and the ear stood the strain is a puzzle, for there was comparatively little damage done when we chained the culprits up and examined them.

After this we took a sounding, 2400 fathoms. We take turns at winding the winch doing about 200 fathoms (1200 feet) each. Owing to the heavy weight on the end of the wire, this is rather tiring work and it takes about half an hour per thousand fathoms at the quickest.

Having seen a seal on an adjacent floe the Captain and I set off in a boat (the Norwegian pram) to capture it. I took a revolver with me. We soon found our victim and, at about three yards only, I fired for his brain, making no apparent effect, as he reared up rather menacingly; so I gave him another bullet, he then turned and made for the water, and fearing we should lose him I gave him the remaining bullets, but even then he took very little notice of them, though we know he was wounded by a slight blood stain on the floe. As he seemed to lie quietly we left him to attend to his wife who was lying at a respectful distance from him. As I had no more ammunition on me, we stunned her by a blow with an oar and then cut her throat with a blunt knife, a proceeding she protested against by snapping vigorously and one had to dodge her sharp teeth. It was a disgusting piece of butchery, but we need the meat and it is immaterial how we get it so long as we do not inflict, willfully, unnecessary torture. Meanwhile Mr. Crabeater had died of a broken heart, for when I cut him up and skinned him in the afternoon I found that a shot had penetrated his heart. This was probably the one which I aimed at his brain! The accuracy of the aim matters but little, however, so long as a vital part is hit!! Our work then commenced for we had to pull the two seals about 100 yards to the edge of the floe over some very hummocky ice, and as the male weighed about 300 lbs. it was as much as we could do, for we are all very much out of training through lack of proper exercise. At the edge of the floe we made the seals fast to the two ends of a line which we passed over the gunwales of the boat. To our surprise the male sank, but only with a very slight negative buoyancy so that the rope prevented him

from sinking altogether. In this way we towed them both back to the ship where we were received with strains of "See the conquering hero comes" and good-humoured derisive cheers and one or two ribald remarks from members who had watch the sanguinary proceedings with binoculars.

On our way back I heard a curious blowing sound and at first thought it was one of our poor victims showing signs of returning animation, but on its being repeated we saw only about 50 yards off the fin of a whale just disappearing, and fearing it might be one of the dangerous killer whales. who will swallow a seal or a man whole or scrunch up a small boat, we considered discretion the better part of valour and as he appeared to be making directly for us, we prepared to propitiate him by casting off the seals and rowed close along the edge of the ice so as to be ready to jump on to it if he came alongside. Of course it may have been only an inoffensive blue whale or humpback but Sir Ernest who was watching us all the time said we were quite right to take the precautions we did as he was not at all sure that it was not a "killer". These killers (orca gladiator) Scott says in his book have the most terrible array of teeth in the world and skirt along the edge of the ice, occasionally peering up over the edge of the floes to look for seals basking on the floe. They then dive under the floe and break it up by bumping it with their backs and catch the seals as they fall into the water. Several men have been on floes so attacked, the killer no doubt mistaking them for seals.

This afternoon I skinned the male intending to preserve his skin as a rug but one of the old hands assured me it was worthless, as the animal was evidently moulting for the hair was easily pulled out. This hair is only about half an inch long and is no good whatever as fur. I hope to bring one home.

I contented myself with removing his blubber, which is about an inch thick all over forming a layer of dense fat between the skin and the meat. It has a most disagreeable rank odour which is difficult to eradicate from the hands and the slightest trace of which renders the otherwise excellent meat entirely uneatable. Fortunately its removal is comparatively easy with a sharp knife. This and decapitation, as I want the teeth, were second only in their revoltingness to the gory episode of the forenoon and I finished up in a pool of blood leaving the disembowelling to others less squeamish and more experienced than I am as yet.

It has been a great treat though to get a little normal exercise again.

During dinner a large pressure floe bore down upon us ever so gradually, but with all the appearance of irresistible force, and we had to hurriedly cast off and shift our berth, probably just in the nick of time.

Thursday, 7 January, 1915

A day of quiet, uneventfulness. We tied up to a floe last night. About midnight we saw two killer whales. This morning it was fairly cold, about 20 degrees due to the wind blowing from the south. At 11 a.m. Sir Ernest decided to get under way again and soon afterwards we set sails and sailed in a northerly direction into open water, endeavoring to find an exit from this ice-locked sea.

There is a water-sky to the N. aggravatingly obvious and easy of approach, another to the S.E. as annoyingly inaccessible but for this, I gather, we are now making.

This afternoon I amused myself cleaning up and repairing the door of the stove, also watching Hurley make and develop a quantity of bromide prints. He is a brilliant photographic artist, besides being a most versatile handy man.

Later I gave the cook my seal's head to boil, so as to get the teeth. The foolish fellow put it on right in the middle of tea and the wardroom soon reeked of the rank smell of the blubber, no one was pleased and Sir Ernest was not a little annoyed.

Friday, 8 January, 1915

Another dull, overcast, cold day but we are on the move again, thank goodness!

At first under sail in open water sailing leisurely in a northerly direction at about 3 miles an hour, then about 3 p.m. we entered the pack again making for a fairly promising "lead" (channel of open water) to the S.E. in the hopes of circumventing the impenetrable area of pressure pack which has been barring our progress to the south for the last few days. Bumping away at the ice pack again is quite cheering though the collisions make a noise like thunder and knock one off one's feet almost at times, and would be highly alarming in any other ship. Even as it is one is sometimes a little inclined to wonder whether she will stand each successive and often progressive bump.

Sir Ernest is deserving of all praise.

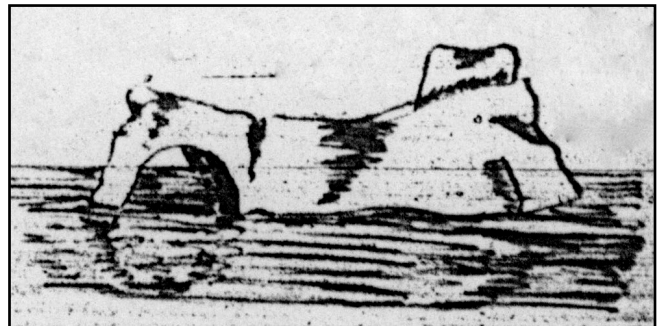
The man who should feel the greatest anxiety about our reaching our base exhibits by far the least and but for his cheery optimism we should all be despondently irritable.

There is no doubt that it is far harder than anyone had expected but the most I have ever heard him say is, "I do hope we shall get through all right, I feel sure we shall but it's going to be a hard fight." That he means to win was obvious from his tone though he did not boast that he would do so, but knowing him as we do, we know that it will not be his fault if he is beaten. We all have such implicit confidence in his skill and experience that no one ever doubts for a moment that he will put up a better fight than anyone else possibly could.

So much depends on it for him - he has his obligations to his patrons to fulfill, his own livelihood and reputation at stake.

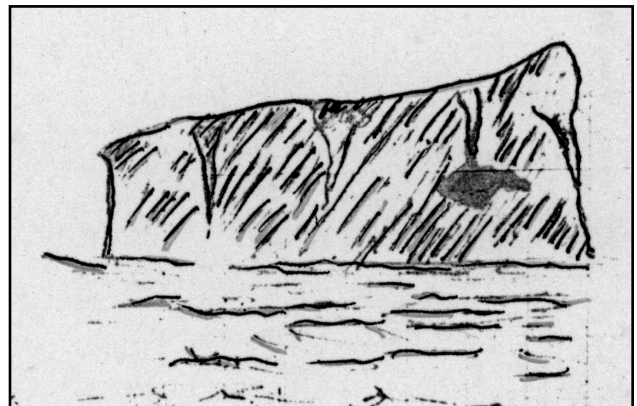
I doubt whether it would be possible to make a renewed attempt next year for financial reasons.

We passed an exceptionally beautiful iceberg today about 2 miles off in the pack, with a wonderful natural arch in it. Truly we are privileged in seeing these natural wonders.



Saturday, 9 January, 1915

This morning we passed literally hundreds of icebergs most of them merely pieces of low ice foot some 15 to 30 feet high, but many were old weathered bergs of various fantastic shapes, and carried out by the denuding influences of sea and atmosphere.



Just before finally leaving the pack we passed very close under an exceptionally fine berg, a piece of barrier ice about 150 ft. high showing ice sections and several well marked crevasses.

These crevasses were also snow-bridged showing clearly what death-traps such fissures are to the polar explorer, who disregarding caution, fails to rope up his party.

Unfortunately, as I was "on the wheel" I was unable to take a photo of it but our expert photographer - Hurley - took one and I think that it will be sure to be amongst the published photos.

The sun, which we have not seen clearly for a week has just come out and is shining brightly now, at 10 p.m. This seems an odd time for the sun to come out, but of course we are now in a land of midnight sun and it is at the moment at about the same elevation in the sky as it is at 4 p.m. on a summer day at home.

We are still eating seal and penguin almost exclusively and I am husbanding my precious tinned stuff like anything for the ship's winter needs.

One of the smaller bergs we passed today was thickly streaked with earthy material indicating that it was a glacier berg. It is not likely that it had come from Coats Land as I believe that no actual bare rock or land has been seen there for it is supposed to be low land and entirely ice-covered. If we strike Coats Land we shall follow its coast line as far south as possible so as to try and get to Leopold Land our proposed base.

Another interesting iceberg about 80 ft. high exhibited a band of solid blue ice about a foot thick half way up. This, Mr. Wild said, indicated an old summer thaw, when it was once the surface of

the barrier from which the berg had broken off, but estimating an increase of about a foot a year this would indicate that the thaw had taken place 30 years ago and that the berg itself was probably 420 years old.

Today is the anniversary of Sir Ernest's and Mr. Wild's furthest south, when they reached a point within 100 miles of the pole, seven years ago.

Saturday, 10 January 1915

We nearly always seem to pass at least one berg each day of exceptional beauty and today we passed a fine one... Its peculiarity exists in the several sharp pinnacles and its undulating surface. I wish I could draw. There are unrivaled opportunities for an artist. Our artist, Marston, paints nicely but either he has done all he wants to or else what seems to me to be worthy "subjects" are not really so, for the spirit seldom moves him to exercise his art. He is, however, a first class bootmaker and perhaps that is what really matters most after all.

The pigs trouble me a good deal. They live just outside the wardroom door and they occasionally get out of their pen and make a mess about the place. Still they are growing like anything and will be most acceptable when the time comes. It must come before the winter for they could never stand the climate. The little one is now as big as the big one was when the little one came and the big one is getting on for twice as big as he was when he arrived and is almost half grown. Puzzle: how little was the little one when he came?

Opposite the pigs are 5 puppies and their mother, the "interesting event" having taken place three days ago, but so far Tom Crean, who has cared for her like a hospital orderly is the only one who

has seen the little creatures though we all hear their shrill little squeaks. They will soon be fun.

One would think that with seventy dogs aboard, and all living directly above the cabins the ship would be unbearable, and we fully expected it to be so and dreaded their advent accordingly, but it is not so at all.

This is partly due to the cold climate arresting any decomposition and partly due to the thorough manner in which their excreta is dealt with. One of us goes round, about every two hours, with a shovel and a squeegee and so the decks are always more or less clean.

The shovel is suspended over the stern by a rope and is automatically cleaned by the water splashing against it.

We do not find this job at all unpleasant, far less so than having to scrub places where people expectorate, but since leaving South Georgia I have hardly done it at all as I am on special duty as messman.

I think it is quite probable that the ship will return to winter at Buenos Aires or at South Georgia and I am therefore writing a few letters home and also making a precis of this diary. I do so wish sometimes I could just pop home for an hour or two as easily in the flesh as in the spirit. No doubt the explorers of 2015, if there is anything left to explore, will not only carry their pocket wireless telephones fitted with wireless telescopes but will also receive their nourishment and warmth by wireless means and also their power to drive their motor sledges, but, of course, there will be an aerial daily excursion to both poles then, and I suppose it will be the bottom of the Atlantic, if not the center of the earth, that will form the goal in those days.

We "live" well, but perhaps it is that hunger is the best condiment. Even the fact that our seals and penguins are full of internal parasites of the nastiest and most loathsome kind does not deter us. We have nothing else to eat and so we have first got to put squeamishness aside and eat them. I never thought I could bring myself to do such things so easily. Often there is such a run on certain dishes, that there is nothing left for the messman and then I quite cheerfully eat up scraps from other peoples plates, without the shadow of a wince, though I am usually very discriminating as to whose leavings I have, avoiding those off the plates of certain people.

Monday, 11 January, 1915

Today's menus were, breakfast: Quaker Oats, seal's liver and bacon (not much of the latter); dinner: "stick-rib" soup (lentil thick), stewed clubbed seal a la Worsley, tinned peas a la anniversary, and custard; tea: oxtongue, jam tart. Could anyone want more, of course it depends on how much one eats, but most of us do not trouble to spare our digestions much. Sir Ernest and Mr. Wild, on the contrary are remarkably abstemious in the matter of food which is no doubt indicative of their wonderful endurance.

I have just been reading that old Captain Cook wrote that young pup seals and the females were eatable but that the males were execrable. Whilst Dr. Cook, the polar impostor, states that penguin tastes like canvas-backed duck fried in cod liver oil.

...but I have seen this entirely covered up at Dover by the snow in winter. Perhaps too the ice is rather whiter than the creamy chalk of the cliffs but when the former is in shadow, as it was this morning, the difference in colour is not noticeable perceptible. Much of the cliff was undercut and in many places an ice-cornice

overhung the top, some-times festooned in a manner that demonstrates, the plasticity of ice in a more obvious way than I have ever seen elsewhere.

As the barrier receded somewhat from our course we left it when thick weather came on and also partly because the N.W. wind which was blowing converted the barrier into a lee shore, one of the most dreaded things to a mariner.

We are lying to on the windward side of a large floe on which is an emperor penguin which I covet, but Sir Ernest will not let us go after it for fear the wind should blow the floe away from the ship with anyone on it, and naturally he knows best, though it looks perfectly safe.

Sir Ernest looks dead tired and I think he must be though he will not admit it himself. He has been up at night so much lately; and the anxiety of the last few days, to which he never owned, must have pulled him down, a little I think.

It seems that the land we sighted last night is considerably north of the previously discovered portion of Coats Land and is therefore new land which has never been seen before. I wonder whether Sir Ernest will name it, but whether he does or not there is wonderful fascination about the thought of having seen a vast tract of country that no human being has ever seen before, however bleak and uninteresting it may be.

For some time during last night we were in some very heavy but loose pack and the bumps were terrific.

During my turn at the wheel today we saw a most interesting and extraordinary sight. A seal had its head out of water and was endeavouring to devour a fish apparently too large for its throat. It

struggled and struggled but whether it eventually got outside the fish or not we could not see although some of us kept our binoculars on it until it was out of sight.

I have devised labour saving method of steering which increases my accuracy (or rather diminishes my inaccuracy for my steering is a by-word I am sorry to say) and at the same time saves me a lot of trouble. The compass we steer by is about eighteen inches in front of the centre of the wheel and I think it is partly due to the difficulty of looking at it from one side that I steer so badly; so now, if we are on a straight set course as we always are in open water, I simply stand in front of the compass with my back to the wheel and lean against the latter and correct any deviation at once, long before I should notice it from the ordinary position, by pushing the wheel over with my shoulders keeping my hands comfortable warm in my pockets. It sounds a lazy way but it is a fact that it has decreased my inefficiency enormously.

We have had a fine run of open water all along the barrier face, and we have taken several soundings all of about 150 fathoms only. This alone is an indication of the proximity of land. We passed one huge berg about seven miles long, a piece recently broken off the barrier.

Tuesday, 12 January, 1915

I had a great weight taken off my mind this morning. The "watch" on duty were told off to scrub out the passages and paint-work, and, as they had the necessary tools and solution, I had fully suggested that they might do the paint-work in the wardroom. I regretted I could not assist as I had to go on the wheel, but asked them to leave the deck for me to do! This had its effect and to my intense satisfaction I found when I came to lay the dinner that they had done the deck as well as the walls. The latter was in great

need of a scrub. Desultory efforts on my part had made little or no impression on them.

This is a tremendous relief for me, for as I have so often written in this diary, scrubbing the floor is to me the one really distasteful job on the expedition.

I have had an unusually stiff case-shifting seance in the hold this afternoon with the result that I have at last found a case of marmalade and one or two other things that Sir Ernest especially wanted.

This evening I was up in the crow's nest admiring the scenery when Sir Ernest saw some strange looking penguins on the ice-foot which extends in front of the barrier for a mile or two out to sea. In order to investigate them he put the ship about and ran her bows on to the ice.

Wednesday, 13 January, 1915

Another dull day, but the sun was visible just long enough through a bank of cloud for Lt. Hudson the navigator to get his sextant readings and so ascertain that we were well south of Lat. 74 degrees south of Bruce's furthest south and in Long. 26 W.

We were going along full speed in open water this morning at times close in to the barrier at other times crossing from point to point of great bays in the barrier, for this barrier has an unusually irregular edge. In very many places it has an ice-foot extending some miles out to sea made up of floe ice exceedingly crumpled up into hummocks by pressure.

It is this ice that breaks away and floats north each year which forms most of the pack. The most northerly part of the pack

consists principally of smooth floes which have probably been formed independently out at sea. On the other hand if they are the seaward extremity of the ice-foot it is the united force of these smooth ice-fields which cause the pressure and breaks up the ice-foot at the barrier edge whenever the wind blows from the sea toward the barrier.

The barrier in its turn is merely the seaward extremity of the polar ice-cap, which is constantly being augmented on the polar plateau and owing to the considerable, if imperceptible, plasticity of ice in bulk creeps constantly outward toward the coast where it forms the barriers peculiar to the continent of Antarctica.

In its irresistible progress it moves over all undulations even "flowing" uphill in places, except where it meets precipitous mountains, around which it diverges, always exhibiting the accompaniments of great pressure, crevasses, ice-falls and leaving solitary peaks emerging above the general surface as "nunataks". It is these nunataks or solitary rock peaks that the polar explorer desires to see for they establish with certainty the existence of land, whereas barriers at the most only indicate shallow water and therefore adjacent land. In this case the exact proximity of the land cannot be well estimated for the Great Ice Barrier of the Ross Sea certainly extends 300 miles from land, and if England were under an ice cap it is probable that the whole of the North Sea and Irish Channel and part of the English Channel would be filled with a great barrier, so that the edge of a barrier does not at all indicated the edge of the land.

Thursday, 14 January, 1915

Last night we came up to a place where the pack was still contiguous with the barrier, that is, it had not yet broken out and so we made fast to the ice. It seem that we have drifted several

miles to northward and Sir Ernest thinks that what appears to be barrier may after all be an immense berg some 40 miles round and 1500 miles in extent.

We certainly have during the previous few days steamed for some hundred miles along the Coats Land Barrier face and if this is really a detached piece floating free as a berg, then we must have come up with it in crossing what we took to be a bay, for its edge, which is more or less at right angles to the barrier, would form a bay therewith. It will be interesting to arrive at some definite conclusion on this matter. I was up in the crow's nest this afternoon with Sir Ernest, or rather he was in it and I was standing on the rigging outside it (standing on a block and holding onto a halyard). He surveyed it for a very long time but gave no very definite opinion about it other than the above. The view from the crow's nest was wonderful and extensive, but tremendous pressure pack everywhere seemed to hem us in on every side. It has been a perfectly glorious day, a real Swiss winter day, dead calm, temperature about 20 degrees (12 degrees of frost only) and the most perfect blue sky and bright sunshine. The sun shining on the barrier face and the dark shadow on its surface when the sun was low on the horizon about 10:30 p.m. tonight made it look more than ever like the cliffs at Margate or Broadstairs even to the sunburnt grass on the plateaux above them.

We have had plenty of interest today. Two seal were shot early in the morning and cut up for dog food, the skin of one is being dressed experimentally to see if we can put them to some useful service.

Hurley was out on the floe photographing the ship but had to return hurriedly as the hummock that we had our stern made fast to by a wire broke off with a piece of the floe attached and we began to swing out away from the floe. This was probably due to

having set some sails for the sake of making good picture, though there was only the lightest of zephyrs blowing.

I occupied my spare time cleaning out the "Rookery" (our cabin) which wanted it badly especially under the bunks. I did some washing and repaired my old green slippers for the fifth and last time. I am walking on stitches, lining and a layer of caked dirt, for there really is no leather left on the soles. The best of friends must part, and these shoes are such old ones that I hate to part with them so far from home! It is now more than twelve months since a boot-repairer at Deal declined to repair them as unfit for further use; needless to say he was also a boot-seller and no doubt saw in me a prospective customer.

This evening after tea all hands went out to play football on a small smooth patch on the floe about a quarter of a mile from the ship. As I had the tea to get, clear up, and some stores to get up I was too late to join in so went out on skis. The snow on the floe was very loose and powdery and the football game must have been very slow and very strenuous, for their feet were sinking in about nine inches every step. I climbed a small iceberg about 35 ft. high, frozen into the floe, it was sloping so much that one could easily.

Friday, 15 January, 1915

With such a steady and simple routine as we observe from day to day, I often wonder that I shall find anything to write about in this diary on the morrow, except pointless soliloquies on how not to wash clothes and scrub floors, but really there is so much of incident each and every day that it is seldom I have space left to air my little views on the amenities of Antarctic life. Today we saw an even more wonderful sight than any of us have ever seen

before of the same kind -- a sight that made even the least demonstrative of us supremely enthusiastic.

Early in the morning a flock of seals had been seen some distance off, for we are under way again, and during my wheel about 11 a.m. saw another flock close alongside the ship swimming in the opposite direction to us at great speed, plunging and rising again with their heads out of water. The usual alarm was given, which is always done if there is anything of unusual interest, and all hands were soon on deck, but too late to enable anyone to take a photo of the. After this a close watch was kept for them, and the cinematograph kept in readiness and, to the general delight of all, about 3 p.m. another large flock was sighted. We at once steered for them and as soon as they saw us, instead of fleeing before us, they followed us, keeping close alongside for about a quarter of an hour. Hurley was able to take a good deal of cinematograph film of them and we believe that this film will be of extraordinary interest, both scientific and popular. It was truly a wonderful sight, as the active graceful creatures rose with their heads out of the water and dived deep down, often under the ship from side to side. The water was just a little rough, unfortunately, so that even from the main top, where I was, one could not see them under the water quite as clearly as one could have wished to have done.

Dame Fortune, Sir Ernest's old and constant friend, had again favoured us, for during the night a rift appeared to the southward, we got up steam and passed through and have sail with a fair wind, making Lat. 74 degrees, 30 minutes at noon. It has been dull and distinctly chilly today but perhaps I have felt it rather more than usual as I have on only a thin summer vest and a sweater on besides my ordinary jacket.

Saturday, 16 January, 1915

It seems superfluous to use so many superlatives but I really think that for scenery I have never seen anything to equal that in amongst which we found ourselves today.

We steamed fast and well all last night and arrived this morning in a small sheltered bay formed in the debouchment of a mighty glacier. A little way inland the snow covered hills rose like the South Downs to a height of about 500 - 600 feet and except for the entire absence of even the smallest vestige of rock the scenery was that of Freshwater Bay in the Isle of Wight.

The crevassed extremities of the great glacier on the verge of splitting off were not unlike those pieces of a sea cliff at home which have cracked off and are about to form a landslide.

All around lay pack ice and great stranded bergs festooned with prodigious icicles and of beautiful shapes, some twenty bergs in all within a range of a few miles of us. Hundreds of seals, some with young, and not a few Emperor penguins were basking in the most glorious sunshine on the floes. Such was a scene which I shall never forget, but scenery is not everything and although we steamed round the bay several times in order to take photos and cinematograph film of the lovely scene yet we soon saw that our way to the South was blocked by heavy pressure pack which was continuous from the ice-cliff and ran miles out to sea. We are, however, in Lat. 76 degrees, 27' only a hundred miles from our prospective landing place and our hopes of attaining it now run high.

A slight breeze this morning has developed into a roaring gale and we are pitching about a bit and for the present are, I believe, "lying to"; but I am not quite sure for I was at work all the afternoon packing and stowing in the hold by candle light, when I came on deck, the blinding glare was so strong that I was entirely unable to

see how we were going, and as I had only three minutes in which to lay the tea I had not time to stay on deck long enough for my eyes to accommodate themselves to the strong light. We were lucky enough to notice an earth-stain on one of the bergs and on closer investigation discovered some lumps of granite embedded in it which Mr. Wordie, our geologist, secured.

There is a very noticeable tide mark on the glacier face, barrier and stranded bergs there, in fact this is the only means by which one can tell that the bergs and barrier are aground, floating bergs, of course, would exhibit no such mark above waters.

Sunday, 17 January, 1915

A horrible day "lying to" in the lee (i.e. on the sheltered side) of a great iceberg. The wind is blowing a hurricane and shows no sign of abating. The sea is rough and we are pitching quite considerably especially just now as we left our present position and gone over to another big berg to seek better shelter from the storm. It is curious that we should be in open water during this gale for we have been caught in previous gales several times in the pack, where of course the ship has remained stationary in spite of the wind.

We are not anchored and therefore we have our wheel watches as usual for we continue to steam round in a small circle, very slowly and it is slower work still at the wheel.

A few seals passed with their heads out of water.

We are two or three miles from the barrier edge now and can see the snow-covered land rising at an almost uniform gradient at the back of the barrier to 2000 - 3000 ft., but not a vestige of rock to be seen anywhere, nothing but a few big crevasses.

Monday, 18 January, 1915

Pretty nearly sea sick this morning there was so much motion after the gale.

We got under way during the night and have been making a westerly course under steam and sail through rough open water most of the time. It was snowing and blowing and generally horrid all my wheel but later the sun shone fitfully. On the snow covered land the sun seemed to be shining nearly all the morning, but it looked as if it would be a blizzard of drift snow ashore. Owing to the state of the atmosphere we are out of sight of land again and are now trying to round a large area of pack in which we are at present stuck.

We passed through a very big "stream of ice" about noon made up of brash ice, i.e. little broken bits of floes. Numerous seals and penguins and I think I saw a giant petrel, or it may have been a skua gull; which ever it was it is a sign of land

At noon we were in Lat. 76 degrees, 27', only 104 miles from our base and now (9 p.m.) we are very much nearer. Spirits are high all round as we are all eagerly looking forward to the change which landing will mean.

I have been in the hold all my spare time today sorting out the things ready for landing to make sure that the stores marked "ship" and "shore" are quite separated. My clothes are ripped to ribbons but I positively have no time to repair them.

PART TWO - TRAPPED

Tuesday, 19 January, 1915

Stuck in broken pack all day. We are waiting for the wind to drop again. It is fairly warm. I spent all the morning making boxes for packing the hundred and one little things necessary to take ashore with us, and most of the afternoon packing them.

We took soundings, about 250 fathoms, and made several small dredges which always provide interest in the assortment of marine life they bring to the surface.

I have also been trying to make a purse out of a seals tail, but I think it will be a failure; I am no good at taxidermy, I dislike the messy operation of skinning anything. The seal's tail is just the right size for a purse. One would think that a seal would have a large tail and use it as a rudder, but it does not, the tail is more or less of a little ornament. I think they swim almost entirely with their hind flippers and so astern.

I have been cutting up some seal meat this afternoon. It was frozen solid and was like cutting india rubber, but not so hard as to necessitate the use of an axe as it sometimes does.

The cook gave me some stones from a young emperor penguin's crop. It is surprising what big stones they swallow and more so where they get them from.

Wednesday, 20 January, 1915

A wretched day blowing a blizzard -- wind and snow, unable to move. We are very much stuck in the pack. There is ice all round

us even under the stern and no open water along side the ship at all, as there usually is, but as the temperature is high 29 degrees there is no fear, at present of our getting frozen in.

Sir Ernest's ability is most conspicuous in his knowledge of ice-lore. He seems to know just what the ice is going to do every time and so far he has been infallible. No one could at the same time be more daring and circumspect than he. He combines trepidity with caution in an extraordinary degree. He is ready to attempt anything and yet if the ship gets into a position invoking the remotest possibility of peril he is unremitting in his attention to her navigation until she is removed from every vestige of prospective danger.

He always seems to realize his responsibilities to us and to his patrons and is ceaseless in his endeavours to save us from the remotest anxiety, without being in the least demonstrative about it.

Mr. Wild shot a 9 ft. crab-eater for the dog's and our larder today.

I have been washing and mending all the afternoon.

Thursday, 21 January, 1915

A wretched day. Snowing and blowing all day, high temperature, (somewhere up about freezing point) everything in the wardroom and cabins damp with condensation. Air full of moisture. We can't see a yard and until it clears cannot more one.

Sir Ernest now talks about making in a westerly direction through the pack to try and pick up the very doubtful Morrell's land, which Morrell - a notorious romancer - claimed to have discovered about 1823. If we found no land in its assigned position this

negative proof would be quite as important as the re-discovery of old or the discovery of new land.

Sir Ernest again revealed his wonderful intuition this morning. A piece of the adjacent floe cracked off and jammed our rudder hard over, seriously imperiling the steering gear. Sir Ernest at once set hands to work upon it, directing each one personally until after 3/4 hour hard work the menace had been removed and only then did he give way to an expression of opinion as to the danger that might have accrued from the tremendous pressure exerted by the ice on the rudder. I was straining on the wheel the whole time and when it did eventually go I went down under the wheel, not over it this time.

Darning socks and repairing clothes all day.

Friday, 22 January, 1915

Still in the pack, entirely surrounded by ice, pressing close up to the ship's hull all round, but we do not seem to have been subjected to undue pressure except perhaps for an hour or two yesterday. As a safeguard a close watch was kept on the rudder all night.

We seem to be burning rather a lot of coal and that is really the main disposing factor in our subsequent evolutions.

I gather that we now have only 75 tons out of the 160 we started from South Georgia with. Of this we shall require at least 15 tons for use at our base in the hut, thus leaving the ship only about 40 tons to get back with, presuming that she will use another 20 tons before landing us; even this is a low estimate. Of course, on her return journey to South Georgia she will be aided by the current which we know drifts northward all the time and also, as time is

no serious object she can sail much of the way. It is sincerely to be hoped that she will not get fast in the pack on her return journey as the ship of the recent German expedition did. If that were the case she might not drift out of it in time to relieve us next year! That would be annoying, for although seal and penguin meat would save us from starving, we should be short of fuel and general provisions. The unveiling of the future is always keenly anticipated, if not actually fraught with anxiety.

Saturday, 23 January, 1915

A dull calm day; it brightened a bit in the afternoon and we could see the land in the distance about 20 miles off, just the same as before, like great snow covered downs rising to some 2000 to 3000 feet. Sir Ernest seems inclined to let the ship drift on to the westward, in fact, one cannot very well do otherwise just now for she is stuck fast in the pack, with one solid congealed field of ice all around and no open water in sight, even from the mast-head.

There is not much to do on board and it is well to have something definite to do to keep oneself occupied; otherwise than by reading all day. I find that the management of the stores still gives me plenty to do, and there are always socks to darn and clothes to repair.

This morning I scrubbed out the wardroom with a mixture of soft soap and soda and less reluctance than usual; because it was possible to see some result of one's labours.

The tables in the saloon are covered with ordinary white marbled oilcloth, as it was looking very soiled I scrubbed it well and on wiping it down, found to my dismay that I had scrubbed off both the glaze and the pattern; another scrub and there will be no surface left.

The sun has just come out at 10 p.m., the first time for days and it feels quite warm in the sun.

Sunday, 24 January, 1915

A most beautiful warm dry sunny Sunday. Most of us took the opportunity to air our sleeping bags, turning them inside out and hanging them over the boom in the sunshine.

Last night after I had finished writing we espied a seal behind a hummock on the floe about 150 yards from the ship.

As we need all the fresh meat we can get and as we are not likely to have many seals at this spot so far from open water Mr. Wild shot it from the deck with a rifle -- a very good shot, through the heart, and I was sent off on skis with a life line round me to take out a rope and secure it to the seal so that the others on board could pull it in.

After much stumbling and cautious circumambulation to avoid weak and slushy depressions in the floe, I accomplished my errand and holding on to the line I was pulled, still stumbling, over the small hummocks, toward the ship. About half way, the seal's weight broke through a spot that I had just managed to avoid and we nearly lost her as she began to sink, but by taking off my skis, making a bridge over the hole with one and a lever of the other I managed to get her head up sufficiently to enable us to pull her on board. A very large old female.

It is not for me to say it but one cannot fail to perceive that we are in a position of considerable disadvantage, though, I should say of very little peril unless the whole field of ice of which we seem to form the centre should subsequently be subjected to

considerable pressure; even then it is expected that the ship would rise so that the ice would pass downwards under her bottom. When we got in here first we were merely in a pool in an area of loose pack ice. The recent gale caused this to congeal into one great field of ice without a rift or lead to be seen anywhere as far as the eye can see from the mast-head. No doubt it will open up, as it always has for us and most previous ships, in a week or two, but if this should not occur before the end of March, we should have to remain frozen in until next November probably, which would be rather trying.

No one contemplates, for moment that this is at all likely and Sir Ernest, least of all, exhibits the slightest sign of anxiety about it. In any case we have ample provisions though not too much coal.

The temperature is about 19 degrees Farh., but it is so dry that it does not feel unpleasantly cold.

Monday, 25 January, 1915

Late last night no sooner had I made yesterdays entry than the ice proceeded to split up and by midnight there was a large open lead at right angles to our fore and aft line tantalizingly close to us, but separated from us by a hundred yards of exceedingly thick hummock ice.

Today at 9 a.m. we hoisted all sail and got up full steam and continued to drive the engines full speed ahead until noon in the hopes of reaching the open water but all to no avail for the ship seemed firmly imprisoned in the ice.

We resorted to all the devices known to polar navigators, using great crow bars called "slices" to break up the ice, but we were so tight in its grip that we never bridged a single inch. The hummock

ahead is too thick to break up by hand I suppose, but I should have thought that and the combined efforts of all hands for several hours would be able to reduce it to such an extent that the steam and sails could do the rest. It has been a perfect day: bright sun and thermometer down to 15 degrees during the night. Since writing the last preceding I have just been in the rigging out on the yard furling the foresail, very cold on the fingers and heavy work. We took in all sail. Something has just gone wrong with the engines and they are taking them to pieces.

Tuesday, 26 January, 1915

It has been another fine dry day; sun shining most of the day. We can see clearly that it is nearly always sunny on shore and cloudy over the water. The lead that promised so much has almost closed up again, but it seems that it could not have offered us much for it really extended for only about a mile or so in each direction.

I have spent quite a busy day picking the eyes out of the potatoes all the morning and repairing the Captain's trousers all the afternoon. They wanted it badly. I let in a little diamond shape gusset in the fork as now that he is wearing the thicker underclothing than usual, they had become a little tight on him and had split.

Hurley has taken some splendid colour photos.

We nearly all find something to occupy ourselves with, some sleep in the afternoon, others play cards and Hussey and Rickinson (chief engineer) the banjo and fiddle respectively and, fortunately, in concert. Poker patience is the most popular game but in the evenings Sir Ernest and three or four others play poker proper for an hour and a half. Occasionally they play bridge.

We seem to be a wonderfully happy family but I think Sir Ernest is the real secret of our unanimity. Considering our divergent aims and our differences of station it is surprising how few differences of opinion occur.

Wednesday, 27 January, 1915

On the whole a fine dry day, sun appeared through cloud at noon and shone from 3 p.m. and is still shining at 11:30 p.m.

At midnight the sun is now about 18 degrees above the horizon so that it has no appearance of a sunset, in fact in England it has that altitude about 2 hours before sunset.

Midsummer day here was a month ago (Dec. 21st) as I recorded at the time. We were then too far north to get the midnight sun, but as we came south we came up with it and the more south we get the higher it is at midnight and the lower at midday proportionately.

Now that we are stationary and nearly as far south as we are likely to get, the sun's altitude both at midnight and at midday is getting lower daily, until by about March 1st we shall be getting an hour or two of darkness every night each night lengthening rapidly until on March 23, the equinox, we shall have 12 hours of darkness. Thereafter the days will get shorter and shorter until we get perpetual night from May to August when we shall once more welcome the return of the sun. Man is hard to please and is ever conservative, for there is not one of us who would not be glad now to have a dark night. The perpetual daylight gets monotonous.

This morning a slight crack appeared in the ice and we at once set the square sails to get a move on, but it was a case of nothing doing. I went up with Dr. Macklin to loose the top-gallant-sail and after making up the gaskets (small lines by which the furled sail is lashed to the yard) I was congratulating myself on having finished my job as my left thumb was half frozen and aching, and was descending by the ratlines when Sir Ernest called out to us to loose the foresail also. We did it but it was just as much as I could do to stick to my task and my thumb ached for nearly two hours after, which was awkward as I had the table to lay and dinner to serve.

The air was not particularly cold either only about 23 degrees. I mention this not as an example of stoicism but just to show what little things may effect far greater things.

We do not sleep particularly well now and attribute this to the sun shining in my eyes most of the night, for owing to the ship being fixed permanently in the ice, the sun comes round and streams into our cabin from 9 p.m. to 5 a.m. I have built a little screen round my bunk to keep it off but it is not enough.

We shot an emperor penguin this morning, thank goodness, which will keep us going a bit. I grudge every tin of meat now. I spent the day sewing and opening provision cases.

Thursday, 28 January, 1915

Quite the most beautiful day we have had scarcely a breath of wind, a bright blue sky and not a cloud from the zenith to the horizon. The warmth in the sun was delicious though the mercury stood at 15 degrees only. The low temperatures have caused all the holes in the ice to close up and the floe is practically solid now, so we were allowed out on it this morning to play

football. I went off on skis with Hurley who was taking photographs.

It appears that we strayed away rather too far from the ship and so we were recalled and duly reproved; but it was a pity as I had reason to believe that I was close up to a seal lying behind a hummock and we are badly in need of seals for the dogs let alone for ourselves.

There seems to be some difficulty in finding something to do every day and therefore if one has some definite task to do one endeavours to put it off from day to day, so as to have something to do on a day when one has nothing to do.

Deliberate procrastination of this sort characterises the curious existence one leads in these polar fastnesses. I am sure that I shall always find plenty to do for I always do so, even if it is only mending socks and writing my diary, etc.

I went out on the floe later this morning and assisted Mr. James, our physicist, making some magnetometer readings. I held a watch (chronometer) and called out times whilst he sat at a thing like a telescope on a tripod and seemed to look through one hole and blow through another one lower down; he then called out figures which I wrote down, but what it was all about I haven't the vaguest idea, but I suspect that it was something to do with ascertaining the magnetic variation for the place, as I know that there was a magnet swinging freely inside the telescope and also the image of the sun refracted through a mirror and a red glass. Incidentally James borrowed my pocket knife, called it a "coercer" waved it about in an apparently aimless manner and forgot to return it.

Pessimistic prognostications are not popular but one cannot help realising the possibility of our remaining fast in this floe for the winter. Such an occurrence would be a disaster as far as the expedition itself is concerned, for unless we can land, it seem impossible that the transcontinental journey can be undertaken.

Even if we could manage to sledge over these hummocky floes from the ship to the shore we should never be able to lay out the necessary depots.

Friday, 29 January, 1915

A dull but mild, dead calm day. The temperature went down to 9 degrees only in the night but it feels more like 40 degrees in the open air. Sensibility to cold is largely influenced by wind, humidity of the air and ones personal fitness. Unfortunately I have had several touches of sciatica varying in intensity. They commence immediately subsequent to my being thrown over the steering wheel and I think therefore that I must have fallen on the spot that overlies the origin of the sciatic nerve which is in the lumbar vertebrae. It may be only a coincidence but it looks very much as if it is due to traumatic causes again, for when I had it before it came on immediately after several falls from trees and from the roof at our house -- The Priory, Hardway.

The doctor has given me certain tabloids and these seem to have benefited me. I do hope it won't prejudice me in anyway.

We spent the morning getting cases of dog biscuits from the hold. This gave me a good deal of restowing to do which occupied me most of the afternoon after which I took a sounding (449 fathoms) with Hudson, he had rather hard work winding in 2694 feet of wire with a 10 lb. weight and a gauge on it.

We are still stuck solid in the floe. This has happened to previous explorers in this region -- Weddell Sea -- to both Bruce and Filchner. The former just managed to escape quite late in the season, but he was much further north -- off Coats Land. Filchner got stuck about 200 miles north of us but in nine months drifted nearly 600 miles north and was then able to reach South Georgia. It certainly seems not improbable that we may remain in the ice field in which we are now incarcerated. If this be the case we shall almost certainly drift north emerging about this time next year near South Georgia. Sir Ernest says he will not return to England except via the Pole and Ross Sea, but one fails to see how he can get to land in the early part of next summer, if the ship is drifting all the time. Even now it would be a matter of very great difficulty to sledge any gear for twenty miles over this hummock ice and over stretches of open water which probably intervene between us and the land, and it would be out of the question to get the hut and all our provisions ashore, some fifty tons of gear at a minimum, taking fuel and dog food into consideration.

To transport the motors over this surface would be impossible . The surface is precisely similar to a ruined city made of ice, as the photos will show. The inequalities do not exceed an average of about two to three feet, but they are extremely abrupt and frequent.

The feeding of the dogs is going to be a most serious problem. It has become acute owing to the entire absence of seals on which we had mainly relied. Naturally, on finding that the ice is closing up all round them the seals make for the edge of the ice floe water, for no seal could walk a distance of more than a mile or two. We think that the flocks of seals we saw in the water must have been migrating instinctively northward. If we can secure no more seals it will certainly mean destroying about half the dogs for we have only about 1 3/4 tons of dog biscuit left -- enough to feed

all the dogs for about 2 1/2 months only, in addition we have enough compressed dog sledging pemmican for all the dogs for about 3 months. We certainly have not enough food for ourselves to spare any for the dogs.

I think we have sufficient food for ourselves to last all hands comfortably for twelve months, but as we had relied upon penguins and seal to eke out our larder, and there are none; we shall have to exercise reasonable care.

It seems such irony that we should have seen such myriads of seals so recently. I did venture to suggest once or twice that we ought to lay in a small store of them, as we had none left, but other considerations over ruled this. One must, however, be thankful for the splendid saving that has already been effected by the almost continual use of seal and penguin meat since leaving South Georgia. Tinned meat three times a day soon makes big holes in my stores, besides fresh meats are of the greatest value as anti-scorbutics (scurvey preventatives). I do hope that we shall be able to get a few seal and penguins soon whether we land or remain frozen in.

I have been skiing a good deal out on the floe, but it is almost impossible to get anything of a run, especially as I have no sticks. The ice sticking up here and there amongst the snow causes the skis to slip about in every direction when one comes into contact with it.

Saturday, 30 January, 1915

Every dog has his day and I had mine today, albeit a dull day as far as the weather was concerned.

Sir Ernest likes to keep all hands employed as far as possible, combining this with getting everything in readiness for landing, so as to effect our disembarkation in the least possible time should the chance occur. Today he decided to unpack my motor crawler which has been in a huge packing case all this time on the fore deck abaft the fo'c'sle head. It was like meeting an old friend after a long separation to once more have a motor in my hands. I cannot better describe what it means to me, to have this inanimate creature to care for, to clean and oil. As soon as it was out I filled it up with petrol and water and in a very short time had it running, entirely to Sir Ernest's satisfaction.

This "crawler", besides having paddle wheels, is fitted with a winch, which works splendidly, and Sir Ernest says it will justify its existence if it only raises the gear up the barrier edge when we land.

To add to my joy I found the interior of the crawler entirely full of spare parts! and all of them wrapped up in old motor papers!! Congenial reading for weeks!!!

This evening we had a grand football watch out on the floe. We are divided up for work into two watches, except myself. I am not in a watch as I have a routine of my own. Any how we played Starboard watch versus Port watch and "picked up" for the ship's officers and myself. We were about six a side.

We played on a small flat piece of the floe about 30 yards long. The surface was all loose powdery snow into which we sunk six inches at every step, but here and there there were hummocky slabs of ice and around these we sunk in much deeper.

The game was fast and furious; but owing to us all being somewhat out of training and to the heavy going shortness of breath soon

put limitations on our efforts, and a good wind was the principal factor in goal gaining.

Often the ball struck hard bits of ice and then bounced off at surprising angles, at all other times it settled where it fell in the powdery snow. Sometimes fierce scrimmages took place in a hole between two hummocks.

The player's interpretation of the rules varied considerably. Tom Crean, our Irish giant, had a fine way of falling on one and then sitting on one's chest until the ball was well out of the way. Dr. Macklin and Clark, our biologist, were the captains. Both, especially the latter, are players of exceptional merit, though it availed them little on such a ground.

Sunday, 1 February, 1915

A mild dull day, but with all the mild windless weather we shall never get out of this floe. If only a good storm would come it would break up the floe and we should be able to reach our intended base, but unless this happens within the next six weeks, at latest the lowering temperatures will freeze up the floe so solidly that it will resist the effect of the fiercest storms. There is a possibility that we might be able to sledge over the sea ice to the land but we could never manage to sledge the hut and all the provisions so far -- a distance of about twenty miles. Vahsel Bucht -- our proposed base -- no more than 59 miles from us now.

The situation is certainly enough to drive any leader to despair, but Sir Ernest keeps his spirits up, outwardly at least.

The football match has given us a new subject for conversation and is being fought out again at each meal times. It is surprising how one realizes that conversation at home depends largely on

the news of the day. James rigged up a new wireless aerial out on the floe yesterday as we were to have had a prearranged message during the night but nothing audible came through.

I have been doing my laundry work today and also repairing the coal scuttle.

Monday, 2 February, 1915

Our long awaited release took place in part today. It came on to blow during the night from the north raising the temperature up to 27 degrees which feels absurdly warm. I was down in my storeroom shifting some 200 lb. flour barrels so as to make a little workshop in case of having to winter in the ship. I had just arranged a pile of condensed milk tins and said in jest to Hurley, who was with me, "They'll fall over next time the ship rolls!" to which he replied, "They'll be eaten long before that.", when all of a sudden they fell over and sure enough quite suddenly the ship began to heel over to such an extent that I ran up on deck to see whether she was being tilted over by pressure, when to the delight of everybody we saw the ice opening away on either side of the ship and in a few minutes we were in a pool of open water.

Unfortunately we had no steam up and the lead which was open yesterday has closed up, but there is a good deal of open water about and we are now getting up steam. It has been snowing all the times a mild blizzard and until this stops we cannot select the best course to try for. Still what has occurred so far is wonderful and fills us all with renewed hope, except Sir Ernest who seems to think it is premature to expect too much from this development.

Saturday, 2 February, 1915

I have been unusually busy in the hold entirely rearranging it and trying to partition off a small space as an office and workshop by building it round with condensed milk boxes.

It is all very heavy work but extremely enjoyable because it provides the necessary exercise, the lack of which is the most certain means of dropping into a state of liverish stagnation. I am sure that plenty of hard work is a fine thing down here. At present I never seem to have time to do half the things I want to do and my only fear is that I may one day get ahead of my tasks and find myself in the unenviable position of having nothing to do but read, sleep and eat.

My duties are now slightly added to as we have a fire in the wardroom all day. It is an awful bother to light -- simply won't draw at first no matter how diligently I clean it out and lay the sticks.

Until the outside temperature gets a bit lower the stove makes the wardroom a bit stuffy. The genial warmth is, however, very attractive and nearly all the members now spend their time in the wardroom. This greatly hinders me when laying and clearing up meals but it cannot be helped.

As we are short of fresh water we now have an ice melter (a huge iron urn) on the top of the stove all day long, and it is constantly being replenished with ice as the water is being drawn from it.

Some of the watch go out on to the floe each morning and quarry some ice. This is kept in a basket just outside the wardroom door and anyone drawing water has to put in an equivalent amount of ice into the urn. People's ideas as to an equivalent amount differs always on the short side. As the temperature is always far below

freezing we can keep ice any where about the ship without its melting just as if it were so much salt or soda.

Sea ice loses all its salt shortly after freezing and makes excellent drinking water, but I am afraid we swallow a good deal of foreign matter with it as it has generally been dragged about the deck a bit, and as people draw water for washing themselves consequently their hands are not very clean when they replenish the urn with ice. One can see large hairs of woolen gloves besides numerous other specks floating about in one's mug, but one learns to become callous in these matters and to swallow the lot and chance the consequences.

Sunday, 7 February, 1915

Misty in the morning with the temperature down to 9 degree. There was heavy condensation which caused all the rigging and the dogs' coats and our hair, beards and moustaches to become encrusted with beautiful ice fringes.

It is wonderful how the dogs prefer to sleep on the snow covered deck rather than in their kennels.

The deck has now been more or less covered with snow for the last few days. We try to scrape it off but it freezes on so hard that it is impossible to get it all off. The scene looks quite Christmas-like.

The small pool we are in has now completely frozen over with thin ice and we are still prisoners, but we hope yet that there will soon be another general opening up. I have spent a very quiet Sunday taking a rest after the week of heavy work I have had in the hold.

This morning Hurley took all our photographs and afterwards I took his. These are to be sent home "when the ship leaves" for we still talk of settling down in the hut and of the ship going back, though the latter certainly looks highly improbable just now.

I am a regular old Dorcas; I spent most of the afternoon darning the Captain's woolen gloves. I have contracted to do all his mending at the rate of one chocolate per article. It took me two hours to do the gloves!

Two hours work for one chocolate!! but chocolates are valuable down here, they are big ones too -- Carson's make. They are really excellent, quite plain. We now have 12 pieces of chocolate every week -- a very generous allowance -- each piece is the size of a visiting card and nearly as thick as a pencil.

This is really more than I care to eat in a week and what I do not give away I put by for a rainy day, or a frosty one. These chocolates form a convenient means of exchange instead of money and either them or cigarettes form the stakes for most of our bets and winnings and games.

The bunk above mine, in which James sleeps, has been squeaking abominably lately, and I have tried to either locate or eliminate the cause of it, but unsuccessfully. I oiled and altered it in every way, all to no effect, but at last today I discovered that the noise arose from a board lying on the bunk supports. I removed it and the noise ceased at once. It has been so bad lately that it has wakened me many times every night as I am a light sleeper and I could never get accustomed to the intermittent sounds.

Monday, 8 February, 1915

Bright but cold, temperature 2 degrees below zero.

This morning I inflated all my motor tyres to see how they were getting on and found them all in good condition. Unfortunately I believe I have forgotten to bring any spare valve rubbers. One can purchase this rubber tubing at about six inches a penny and it seems absurd to be short of such a trifling thing here. Still, I have no doubt I shall be able to manage by carefully preserving those I have and if I finally run out of them I shall probably be able to improvise some out of the rubber covering of insulated electric wire.

The wheels are, of course, for the aerosledge in case we ever find surfaces hard enough to use them. Being very light they are carried all the time on a hinged axle and can be let down to project 3 inches below the runners at a moment's notice.

"Sailor", one of the dogs, got loose today and jumped overboard on to the floe where he found the remains of some seal meat and had a good feed before he was retrieved.

Seal blubber has an extraordinarily lasting smell. It is nearly four days since I was dabbling in it but I still can't quite eradicate the smell from my hands.

We always use cold water to wash in as there is no sufficient supply of hot. One never can get really clean in cold water.

Tuesday, 9 February, 1915

Last night we played the simple game of "questions", answering "Yes" or "No". We each had a turn as "guesser". The subjects were all rather difficult ones, such as the first pip in the apple Eve gave Adam, the hilt of Nelson's sword on the Nelson column, the first gold coin staked at the baccarat table at Monte Carlo in 1914.

Sir Ernest had to guess the left eye of the snake who tempted Eve and I had the dorsal fin of the second fish in the miracle of the five loaves and three small fishes. It is a simple game but provided the conundrums set are sufficiently exacting it becomes really interesting and educative. It passed the two hours after tea pleasantly enough and I hope we shall have more of it during the long winter, now approaching.

We all guessed our tasks eventually.

During the game, in response to a cry, we all ran up on deck just in time to see and hear a number of seals break through the thin ice of the frozen pool in which we lie to "blow" i.e. to recuperate themselves with fresh air after what, to judge from their apparent distress, must have been a long journey under the ice and before proceeding on another long spell to open water.

Today we made a desperate effort to get the ship free from this wretched floe.

Owing to the temperature having been below zero a good deal lately the pool in which we were lying is now all frozen over. In the morning some cracks opened up leading towards some open water, but before we got steam up the crack had closed again, and, as Sir Ernest said, it is better to be in an open pool than a closing crack, for that means pressure, the greatest peril that a polar ship has to face.

As it was we took nearly two hours turning the ship around, as the young ice in the pool is very tough and the pool is not more than twice as wide as the ship is long. It is hard times getting thwarted again just when things were beginning to improve. Sir Ernest accepts the inevitable with his customary inscrutable

composure. One wonders what he really does think with so much anxiety concealed beneath so calm an exterior.

This evening a particularly fine specimen of an emperor penguin came up alongside we secured it. Hurley subsequently took a colour photograph of it.

I overate myself slightly at tea and indigested something so retired early but it was tomorrow before I slept.

Wednesday, 10 February, 1915

Beautifully bright but d-----bly cold.

Temperature 3 degrees below zero. This morning we got out the warping wire of the motor tractor and rolled it off its packing reel on to the drum of the motor. It is magnificent stranded wire, beautifully flexible and guaranteed to take a strain of two hours to roll it on by hand.

I was shifting stores all this afternoon. I always seem to have a lot to do in the storerooms. There are always so many cases to be opened, the shelves to be replenished etc., and as the cases containing the most generally used comestibles are often buried far in at the back of the hold there is always a lot of rearranging to do in making things generally more accessible.

In spite of my limited knowledge on the subject I feel pretty sure now that we are doomed to spend the winter in this floe. It is cruel luck, but it does not necessarily mean the total failure of the expedition. With Sir Ernest's brilliant resource we may yet contrive to carry out the main raison d'etre of the expedition -- the trans-Antarctic journey. Our meagre coal supply is our principal limitation.

Thursday, 11 February, 1915

A lovely day. Temperature 5 degrees but quite warm in the sun. We again made a valiant attempt to get free but to no purpose. By all hands running across the deck to and fro we got a slight roll on the ship enough to free her from the young ice but the ice immediately ahead of her was too thick to break and we had to abandon the attempt.

This afternoon we hoisted the motor-tractor (the "crawler") out on to the floe and gave it a trial trip. The snow was loose and powdery as bad as could be, and we were sinking in six to nine inches at each step. In spite of this really wretched surface she set off at a great pace, running stern first on her lowest gear. We soon found that on this sort of surface it would not run forward owing to the front part of the sledge dipping into the snow. It is clear that the paddle wheels do not project sufficiently below the framework, but as there is an alternative lower position in which they can be placed I shall put them down to this before we make another trial of it. Before hoisting it on board again we tried its "warping" or winding in gear. It wound itself in splendidly but unfortunately came hard up against a small buried hummock which slightly damaged its woodwork.

Friday, 12 February, 1915

A dull mild day. 11 degrees Farh. Slight breeze.

The overcast days are more uniformly mild than the bright days, because the bank of clouds prevents radiation from the earth. At the same time one misses the genial sunshine. The sun now gets very low at nights and although it has not set yet, we get almost a twilight at nights on overcast days. Two nights ago there was a

parhelion or "mock sun" at midnight. I just happened to see the beginning of it at 11 p.m. These phenomena occur when the sun is low on the horizon and the air is full of icy particles.

The adjacent floe is splendidly level of skiing, several novices have been making their first essays. The antics of our gawky but excellent cook, to whom I lent my skis, were particularly exhilarating.

When the sun is shining in the evening and the temperature low, the surface of the floe sparkles like a million diamonds. These things are really very beautiful but, alas, they are no compensation for our enforced inertia.

The carpenter has been unusually troublesome today. He is in charge of the water tanks and these are accessible only through hatches fitted in the deck of the hold. As soon as I have made a good stow he finds that he must have it all shifted to get at some other tank. He has an exceptionally offensive manner and it is very hard to be patient with him.

Saturday, 13 February, 1915

A dull morning but sunny in the afternoon. I have been very busy all day with the help of the engineers repairing a leak in the water tank of the motor. There is much more engine vibration than I had expected. I find that the water tank on the top of the cylinders is liable to suffer from it.

In fact it gets shaken so much that the solder and rivet joints between it and the cylinder-water-jacket has sprung a minute leak and always will be liable to do so unless I can considerably reinforce it. The maker ought to have observed this when trying it, instead of leaving me to rectify it under difficulties. It is curious

for they were usually extraordinarily painstaking and conscientious.

We have, however, unquestionably established the efficacy of water-cooling in the Antarctic and our system, which we called "hopper cooling", from the fact that we have a "hopper" or container mounted direct on the top of the cylinders, exceeds our expectations in both principle and practice, in spite of a few weak points in construction. We ought, of course, to have had a special casting made, but this would have added greatly to the expense and we had spent too much already.

Sir Ernest has little mechanical sympathy. With him the thing is alright if it goes and all wrong if it doesn't.

Sunday, 14 February, 1915

Valentine's Day. I had none but shall live long if I ever forget this strenuous Sunday.

Last night several "leads" appeared and Sir Ernest decided that the time had come to make a great effort. We got up steam and directly after breakfast commenced breaking up the ice in our pool by going ahead and astern alternately in a very limited space, having scarcely more than a ten foot run at first.

All hands except myself (I was on the wheel) went out onto the ice and commenced to work at it with pick axes, ice saws, etc. By slow degrees we got as much as ten yards run. This broke up most of the young ice in front of us, which was only about nine inches thick and as many yards wide.

Repeated ramming failing to break this, all hands proceeded to cut out the young ice behind it in order to weaken it. We soon came

to call this obstinate obstacle the lump, or occasionally, that ----- lump. By dint of really strenuous and unpleasantly wet work we cut out with picks, shovels and the large ice saw a square pool about half the size of a tennis court by midnight when we adjourned for a space and regaled ourselves with porridge and very delicious unsweetened condensed milk.

The actual cutting out of the ice with picks and saws is difficult enough but lifting the blocks, some of which weigh as much as 3 and 4 hundred weight, out of the water; hauling them away, breaking them up and getting rid of the pieces by throwing them clear of the proposed route of the ship entails much hard work on the part of a comparatively small party like ours.

After a day's labour the ----- lump is still there and the ship has advanced barely fifty yards. It used up at least three tons of our precious coal, but the necessity of drastic measures justifies going to the extreme limit of our resources.

The temperature was about 10 degrees and we were all cold and wet, but no one got a real ducking.

Midnight tonight marked the termination of the Antarctic "day" for the sun just dipped below the horizon for a couple of minutes. It was a glorious combined sunset and sunrise.

Monday, 15 February, 1915

Sir Ernest's birthday, he is 41. Before ceasing work at midnight last night we gave him three cheers.

We all slept well, but recommenced work again directly after breakfast this morning. The great difficulty all along has been that there is no open water around us where the broken fragments

can escape out of the way and consequently these all jam together and form an impenetrable mass of slush and lumps in front of the ship.

All our energies are concentrated in hauling and pushing these lumps astern. It is wonderful how solid the floating covering of slush and brash becomes. It is impossible to realize it without seeing it, but, the fact that one can run across a piece of apparently snow covered water by hopping quickly from lump to lump like Irish bog-trotting gives some idea of its comparative solidity. One can even get a safe temporary footing on a small piece the size of a football.

The ship split that ----- lump at 11 a.m. and we removed it piecemeal by 3 p.m. and the bows of the ship reached our artificial pool about 4 p.m. Sir Ernest then decided to abandon the unequal contest as there was at least 300 yards of 10 ft. thick ice between us and the lead ahead.

It has been very trying work all the time, for there was not one of us who did not realize the ultimate futility of our efforts, though that did not lessen the earnest enthusiasm of our labours. Puny mortals striving frantically against the mighty forces of nature -- the laughing stock of the Gods; only a handful of us contending with all this mass of ice. It seems almost impertinence of us to have ever attempted it. Sir Ernest is the last to admit defeat but what use is it to continue fighting against such overwhelming odds. It is not that we shirked the task in anyway -- I never saw such unanimous cooperation and intensity of purpose. All toiled with a will.

The decisive factor that led to our abandonment of the project was the fact that the open water was freezing over as fast as we cleared it. The pool we cut last night is now covered with ice

strong enough to walk on and that means that it must be already 3 inches thick, salt water ice being so much less strong, when new, than fresh water ice.

Perhaps the fact that we are all in such brilliant health accounts for our ability to work with so little fatigue under such wet conditions and in such cold temperature as +5 degrees.

Tuesday, 16 February, 1915

A glorious bright day but exceedingly cold. I did quite a lot of washing last night, including my heavy sweater and repairing the numerous holes, etc. in the washed under-clothing fully occupied my morning. In the afternoon I had a good deal to do in the hold searching for some wholemeal flour -- as Sir Ernest has ordered brown bread. It is not universally popular, strange to say, but there is no question about its being more beneficial to one's health than white bread. The cat occasionally gets shut in the hold and I have been blaming her lately and chiding her in consequence for a suspicious effluvia which has lately pervaded the whole hold. Today I opened a case of dry fish and the over-powering stench of the contents was positively annihilating and entirely accountable for the recent odours. I hardly know how to adequately convey my apologies to the cat, but I think perhaps some of the fish will be an equable compensation. Poor Pussy. I am assured that it --the fish -- is edible and even wholesome, but in its uncooked stage it is so unappetising that I will gladly forego my share to provide the feline compensation.

At 4 p.m. we had a grand cinema football match with two full teams of eleven a side. Hurley, who never plays games, was busy with his cinematograph and cameras all the time and the pictures promise to be interesting, showing one phase of our strange existence, our recreation as we all played with much vigour. Some

of the members had levelled the ground down a bit in the morning and it was far superior to the deep snow surfaces that we have hitherto been playing on. The game was really interesting and we had a much needed and capable referee in Dr. Macklin, who, though one of our best players was unable to play owing to having been bitten rather badly by one of the dogs this morning whilst separating two combatants.

The temperature was about +5 degrees and we all commenced play in warm jerseys, caps, etc., but very soon one began to take off first a coat then a hat and so on until I, myself, had nothing on but a very thin short-sleeved summer vest ("Irish Linen mesh" make). I do not mention this as a sample of personal hardiness but merely to show that the Antarctic summer is not so formidable as some suppose, as the cold is certainly "dry cold" like it is in Switzerland.

Wednesday, 17 February, 1915

Dull and snowing but fine and sunny after 4 p.m. Last night I was out skiing with James, our physicist, giving him a little instruction, though he did not seem to require much. Whilst we were out, we noticed a very black appearance like great clouds of smoke coming up from the direction of the open lead which is about half a mile to the east of us. It was not long before it has spread all over the sky immediately above us and blotted out the sun. This we learned later was "frost smoke" and it is due to the intense cold of the atmosphere condensing the evaporation from the comparatively warm water.

This condensation really forms a white fog but the reflection from the black water, black by contrast with its surroundings of course, causes the fog to resemble black smoke. Indeed, as it spreads

beyond the water it gradually shades off to the normal grey of a dense cloud.

As we were returning we heard some loud blowing and looking back saw the spout of a whale in a pool over part of which we had recently passed. On returning on board we learned that it was a killer whale which had come up and broken up the young ice with his back; so it was just as well that we were not on it at the time for this is a nasty little way they have of catching seals, by shattering from below the ice upon which the seals are lying; and they cannot be expected to discriminate between a seal and a human being.

Skiing over the snow covered ice floe is a very different thing to skiing over an ordinary snow field. The actual surface consists of very loose snow in the form of absolutely dry granulated crystals, almost exactly like powdered rock salt or granulated white sugar. There is no "run" in it at all. One only wears skis to prevent one from sinking in. Every here and there one comes upon hidden blocks of hard ice which cause the skis to sideslip, and one can seldom go a hundred yards with out having to cross the pressure ridge between two portions of the floe and which marks the place where the various smaller floes have all frozen together to form one big one.

Very busy in the hold all day at first hunting for the case containing our sledging diaries and hut diaries. This we opened and Sir Ernest gave each of us who wanted one a diary or a notebook.

I shall have plenty of work during the winter rewriting all that I have written in this book into the new book

We repacked all the sledging diaries and put the case away and I wonder whether we shall ever have occasion to use them. I am inclined to doubt it.

I have been out skiing this evening with Hurley. We found a little snowy hummock about 15 feet high and were able to get quite an exciting little run down its slopes.

There is an enormous expanse of open water not half a mile from the ship. It is excruciatingly tragic to be incarcerated in this floe and utterly powerless to get the ship into the open water. The fact, however, that leads are continually opening and closing all around us is not a little hopeful, it shows that all the ice is still "on the work" but the season is getting late and open water soon freezes over now.

Thursday, 18 February, 1915

Dull and overcast but comparatively warm and mild. Temperature rose to +10 degrees. It is now blowing fairly hard, the first strong wind we have had for some time. We fervently hope that it may have the effect of splitting up the floe.

It is heart-rending to see the water so close and to know that it will soon freeze over so hard that even if we do get out of our present positions, what is now open water will be covered with ice too thick for us to negotiate.

It has been snowing a good deal and the snow freezes on the deck and is very difficult to cut off.

I have been particularly busy in the hold today hunting for special cases required and restowing everything to my own satisfaction. My relatives who read this will fully appreciate what I mean,

knowing, as they do my diabolical propensity for packing things. It is most awfully fortunate for me that Sir Ernest should have put me on to this work which is so especially congenial to me. It is a pleasurable prospect to know the one has some definite job and plenty of work to keep one employed all the long winter. With plenty of hard congenial work I find that the time simply flies and I really never seem to have any time to read or even to do my needlework.

Friday, 19 February, 1915

Today marks a step in my career. Was it ever so?

The cook has succumbed, appropriately enough, to housemaid's knee, and Sir Ernest, having too credulously heeded my infernal swanking on culinary matters has paid me the compliment of appointing me cook during the indisposition of Mr. Green. Thus it came to pass:

Someone: "Oh Colonel (that's me) the Boss (that's Sir E.) wants to see you."

Me: (soliloq.) "What asinine thing have I done in the last 24 hrs."

I proceed with desultory knock kneedness to the boss's cabin, rapidly reviewing my lurid past and inventing plausible excuses for all recent indiscretions. On arrival I stumble over the threshold of the door and make a clumsy entrance followed by an awkward announcement. Sir E. hates clumsiness and is liable to be adversely prejudiced thereby but as he is washing his hands and has his back to me he fails to perceive my approach. Instead of the expected reprimand he merely says, "You can cook, can't you, Lees." "No, I can't," I gurgle inarticulately to myself, but he mistakes my confusion for a bashful affirmative and my fate is sealed.

Oh why, oh why did I let my lying tongue run riot. Could I ever have seen such a combination of circumstances as this.

If I ever did really boast that I could cook I merely meant that, provided I had a tin opener and a toasting fork I could prepare such dishes as cold ox tongue or even a made up French savoury like sardines on toast, -- camp cookery for one or two people, but that I could cook a three course dinner for a whole ship's company of 28 men -- no I never said I could do that and moreover I can't and won't do it. I'll either starve them or poison them. It's a gross miscarriage of selection that I should be placed in this ridiculous position. I'm not afraid of the amount of work, I'm merely aware of my incompetence and ashamed of my indiscreet utterings. I'm not sure that it's not all a deep laid snare to show me up, as I now see, I well deserve to be.

I write this immediately after the edict has gone forth, for God knows, I am in such a state of agonized anticipation that I may not live through this day to record my sentiments at the end thereof.

I write my eyes full of tears and my heart full of fears, and dolefully proceed to the galley (how like gallows) the place where they cook, and I don't.

9 p.m. Later. Enough for the diaries! the evil thereof. The galley is a small place; not enough room to swing a cat in, at least I could not swing that feline there very far as she was the first creature I met there. I vented my despair before her in trying the experiment. Soon the sick cook appeared.

I opine that the varlet malingers, but the doctor thinks otherwise. Is it conceivable that a doctor could connive with a cook to bring about my downfall, but the fact that the cook has been giving the doctor boiling water these last few days is more circumstantial than extenuating.

The cook had the cheek to smile at me and the impertinence to put his filthy little chef's cap on my head, simultaneously insulting me by some patronising compliment about my appropriate appearance, he assaults me with a floury hand and a rolling pin. I dismiss the knight, ordering him below.

He affects to ignore my dismissal and lingers as well as malingers, but now he shows me what preparations he has made for the day's cooking. Soup stock already on the boil, stewed seal meat already stewing -- looks nasty and smells worse, an embryonic bread and butter pudding -- just the bread and butter cut up into dice and put in a baking tin, and that's all.

I will do him the justice to say that he gave me every assistance and some much needed advice and a couple of stale scones to eat before he stumbled down the narrow staircase to the fo'c'sle and his bunk.

In great desperation and yearning to share my troubles with anyone I find Blackborow -- our stowaway who is now acting as pantry boy and is really a most excellent and competent young fellow. I soon find that he knows quite a lot about cooking, I confide in him that I know nothing and that I rely upon him to pull me through. He'll have a good deal of pulling to do I'm thinking.

Sir E. has a very high opinion of him, in fact, he considers him the best man of the whole crew. It says much for his bona fides when a stowaway rises so high in the estimation of our leader for there is always a very natural prejudice against a stowaway.

Now my cooking -- I taste the soup, all good cooks do thus, so there can be nothing wrong in a bad one doing so, it tastes insipid, heaven knows what it is made of, but how to rectify its insipidity is a puzzle. After some consideration a sudden rush of brains to my

head prompts me to add salt and then in succession pepper, some milk and finally onion. These certainly improved it and when I served it in a state of terror it went down well enough for all members to ask for 2nd helpings of it; but I think this was mainly due to a desire to encourage me and partly to the effect of the polar air which makes gluttons of us all.

The seal stew was unimprovable so I just let it be adding a soupcon of sage and celery seed to disguise its flavour and vowing to do better tomorrow. At the last minute it occurred to me that I might be able to improve it by thickening it up with flour, so I made a white roux and incorporated it with the stew. The bread and butter pudding did not tax my ingenuity much, the addition of butter to the top, egg powder, milk, currants, sugar, and a pinch of salt seemed to produce the desired effect for it too was completely consumed and some members were left asking for more and had to go without. I have determined to give a tinned breakfast and tinned tea daily so ox tongue filled the bill today.

Just as I was about to conclude my labours Blackborow said to me, "When are you going to make the dough?" Dough indeed, am I then to make bread daily and be a baker as well as a cook. Little did I realize what I had let myself in for when I unprotestingly accepted the post this morning.

So I began to make the dough, after prolonged consultation with the lazy cook, now basking smugly in his stuffy bunk. It is an awful responsibility to have the spoiling of 12 lbs. of our valuable flour for we bake 12 loaves daily. The water added to the flour added to the flour to make the dough produces about 20 lbs. of bread from 12 lbs. of flour.

I proceed to make the dough, taking a large jug of tepid salted water and two big cups full of yeast. I work the dough up, but it

doesn't look a bit like it does when the cook does it and it takes me half an hour to his quarter; at last, by constantly dredging with flour I get the dough tough enough to lift out of the galvanized bath in which I make it, turn it and put it back, cover it with a cloth and leave it on a rack over the corner of the stove for the night to enable it to rise. Before retiring I get up the various stores required for tomorrow, opening the tins of fresh herring for breakfast and bring in the seal meat placing it in an enamelled bucket over the stove to thaw. So ends oh such a strenuous day.

Saturday, 20 February, 1915

Calm and cloudy. It may have been tropically hot yesterday or 1000 degrees below zero. I don't know. I simply had no time and less inclination to think of any thing except my own dire plight.

Cooking necessitates early rising, I find, I didn't think of that, but in spite of my wonton customs, I rose early today, 6:45 a.m. and wearily wended my way to the galley where I found my faithful henchman, Blackborow, had carried out my instructions and had the porridge (always called "burgoo") well under way. He is certainly a most useful and reliable young fellow, scrupulously clean and very industrious.

He turns over the porridge to me and I proceed to stir it with a long piece of firewood left over from lighting the fire. We are not over particular about utensils and I daresay some of our methods would absolutely horrify the ordinary domestic cook. I am here to make a full confession and will endeavour to describe all our proceedings hereafter.

I feel sure that the porridge will never be ready by 8 a.m. the time when the crew have their breakfast, but at last it boils and I push the great pot to one side in order to get the big kettle boiling for

the tea, coffee and cocoa. In the intervals of stirring up the now thickening burgoo I dash about and cut four long loaves into 96 slices, place these on 4 plates and then mix up the dry milk powder, make the coffee and tea and rush down to the hold to get up a few forgotten stores, whilst Blackborow fills the sugar basins, jam dishes, butter dishes, etc., and passes the cutlery, plates etc. through the trap hatch to Clark, who has taken over my standing number as messman, is acting waiter for the day. Butter came next I vigorously dug chunks of it out of the 4 lb. tins in which it is supplied and passed them through to Clark.

Tinned herrings, always a favourite, comprised the relish.

Breakfast over, I was able to compose myself to the more serious business of the day, the completion and baking of the bread and the preparation of the midday dinner.

Now that I have a free hand I propose to devote myself to the improvement of the seal meat and endeavour if possible to serve it more as a joint than as the uninteresting stew that has hitherto been the only mode of preparation that Mr. Green can devise.

Accordingly I set me to discover in what manner the meat lacked the essentials of the English joint and arrived at the conclusion that all that was wanting was the fat. This I readily supplied by chopping up some frozen tinned dripping into little almond shaped pieces, piercing a piece of well thawed seal meat all over with a sharp pointed knife and inserting the dripping pellets into the holes in the meat. Moistening the meat and dredging it well with salt and flour I placed it in a baking tin in the oven and put it out of sight and out of mind for a couple of hours.

Next I proceeded to put up the bread. This I am not altogether unaccustomed to for I had several lessons on the way out and

more recently. The dough set last night to rise had risen well by this morning. I knocked it down and set it to rise a second time which it had done by about 10:30 a.m. when I knocked it down once more and turned it out on the board about 20 lbs. of it and divided it up into eight equal parts, each of which I kneaded and "put up" into loaves leaving them for about half an hour to "prove" in which condition they become elastic. The next process was to make them up into long sandwich loaves to fit the only available tin and lay them in, once more covering them with a cloth until there was accommodation in the oven to bake them.

I now improvised the soup by adding to it what Green generally throws away, namely the red juice which drains out of the joints in the process of thawing the meat out. Whether this juice consists mainly of blood or not as he says, and whether the ship's company would object or if they knew it was added to the soup, I really do not care so long as the liquor enriches the soup which it does. Rather more salt than Green dares to add and some pepper which he entirely omits and just a soupcon of onion which he has never thought of complete the refinements and the appreciative remarks at dinner justified the additions.

Meanwhile the joint has roasted to perfection. This is the first time they have had joint and they are a little suspicious of it in the wardroom until they taste it when they almost unanimously ask for more. So far so good, but the sailors are so prejudiced that I have not ventured to convert them to joint yet and they have stewed seal of the ordinary variety today, but their duty-hand sniffs about and presently scents the joint and at his next appearance hints that the.... I am differentiating between the wardroom and the fo'c'sle. This is precisely what I want, the ice is broken and the way is paved to give the sailors "roast" tomorrow.

Lately they have grumbled once or twice about having seal meat at all. Once of them, How, said to me the other day that he thought it was a ----- cheap way of running the expedition. I pointed out to him that the principal reason why Sir Ernest was so keen on our having seal meat was on account of its antiscorbutic properties but I could see he was unconvinced and he merely expressed the sentiments of every one of the sailors on board.

They are an extraordinary prejudiced lot of men. Food seems to be one of their main objects of existence. In view of their preference for tinned meats I have promised Sir Ernest that I will endeavour to cook the seal meat in such a way that given their choice they will select it in preference to tinned meat.

I am hopeful of success.

I baked the bread in the afternoon successfully, served a tinned tea and made up my dough once more.

Sunday, 21 February, 1915

These are sealing days. There is nothing new to record in the methods of capture but we secured four yesterday and a similar quantity again today. The weather has been beautiful.

I continue my cooking duties and judging by remarks no one has been very ill and the doctors have been kept less busy than they anticipated.

Today I tried my hand at an Irish seal stew, and results justified the care I took to make it a success, but I must attribute most of the credit to Knorr's vegetables in spite of their German extraction.

We have plenty of potatoes. Blackborow peels them. I can't be bothered, besides I have to keep the soup stirring to prevent it from catching. I embellished it today with a little sugar and a good deal of milk and it seemed to me to improve it and I heard no loud complaints, but I am always afraid that when one is doing a job a little out of one's regular line it is considered etiquette on the part of the victims to swallow unprotestingly things that they would not accept from the regular hand.

Monday, 22 February, 1915

I seem established in my new billet. No casualties are reported up to date, so I am gaining confidence, and am perhaps getting rather reckless.

Getting in the seal meat affords me as much outdoor exercise as I require.

One door of the galley leads out onto the open deck, and just outside it there hangs the seal carcass from which the joints have to be cut. To do this it is necessary to deal heavy blows with a sharp axe, for the meat is frozen as hard as wood and in the hacking process splinters of meat fly about in all directions.

I ring the changes on seal stew, minced seal, seal liver, roast seal and seal steak. For dinner we always have soup, varied occasionally - pea soup or soup made from compressed tablets, and besides potatoes, another vegetable, and a sweet. Sweets interest me especially and my one effort is to contrive something novel with the limited resources at our command.

For tea I make a dry hash if there is suitable meat left over.

Tuesday, 23 February, 1915

The temperature remains very low for this time of year -12 degrees having been recorded.

There seems to be a sudden boom in seals as we got 3 yesterday and 4 more today.

The training of dogs has commenced and soon their services will relieve us of a great deal of not unpleasant work in bringing in distant seals.

Wild, Marston, Crean, Macklin, McIlroy and Hurley are the dog men; none of them have any preliminary experience to speak of but this does not seem at all essential. Each man has one team of seven to nine dogs. The dogs were divided up arbitrarily; the better dogs being shared out equally.

Something went wrong with the bread today, it didn't rise properly in the oven and is heavy and close set. It is eatable, but that is as much as one can say for it. I must consult the ailing cook and ascertain the cause and remedy as I cannot again afford to jeopardise my reputation in this way. I made a small cake today but it was not a success. I was so ashamed of it I ate it myself but wish I hadn't. It was rather heavy and partly raw.

Wednesday, 24 February, 1915

Three more seals were shot today.

The pigs have become such a nuisance on board that a substantial snow house, which we have called the pigloo (short for pig igloo) has been put out on the floe and well lined with straw; they will be warm enough out there, no doubt.

To our great surprise it was suddenly found that we were short of butter and as we have not yet touched any of the shore party butter, a hunt was instituted for it, but is necessitated the clearing out of the entire hold before we found the cases, which must have been the very first things put into the ship as they were even below the whole of the wood of the hut.

For some time Sir Ernest has been talking about our living down in the hold for warmth in the winter and it seems that he has now decided upon it and that the upheaval in the hold today was the first preliminary to settling down there.

The contents of the hold are then to be passed into the adjacent bunker just forward of the hold.

Thursday, 25 February, 1915

The decision to reside in the hold for the winter has been promulgated and a tremendous upheaval has taken place there today. The whole of the wood of the poor old hut had been removed and together with many cases of provisions and other gear, has been stowed on the upper deck whilst most of the dog's kennels have been put out on the floe and the dogs are in future going to live out there. This will be a great relief to us, for there will be no more cleaning up to do on board, no more rattling of chains at night and the barking will be much less audible, besides which the clearing of the upper deck gives us much more freedom to move about on it.

Sir Ernest considers that it is so improbable that we shall require to erect the hut before again touching at some port where he can replace the wood if necessary, that he had appropriated a certain portion of it to be used in the construction of the cubicles which we are to occupy in the hold.

The great majority of the cases of provisions, about 280 all told, were placed in the coal bunker on top of the coal, where it will take several weeks work to sort them out and rearrange them.

Friday, 26 February, 1915

There is no end of work to be done just now settling down for the winter before the days get too short or the weather too bad to work much outside.

The putting "ashore" of the kennels was a bigger undertaking than at first anticipated. They were originally constructed in rows like a row of houses and now that they are out on the floe it has been necessary to saw them apart and patch them up, so that by placing them at some distance from each other, the dogs can be given a much longer chain and therefore more freedom than they had on board. The fastening of the chains is a simple matter. A hole is made in the ice with a crow bar six inches deep, the end of the chain inserted and the hole filled up with water which instantly freezes and secures the chain tightly enough to hold back a steam roller.

In order to avoid injury to the rudder we have been careful to keep a clear hole round it, the sailors removing daily the ice formed during the previous 24 hrs during which process today McCarthy, one of them, fell in right up to his neck. He said it was warm enough until the water overflowed down his neck.

Saturday, 27 February, 1915

The dogs seem ever so much happier now that they are out on the floe, several of them have to live in igloo kennels made entirely of snow blocks and one or two have no kennel at all as yet, but

this does not trouble them for most of them prefer to sleep outside their kennels on the snow.

We have caught six more seals in the last two days.

Today we have all been issued with our full polar equipment. Some little difficulty has arisen in making the things go round as the gear originally intended only for the twelve shore party has had to be divided up so as to provide the ship's company with the same outfit as the shore party men. Indeed, the terms "shore party" and "ship's company" no longer hold good for we are now all brothers in misfortune.

Each member received the following kit.

- 1 Sweater (thick Jaeger)
- 1 Pair Amundsen pattern Burberry boots
- 1 " Shetland wool mits
- 1 Woolen Helmet
- 2 Pair soft wool bed socks
- 2 Pair mittens
- 1 " Finnesko (Reindeer skin boots)
- 1 Shetland wool jersey
- 2 Jaeger shirts
- 2 Jaeger combinations
- 1 Pair felt mits
- 1 Pair fur mits
- 1 Pair lambskin mits
- 1 Pair thick woolen socks
- 2 Shetland wool socks

Sunday, 28 February, 1915
Temperature -12 degrees.

By far the most valuable article of clothing we have is the Burberry overall wind proof suit, with which we were each issued some time ago. The material is as thin as the stuff with which an umbrella is covered, but it is so closely woven that is quite impervious to wind and its use soon demonstrates that bodily coldness is almost entirely due to the wind penetrating the pores of one's clothing.

It has, of course, no insulating value in the same way as wool, and if worn next to the skin would form no sort of substitute for woolen underclothing, but as an outer garment, the difference between wearing it and not doing so is most striking.

We have about 2000 onions and how to preserve them to the best advantage is a matter of much controversy. Sir Ernest proposes building special shelves all round the new pantry in the hold, but others consider that it would be best to freeze them and keep them frozen until required and we may perhaps adopt this method in the same way that we have already done with the potatoes and so far proved to be a success. ((This was finally done and the results justified the experiment.)) They are a valuable antiscorbutic.

Monday, 1 March, 1915

Incredible as it may sound another of the sailors, Vincent, managed to fall into the water hole round the rudder. Considering that the hole is hardly 4 feet across and mostly filled up by the rudder it is inconceivable how they can be so careless as to tumble into it, for they certainly do not do it for fun or bravado. It is much too cold.

Again we had a wonderful haul of seals securing no less than seven, but the details of the chase are but a repetition of our previous captives.

We have made the rather alarming discovery that even with the "shore party" butter recently found, we are rather short of this commodity and shall have to exercise rigid economy if we are to make it last for long, but we have a large quantity of dripping and one's hunger for fatty foods here is so keen that to most of us it is a matter of indifference whether we are using butter or dripping or even lard on our bread. One seems to very quickly lose that refinement of taste that characterises one's gastronomic fastidiousness at home.

Tuesday, 2 March, 1915

The reconstruction of the hold is going on apace. It takes a great deal of planning out and arranging. There are to be cubicles accommodating two members each and about 6 ft. 6in. x 5 ft. each along the two sides of the hold. They will have curtains instead of doors. The original intention was to erect the stove of the hut at one end of the hold and kill two birds with one stone by warming the hold and cooking at the same time

The hut stove was actually assembled but it was subsequently considered that the cooking operations would encroach too much upon the available space and that the vapours and smell of cooking might be undesirable in the sleeping quarters so the project has been abandoned and the oven of the stove had been erected in the portion of the hold that is destined to be the pantry so as to act as a hot cupboard with a primus lamp below it.

Wednesday, 3 March, 1915

Temperature -18 degrees.

I had an awful fright last night, after making up the daily dough for the bread, I suddenly remembered that I had forgotten to include the customary salt. What could I do? All sorts of expedients suggested themselves to me such as setting it to soak in salt water, etc., but none seemed feasible so I hied me to the sick Green and sought his advice. In his last dying gasp he said try rubbing salt into it. This I did and to my surprise the bread turned out today as good as ever, or rather no worse than usual.

I had hoped that the yeast left behind by Green would have lasted until his return but today it was getting so low that I had to replenish it with a fresh brew, a messy job of boiled blown to bits by the force of the explosion in the opening the yeast jar. My word it does smell awful. Bakers love it, thank goodness I am not a baker.

I have been serving roast joints and baked potatoes to the men lately and they seem to like it, tomorrow I am going to play a trick on them unawares and see if I can get them to take the once despised seal meat in lieu of proffered tin meat.

Thursday, 4 March, 1915

This has been the red letter day of my Antarctic life so far for I have succeeded in breaking down the sailor's prejudice against seal meat.

I cooked up an extra savoury roast with lots of onions and a pinch of sage, made Yorkshire pudding and served peas as a vegetable. The whole ship was permeated with the savoury odour. Meanwhile I warmed up four 2 lb. tins of boiled rabbit in the oven. When the duty man from the fo'c'sle appeared I proceeded to

"get busy" with the tinned rabbit. "But what's that we smelt cooking this morning?", he said, "Oh only some seal I was roasting for the wardroom I replied." "Well if the wardroom can have it we can, can't we?", he grumbles putting down the opened tins of rabbit I had given him. "Which would you rather have then, the seal or the rabbit?", I said in fear and trembling lest he should realize that he was in a trap before he answered, but the ruse was successful, they had a seal of their own free will in preference to rabbit and now they can never go back on it again.

With all dried goods such as peas, beans, apricots and prunes, I find that prolonged soaking and slow cooking improves them enormously.

Friday, 5 March, 1915

My chef d'oeuvre today was a new seal recipe which I called kidney wallop. I cut up sufficient seals' kidneys into very small shreds. Each kidney is about the size of a bullock's so that ten kidneys was enough for the 28 persons for whom I have to cook. The shreds are mixed into seasoned stock and gently simmered for several hours and then thickened with flour, the result is very good.

I am getting my hand in at curries too there are so many oddments besides curry powder and meat which may be put into embellish it, such as chopped ham, sugar desiccated coconut, etc., that I really forget sometimes what I do put in, but so long as they continue to be appreciated, what does it matter what goes in.

I find that bread crumbs and onion mixed in a penguin hash make a very delicious thickening better than flour.

Prolonged cooking and ample, but careful, seasoning seems to be best for nearly everything here.

I had another go at a cake today and made an edible one. Not one crumb remained on the plates when they returned and this is the best guide, but fellows really are not very exacting about their food here.

Saturday, 6 March, 1915

The cook returned to duty today so my cooking ordeal is at last at an end, but I bet he found the galley cleaner than when he left it. It has been hard work, but my messmates have made it easy by commending my few successes and overlooking my many failures.

Being myself fond of sweets I have expended more ingenuity on these perhaps than upon the soups and meats.

I seem to have tickled the polar palate with a certain rice pudding which, considering that the milk was made from powdered Trumilk milk is rather singular, but they said it was the way the rice was cooked. I have that to be indebted to my wife for besides many other blessings that she has insisted on my learning and has taught me to cook. The rice pudding was merely the result of very prolonged simmering in a slow oven. One novelty I placed before my "customers" was a frozen blanc mange made up in four colours (Neopolitan cream) with a boiling hot jam syrup sauce. The contrast was rather peculiar but warmly appreciated.

I unfortunately forgot some jam tarts in the oven today and they got burnt as black as a hat. Even then Sir Ernest good-naturedly attempted to eat one but it was too far gone, even for him. I substituted a hot Bird's custard in a jiffy.

Sunday, 7 March, 1915

Fine and sunny but blowing fairly strong. A slight rise in temperature makes it feel warmer, -5 degrees at midday.

I helped Kerr, our second engineer, to assemble the chain and two speed gear of the Douglas motorcycle engine. As at present arranged, this little sledge will not be a success. I do not like to tell the chief engineer so. It is better that he should find it out by trial as he has taken it on and really taken a great deal of interest in it, but I have carried out experiments so often now, that although I am still far from having perfected a design he has yet a good many fundamental facts to learn.

Everyone was at work this morning. Sir Ernest was shifting gear and laying the linoleum in the hold. Our winter home is proceeding apace, some of the cubicles are up. This afternoon was a holiday. The captain and Wordie went off on foot to a small berg, called the flipper berg, about a mile away. I followed later on on ski. Most of the route lay along the frozen lead near us and afforded fine going on ski. They found and killed a big Weddell seal and I returned to the ship and later a sledge party went out and fetched it in.

Monday, 8 March, 1915

Beautiful, bright, quite calm, but very cold. Everything in our cabins frozen, especially the "save alls" (awful word - the receptacles for the dirty washing water underneath the tip-up basins).

Being frozen solid they are useless. I did not know this. I fetched some hot water to wash in and tipped the basin up; the majority of the water flooded the floor and he began to mop it up, as I did so it froze on the floor and finally I had to chip it off! If one spills water on the upper deck at any time it instantaneously freezes in

just the same way that fat or candle grease sets solid in cold weather in England.

This day has been a welcome lull for me. I have been working at very high pressure ever since the 19th of Feby and today I was able for the first time to devote my energies to arranging my stores once more in the hold. We also managed to get the engine of the motor tractor to start in spite of the temperature being 5 degrees below zero. Considering that I used no artificial heat to coax it, this is really a surprising performance and speaks volumes for the efficiency of the engine and more than ever justifies us in our selection of it. It is a Coventry Simplex water cooled 10 hp.

Tuesday, 9 March, 1915

A beautiful bright morning, overcast later with the usual rise in temperature which always accompanies overclouding. A strong and unpleasantly chilly breeze sprang up in the afternoon. It is the wind that matters, the cold of itself never matters.

The chief engineer, Rickinson and his assistant Kerr were experimenting with the little Douglas engine on the small motor sledge they have made, but they could not get it to start. I had a try at it but without much better results. I got it to start but could not keep it running. We shall have to see to it. They have mounted the controls in positions in which they cannot be easily worked, and also I think that Rickinson lacks experience with these little engines to some extent; it is just as if I were to go down and try to work the steam engine which I do not thoroughly understand. I am honestly only too anxious to help them but I do not like to interfere unless they ask me to.

I am getting my hold into order again.

The carpenter is working wonders in the main hold, the cubicles are nearly ready for us and the stove is fitted and working.

Wednesday, 10 March, 1915

The temperature has gone up to +11 and it feels so warm that we are all enjoying ourselves in the open and find it quite pleasant to be out working without mits on our hands -- a thing we have not been able to do for a long time. It is strange that such a temperature should seem so warm.

Marston, Crean, Dr. Macklin and Dr. McIlroy have been out all the morning training the dogs, who are now pulling well. It is wonderful how instinctively they seem to know their work so well after such a long interval of idleness. It is interesting to watch them; the leaders of teams are soon picked out from the others by their superior intelligence.

Personally I have nothing at all to do with the dogs, not that I should mind doing it, in fact, I should rather like to have some of them to look after.

I spent most of the day helping Rickinson and Kerr with the Douglas motor, but until they have a little more experience with internal combustion engines they will never make a success of it; in fact I shall not be surprised if they break the engine up altogether before they succeed in getting the sledge going. They tried it out on the frozen lead today and stripped the toothed driving wheel off its shaft.

Thursday, 11 March, 1915

A beautiful fine day, calm and mild, temperature about -5 degrees.

Sir Ernest was night watchman last night and I was gratified to find that he had cleaned up the wardroom far better than the majority of night watchman.

I do think it most awfully nice of him to take his turn just like the other members; at the same time it enables him the better to appreciate the little difficulties we all have to contend with. On account of my duties as messman and storekeeper I am exempt from night watchman.

Some of the members got down into their cubicles in the hold last night and James and I occupied the "Rookery", our old cabin, alone. Hurley, Hussey and Wordie having slept down below.

As the weather was so mild I got my old bicycle together, incidentally having to mend a puncture, and took it out on to the lead and had the delightful pleasure (to me) of a food ride. Certainly it was rather heavy going as there is about an inch of hard snow over the ice. As I had no audience to deride me, I ventured on a little trick riding with some little success. No one knows what it means to me to have a bicycle and a place to ride it, however rough and heavy the going.

James and I are just carting all our gear down below and are going to sleep down in our new cubicle tonight.

Friday, 12 March, 1915

Temperature +11 degrees but much colder than yesterday as it has been blowing hard from the N. all day. The N. wind always runs the temperature up but the wind blowing through to one's clothes and also possibly the humidity of the air makes it feel much colder than it does on a calm day with the temperature many degrees lower. The actual temperature has very little to do

with one's sensitivity to cold. It is almost entirely a matter of wind and humidity of the atmosphere on the one hand and calm and dryness on the other.

As the wind increased today it picked up the loose snow on the floes and whirled it along making what is known as a blizzard drift, which from the height of the ship's deck, looks exactly like steam or smoke coming off the surface. It does not rise more than about six feet above the surface being densest at a height of about two feet above the ground.

I have been opening packing cases in my store most of the day and generally helping Sir Ernest in fitting up the new living quarters in the hold. All the cubicles are now ready and occupied and we are to start meals down there on Sunday 14th.

Saturday, 13 March, 1915

A beautiful fine day but, as usual, very cold. Captain Worsley, Hurley and Wordie, (our verbose geologist) set off on a trip to a fine crevassed iceberg which stands in the floe about a couple of miles off apparently, but which to their cost they ascertained to be no less than 7 1/2 miles. Optical effects and the absence of light and shade render distances very deceptive.

They were away all day and returned very tired and hungry. They were unable to ascend the berg; they found open water around parts of it and Wordie collected a few specimens of rock fragments embedded in it.

I had an exceedingly busy day, taking down James's and my bunks from the "Rookery" to our new quarters in the hold. I think we shall certainly be very comfortable down there. We shall all sleep

there tonight. Everything is in an awful muddle at present. Our antarctic kit has swelled our kit bags to bursting point.

It is really wonderful how we have managed to live at all for so long with any receptacle to keep our clothes, etc., in except our suitcases etc.

Sunday, 14 March, 1915

We are all quartered in the hold now except Captain Worsley, Wild, Marston and Tom Crean who are going to convert the wardroom into cubicles and Sir Ernest who is going to reside all by himself far away from everyone, right aft in the Captain's cabin, which he has been sharing with its owner ever since we left Buenos Aires. I am afraid it will be cold for him there.

Yesterday he personally laid linoleum in my new pantry which is that part of the hold that was my stores-issuing room and temporary workshop.

This morning we all had breakfast in the hold and are having all our meals down here in future, starting a new system of meals which I will described later when I have more time.

The "enemy" presses very hard just now and I grudge the time it takes to write even this scrap.

I have spent all day building a strong table in the pantry. I almost wish someone else had made it so that I could say what an excellent table it is without being accused of egotism.

Days menu: breakfast: Porridge, Liver and Bacon; Luncheon: Seal and Vegetable stew (too thin); Dinner: Roast Seal, Black Currant tart.

Tuesday, 16 March, 1915

A raging blizzard from the North and as usual the temperature has gone up. It is now about +15 degrees and feels ridiculously warm but the wind is not pleasant.

Sir Ernest gave orders for the boiler fires to be extinguished. This means more than at first appears to be the case, for as soon as the fires are out the water would freeze in and burst the boiler unless it is blown out. To do this means getting up steam again to a pressure of about 50 lbs. the water is then blown out through the bottom. Once out it cannot easily be replaced and therefore this virtually marks Sir Ernest acceptance of the inevitable and the commencement of our wintering proper. It is a great disappointment to us of the shore party to have to remain in the ship which none of us like too well and to be deprived of the wintering in the hut which we had all looked forward to so much, but what it all means to Sir Ernest it is difficult for anyone who does not know him intimately to realize.

Where or how he winters is no doubt a matter of comparative indifference to him, but the disruption of his plans is a catastrophe which hardly bears thinking of from either a sentimental or a financial point of view.

Breakfast: Porridge, salt fish; Luncheon: seal stew; Dinner: Seal's Kidney Saute, Rice Pudding.

Thursday, 18 March, 1915

Very fine but as usually with a clear sky, very cold; temperature at midday -10 degrees. The air was full of ice crystals and the result

was a beautiful parhelion. This phenomenon is very striking.
(Drawing)

The engineers having blown out the boiler came to me this morning fiercely demanding soda to wash it out with. I appear to be expected to supply anything and everything from my store at a moment's notice, but as I knew that all my soda barrels has recently been placed at the very back of the store I was at first for refusing it, but their manner becoming intimidating I reluctantly proceeded to shift, with their assistance no less than one ton of cases (60 - 40 lb. cases) and unearthed a barrel which they ungratefully took even grudging me a handful of it for pantry use and Sir Ernest backed them up too!

Breakfast: Porridge, Tinned Pilchards in Tomato Sauce; Luncheon: seal stew with beans. Dinner: stewed seal, french beans, Tapioca.

Tuesday, 23 March, 1915

Dull and cold. The sun sets now at 6 p.m. sharp. There is still a long twilight lasting three or four hours nearly always with a beautiful colour effects even in dull weather. Crimson and purple predominate but yellow, orange and puce are generally present whilst dark thin clouds are silhouetted against the brilliantly coloured background.

Today I made a strong top for our other bookcase and the pantry is nearly completed now.

Marston is busy doing Sir Ernest's cabin, the original captain's cabin, and is doing it remarkably well. He has upholstered the settee most tastefully using the back of an old green plush curtain and has put up some excellent book shelves. The stove is in place and now he is making a stout padded door. I really think Sir E. will

not be so uncomfortable after all, but I am afraid that is lonely existence will give him time to brood over this great misfortune that has befallen the ship -- failure to reach our proposed base or, indeed, any land.

Breakfast: Porridge, curry. Luncheon: Seal stew. Dinner: Ox tongue and seal dry hash (2 tongues used), Tapioca pudding.

Wednesday, 24 March, 1915

Lat. 76.36 S.

Long. 38.31 W.

Temperature -15.

A most beautiful dry cold day. The weather here, so far, is often not unlike the Swiss winter days, except that when it is bright here it is usually a good deal colder than the Swiss weather. It has never yet felt unbearably cold in more or less ordinary clothing except once or twice when a blizzard raging.

At such times the wind penetrates through ones woolen clothing & one feels the cold at once: Burberry overalls then become necessary; they are practically windproof.

As for myself I am at present wearing a thick woolen vest (one which once belonged to my uncle, the late General Bigge) and a brown Jaeger jersey, thick pants (also the property of my uncle) and a pair of ordinary grey tennis trousers (which I think my friend Arthur Mackarness gave me some years ago) thin woolen socks and sea boots which come up to my knees, but are rather shaky about the soles.

When I go out I put on a woolen scarf which I bought 8 years ago in Inverness, a wool-lined leather cap which I acquired at South

Georgia & an old Dexter cloth jacket which I obtained 3 years ago from Russell of Deal. When pulling a sledge I leave off the scarf & jacket.

I have been very busy all day endeavouring to free the seized sprocket from the motor axle, but was unable to do it in the time available. As the winding-in gear was required to haul up the dredge I replaced the axle, removed the paddle wheels and ran the gear solid. There was 2800 ft. of wire out on the sea bottom. The motor ran it in in fine style except for one stoppage caused by ice crystals blocking up the gauge on the carburetor air-intake, probably due to condensation.

Another magnificent sunset.

Breakfast - Seal steaks, onion, porridge.

Luncheon - Seal & carrot stew.

Dinner - Seal stew, boiled Sultana pudding.

Thursday, 25 March, 1915

Lat. 76.32 S.

Long. 38.36 W.

Overcast & unusually cold for a cloudy day. A keen S.E. wind made the cold especially noticeable. Temperature about -5.

The motor-tractor was again requisitioned to wind in the trawl net which is now in constant use for marine biological purposes. Nothing but one shrimp came up in it today, but yesterday there were several desirable specimens; I believe many of the most noteworthy are, of course, microscopic.

I took good care to overhaul the engine this morning so that there should be no hitch when it was ----- . I replaced & cleaned the carburettor which I had removed & cleaned out last night, readjusting & tuning it up at the same time.

As the lubricated oil is so thick that it will not respond to the suction of the small force pump, I heated up some oil until it was quite liquid & then ran it in by means of an improvised tin funnel through the "snifter-valve" hole, having previously cut a small door in the dashboard about 10" x 8" to gain access to it.

I fixed the door on by means of a simple leather hinge & I find it a great advantage. I also dressed the periphery of the leather faced friction gear wheel with "colon oil". The effect was splendid. In spite of the cold which gave the oil but little chance to become absorbed in the pores of the leather it entirely obviated all signs of slip.

Until today the engine has never once failed to start easily, but strange to say it was nearly ten minutes before I could get it going this afternoon. As soon as it had started it ran beautifully.

In order to try & stop the leakage in the tank I tried the old dodge for leaky radiators - mixing pea soup with the water but it was no good.

Breakfast - Porridge, Tinned Halibut (very good), hot rolls.

Luncheon - Seal & turnip stew.

Dinner - Seal & rabbit stew, dried apricots & rice.

Friday, 26 March, 1915

Lat. 76.27 S.

Long. 38.42 W.

Very bright & cold & a fine parhelion most of the day. The circular "halo" was unusually brightly coloured whilst the "sun dogs" on the horizon were also very bright, the upper inverted halo was more complete than I have seen it before and at about 3 p.m. there was a fine sun pillar, a shaft of bright light running down from the sun to the horizon where it splays out into a glow of bright light.

The sun is now getting very low even at midday & alas we shall lose him altogether at the end of next month. It is a sad thought but I suppose we shall manage to remain cheerful throughout the long winter.

Sir Ernest is taking the greatest care to ward off scurvy & I am husbanding the fresh potatoes on his behalf, for they are the most valuable antiscorbutic articles of diet that we have.

The motor was in use twice today hauling in the dredge; at 3 p.m. & again after dinner at 7 p.m. in the twilight. I got it going on each occasion fairly easily considering the low temperature. The Zenith carburettor is really wonderful. It simply gives no trouble whatever.

As soon as the engine has started on the priming charge (i.e. the petrol injected into the cylinders from an oil can through the compression taps) it picks up the charge immediately & infallibly from the carburettor. I have never yet got it to start direct from the carburettor without priming, but no one would expect that in this climate. It is marvellous that a blow lamp has never yet been necessary.

Breakfast - Salt fish, porridge.

Luncheon - Seal stew (celery flavour).

Dinner - Roast Mutton, caper sauce. Sultana pudding.

Saturday, 27 March, 1915

Lat. 76.23 S.

Long. 38. 50 W.

Bright & fairly cold. Temperature -6. A strong wind blowing in the morning.

I gave our cubicle its weekly wash.

At 2 p.m. the tractor was required to wind in the trawl net. I must digress here to remark that by a coincidence, as I wrote the words "to wind in the trawl net" I noticed that the very same words appeared through the paper at exactly the same place on the same line on Thursday 25th inst. as anyone can see by just lifting this page).

Owing to the low temperature it took me about fifteen minutes to start the engine & I slightly strained both my wrist & back in the attempt; the former through the "snail" on the starting handle slipping out of engagement with that on the engine & the latter through my extra strenuous efforts to get up a good speed on the engine shaft. Finally I had to accept a proffered blow-lamp, but just as it arrived the engine gave a "snigger" of response to my efforts & before I had actually received the lamp & I got her going splendidly; another triumph for expletive indefatigability & the Coventry Simplex engine.

I believe that by constant turning of the starting handle, the heat of the compression stroke raises the general temperature of the engine a few degrees, sufficiently to cause vaporization of the petrol. It is, however, only by constant priming with petrol through

the compression taps and even taking out the plugs & wetting the "gap" with petrol that one gets the thing started. We hauled up in 15 minutes.

There was a glorious sunset & the moon rose almost like a sunrise - forming a most singular crimson fuzzy streak on the horizon.

Breakfast - Tinned fresh herring, porridge.

Luncheon - Seal stew.

Dinner - Seal & sheep's tongue, dry hash, rice pudding.

Sunday, 28 March, 1915

Lat. 76.23 S.

Long. 38.50 W.

A nice quiet day. No special work was required of anyone so everyone "took it easy", mending socks etc., reading & so on.

I found my way to the galley and gave the cook a hand with the tart etc. He puts up with my intrusions very good-naturedly & talks of his chef d'oeuvres & past triumphs, and tells me many of the tricks of the trade; most of them despicable ones.

I am never tired of watching him make the bread. His manipulative skill is as great as his prejudices & fallacies. There is no doubt that bread depends entirely on its manipulation in the various dough stages.

Try as I can I am quite unable to attain his proficiency in either the making of the dough or the subsequent "putting up" of the loaves. It always seems to stick to me or the board whilst he is able to knock it about with ease & with only half the "dredging" that I give it.

I suppose that there are such things as "born" bakers like there are people born to other trades & professions & I think Mr. Green must be one of these, for he doesn't seem to be a born anything else.

In the afternoon I commenced fitting the pantry hot closet in a different place. Incidentally, by doing so, I think I shall be able to "niggle" a little piece out of the pantry & include same in our cubicle & to put the compact washstand in it increasing our floor space.

It has been misty & overcast all day. There are still some open water cracks about two hundred yards from the ship & a good deal of open water in sight from the mast-head.

Rufus, one of the biggest dogs, got loose but was recaptured without much difficulty. I gave the tractor engine a short run.

Breakfast - Liver & bacon, porridge.
Luncheon - Seal stew (slightly blubbery).
Dinner - Roast seal. Greengage tart.

Monday, 29 March, 1915
Lat. 76.24 S.
Long. 38.26 W.

Bright & cold.

Greenstreet, Hurley & James have been fitting up a new "aerial" for the wireless. Before leaving South Georgia arrangements were made for the powerful wireless station at the Falkland Islands to send us a time signal & a little news of the 1st of each month.

Hitherto we have received no signal at all. This may be due to the daylight that has prevailed here at midnight on all three previous occasions, for it is well known that darkness is more permeable to the "wireless" waves than light. I do not quite know the reason but believe it is that the air is more heavily charged with "ions" at night & these conduct the Hertzian waves.

Anyhow we hope that with the aid of a more efficient aerial we may get some longed for news under the more favorable conditions.

Whilst up aloft Greenstreet, who was working for a few minutes with bare hands, got two of his fingers slightly frost bitten at the tips. The visible sign was a small white blister but I think there was a good deal of inward pain as they were coming to.

We hauled up a fine trawl from 500 fathoms in 20 minutes. I had a great deal of trouble starting up, but it all adds to one's experience & I believe now that within reason one cannot give the engine too much petrol in the cylinders at starting.

It seems that it ought to actually splash up on to the sparking plug points before the initial ignition occurs. Once this takes place, of course, the rest is easy; the heat thereby generated induces vaporization of the remaining unburnt petrol in the cylinder & "ca va bien" .

I am sure I must sometimes introduce quite an egg-cupful of petrol into each cylinder.

Breakfast - Seal steaks, porridge.

Luncheon - Seal stew.

Dinner - Stewed Calf's Head & Seal, Bread & butter pudding.

Tuesday, 30 March, 1915

Lat. 76.20 S.

Long. 38.28 W.

Bright. A keen wind from the South and exceedingly cold in the wind.

It is the wind that makes all the difference as has long since been noted by previous visitors to these latitudes & which has modified the selection of modern polar garments.

Windproofness is the main factor in our polar kit. The outer Burberry suit is no thicker than stout paper but absolutely windproof.

It is as unsatisfactory in appearance as it is satisfactory in use.

In cold weather like this it is impossible to work without mits on for more than a few minutes at a time. My own method is to do as much as possible with the mits on and only to slip them off momentarily to execute little movements which necessitates the use of bare hands, such as the adjustment of a spanner or the final turn in removing a nut, the entering of a screw into its hole, screwing up a sparking plug terminal, harnessing a dog or buckling up a strap.

Although I am able to get out for exercise a good deal more now than I have been doing lately, my actual open-air work consists almost entirely of working & adjusting the motor, & it is this latter function that is the more exacting in the matter of bare-handed manipulation.

We ran the motor today, hauling up an unusually heavy trawl of 450 fathom in about 15 minutes.

The leakage in the water tank is causing such an accumulation of ice inside the chassis of the tractor that I asked Sir Ernest to put the motor out of commission for a couple of days so as to give me an opportunity of repairing it. This he granted readily & I had the tank off quick lest he might subsequently have occasion to change his mind.

Breakfast - Salt fish, porridge.

Luncheon - Pea soup.

Dinner - Stewed seal, Suet pudding.

Wednesday, 31 March, 1915

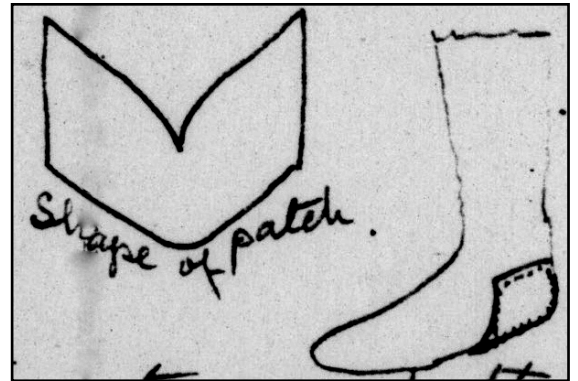
No "sights"

Dull & overcast. A cold S.W. wind in the morning veering to W. in the afternoon with a considerable rise in temperature from -2 to +8. It really feels quite warm & as long as one is out of the wind one can work out of doors with bare hands for quite a long while, from half an hour to an hour perhaps: one must then put on mits or better still put ones hands into ones pockets.

Greenstreet's frostbitten fingers are getting on all right. They were only slightly frost-bitten as he fortunately recognized the fact before they had gone too far.

I had a little spare time this morning for a change so spent it in executing a much needed addition to my thick skiing socks - little flannel heel-pieces. These will I hope save the heels from the chafing of my big sea boots which have until now been playing havoc with my socks. I cut the pieces out of the remains of an

ancient pair of trousers which Wild gave me for patching some time ago. The shape before & after sewing are shown in the accompanying sketch. It will be interesting to see whether they achieve their object.



COURTESY DARTMOUTH COLLEGE LIBRARY

At this point of my writing I just happened to enquire of our witty little meteorologist, Hussey whether there were two "c's" in "accompany". "Yes, he replied, "& one Sergeant Major." Not bad for the Antarctic!

I have been busy all the afternoon preparing the watertank of the motor for soldering which I intend to do tomorrow.

Hurley, James, Greenstreet & Cheetham have been fixing up a new "aerial" for our wireless. It certainly looks good but whether we shall receive the much desired news remains to be seen or heard.

There was some very heavy ice pressure going on in the adjacent lead today.

Breakfast - Seal steaks, porridge.

Luncheon - Seal & carrot stew.

Dinner - Seal & tongue dry hash, rice pudding.

Thursday, 1 April, 1915

No "sights".

Dull & very mild, +5. There is a great deal of open water in the frozen leads around us. I had a good overhaul of the motor this

morning and I dressed the leather faced friction wheel with colan oil, filled the engine crank-case up with castrol and adjusted the engine a good deal closer to the friction wheel. I find that the leather faced wheels is somewhat out of truth at the periphery. It seems to have worn slightly flat in places, probably just at those places where it comes into engagement with the fly wheel disc & slipped a little under an extra heavy "load" before frictional contact has been effected. I think I shall be able to true it up all right again by holding a sharp chisel against it the next time the trawl is run out, for the leather faced wheel is then running at such high speed that it becomes virtually a lathe.

The colan oil is really wonderful. I was doubtful as to whether it would be as efficacious in these temperatures as it is at home; it seems even more so, its "tackiness" is exactly right for ensuring a non-slipping frictional contact. I wish I had used it from the first.

Whilst working bare-handed today my left thumb got frostbitten. It gave me real pain to coax it round. It has given me trouble before. I believe that it is not so well supplied with blood as the other thumb owing to one of the large blood vessels having been cut when I was a child, by an accident the scar of which is still prominent.

Hurley kindly "helped" me solder up the leakage in the water tank of the motor. He did all the work whilst I looked on & held the blowlamp my big one which I had in use for the first time. It works admirably giving sufficient heat to braze with.

Breakfast - Tined Pilchard in Tomatoes, Porridge.

Luncheon - Seal stew.

Dinner - Stewed seal & haricot beans, apple & rice & cream.

Friday, 2 April, 1915
No "sights".

The day was dull & quite mild except for a N.E. wind which increased considerably during the afternoon.

Hot cross buns marked the only religious observance. I am afraid we are a little unrighteous by comparison with most previous expeditions.

A little spasmodic hymn singing is about as near as we ever get to combined worship. Though an arrant hypocrite, I could wish it were otherwise.

If some sort of service is entirely absent one is liable to forget that one has a spiritual side to ones life & I somehow think that the greater ones evil deeds the greater ones need of spiritual guidance through divine service.

This may sound cant but I have definite views & place them here on record.

The secular business of the day consisted on my part, in fitting the water tank on to the engine, overhauling the transmission gear and running the motor to haul in the dredge twice.

I got a piece of rubber insertion jointing, cut it to the shape of the cylinder water jacket manhole, and soon had the faces of the joint cleaned, scraping them & washing with paraffin, and soon had the tank in place, but the subsequent screwing down gave me considerable trouble as there are ten little nuts fitting on studs all inside the tank & some of them in particularly inaccessible positions even to a box spanner; move over my box spanner which fits them has splayed so much that it slips on the nuts &

therefore I had to niggly gouge with a wretched little bicycle spanner.

The whole machine gives me the greatest satisfaction. It would get on quite well with the minimum of attention but naturally I find that the greater the care it receives the better the results.

Breakfast - Salt fish, porridge, Hot + Buns.

Luncheon - Seal stew.

Dinner - Stewed tinned roast mutton, Butter pudding.

Saturday, 3 April, 1915

No "sights"

Cloudy. S.W. wind fairly strong & very cold -12.

I took the opportunity this morning to true up the leather faced friction wheel of the motor whilst the trawl was running out. On account of the reduction gearing the leather faced wheel runs at a very high speed as the dredge descends to the bottom, probably about ten revolutions a second, which is a very favorable speed at which to bring a sharp edged tool up against the periphery.

In practice I find that the face of the fly wheel disc on the engine forms an admirable hand tool rest. For want of a better article I use the square edge of a file. I wonder that Mr. Girling the designer had not made provision for this, but I suppose he could not have foreseen the possibility of the friction wheel being driven by the winch, at any rate at a speed & with sufficient force to form a virtual lathe. After turning off all the inequalities I dressed it with colan oil which the new & slightly warm surface readily absorbed. On starting the motor it ran with practically no vibration whereas

the vibration has lately been rather considerable, due to the irregularities of the face of the leather face.

Having a little spare time this afternoon I went out with some of the dog teams & gave a little assistance harnessing & unharnessing them, but not driving as that is not part of my business at all. I am here for the motors only & have been put in charge of provisions & stores because there is not sufficient work on the motors to keep me fully occupied.

Riding on the sledge whilst the dogs are going at full speed is quite exciting especially over rough ground.

Breakfast - Tinned Pilchards in Tomato, Porridge.

Luncheon - Seal + bean stew.

Dinner - Rabbit pie & haricot beans, Tapioca pudding.

Sunday, 4 April, 1915

Missing some lines.

...had with me on Sir Ernest's experimental trip to Norway.

They are called Challenge Priming Plugs made by a firm at Toledo U.S.A. and sold at \$1.25. A small cup & valve seating at one side connecting with a hole running to the annular base of the plug shell (i.e. the bottom of the screw thread where the "points" are) provides a passage for the petrol priming charge. Hence the charge actually reaches the plug points so that there is a small quantity of liquid petrol in the immediate vicinity of the spark.

I found the improvement in running at once. The makers state on the box that they guarantee the plug to start any motor anywhere & at any time since fitting the plug on the first or second turn of the handle though it has not always continued to run, that is, it has long enough to "pick up" a charge of "mixture" in the correct proportions from the carburetor.

I was busy with the pantry lamp all the morning - one of the excellent Blanchards. It has been giving little or no light lately. We have orders not to tamper with them, but the temptation was too great so I tackled it surreptitiously, fortunately with complete success. I had some instruction in their management at Messrs. Blanchards works in Farringdon Rd. Our lamp-trimmer is only one of the sailors so one can't expect too much of him. With reasonable attention these magnificent lamps give a brilliant light. They vaporize paraffin & the vapor burns in conjunction with an inverted mantle like gas.

Breakfast - Pigs liver in bacon, Porridge.

Luncheon - Bean soup.

Dinner - Roast seal & peas, Tinned raspberries & cream.

Monday, 5 April, 1915

Lat. 76.9 S.

Long. 38.43 W.

Sounding 245 fathoms.

Globeriginal mud.

Very mild; dead calm. Temperature about -8.

Our two little pigs have been killed. One on Saturday the other today. It is very sad, but their meat will be a welcome change,

though we are not going to eat it for some weeks yet. It was necessary to kill them as they were getting so big that the scraps & leavings of our food were insufficient for their requirements.

They wanted more than they used to have and we are running the table so fine that the actual scrapings of the plates are all that is wasted now. Besides it is doubtful whether the pigs could have stood much lower temperatures than those prevailing the last few days. They had a splendid shelter - the pigloo - and plenty of straw to the last.

The pots & pans are always on the sick list & I am the doctor. I am afraid I have a reputation I do not deserve a sort of "medicin malgre lui" for they bring me things long past praying for & rather than lose my reputation or disappoint the cook I tackle things that I should not ordinarily dream of trying to repair.

Today I had two kettles with the spouts broken. One was an iron one: that was not difficult to treat but the other was an enamelled iron one & it was only by the most diligent chipping of the enamel & cleaning of the iron that I contrived to get the solder to hold. It held water until I got it up to the galley but what it will do in the immediate future I do not know.

I ran the motor today to wind in the trawl as usual, but I had no end of trouble to get the engine "free" before starting. The pistons had "gummed" badly inspite of a liberal injection of paraffin before shutting down yesterday. The congealing of the "Castrol" was the cause. I must see to it.

Breakfast - Curried Seal, Porridge.

Luncheon - Seal & carrot stew.

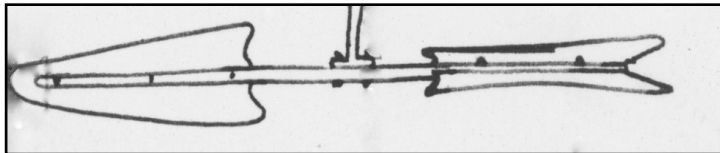
Dinner - Seal & cornbeef dry hash, cabbage, Rice pudding.

Tuesday, 6 April, 1915
Lat. 76.12 S.
Long. 39.4 W.
Sounding 244 fathoms.
Globeriginal mud.

Until 3 p.m. a most beautifully mild day with a slight N.E. wind & temperature -3, there-after the wind increased & now (9 p.m.) it is blowing a hurricane.

We have just had to secure things generally to prevent them from being blown away & Sir Ernest seems a little uneasy about the possibility of the ship breaking out of the floe.

Our current indicator shows that we are drifting very rapidly in a S.E. direction. This indicator is a simple home made contrivance & consists of a large wooden arrow with flukes at right angles to each other. It is, of course, wholly under water but is pivoted & connected to some sort of indicating gear on the surface of the ice.



COURTESY OF DARTMOUTH COLLEGE LIBRARY

This morning Sir Ernest and I went out with one of the dog teams, as a passenger - Dr. Macklin driving. I think it was one of the most enjoyable days I have had since leaving South Georgia: really a sort of holiday outing for me, as I do not get out any too much. My duties as storekeeper & messman necessitate my spending most of my time on board "down below".

We went out along one of the frozen leads, a fine surface with just a little coating of hard snow on it.

At present all the teams consist of five dogs only.

We had a load of four 50 lb. per dog, so for much of the distance Dr. Macklin ran beside the sledge.

My dress was the same as described on 24th March, except that I had a woolen helmet & went out in such a hurry that I forgot my mits so had to keep my hands in my pockets. We went about 4 miles in all.

Breakfast - Salt fish, Porridge.

Luncheon - Seal stew.

Dinner - Stewed seal, haricot beans, Plain suet pudding.

Wednesday, 7 April, 1915

Lat. 76.18 S.

Long. 39.48 W.

Sounding 243 fathoms.

Globeriginal mud.

The wind blew from the N.E. with terrific force all night & as usual the temperature rose.

Nothing untoward occurred, but one of the cracks in the frozen lead to the North of us opened up & became open water. By this I mean that from a "crack" about 5 ft. wide & a couple of hundred yards long it increased to a couple of hundred yards wide and a mile or so long.

This, if it extended a bit longer, would be called a "lead" & is how the "leads" are formed. In the low temperatures now prevailing, these leads freeze over within a few hours of formation & become frozen leads. They are called frozen leads so long as they preserve their identity as such & they differ from the floe ice in that they are smooth levels almost free from snow and entirely free from hummocks.

As time goes on they become snow covered & getting broken up by intersection leads they exhibit pressure ridges and eventually become floe ice.

Here we see the ice in every stage from the newly frozen lead to the old rugged hummocky floe, largely formed of heavy pressure ice.

About a week or so ago we had miles of open water to the north. It froze over almost as soon as it opened up & broke up slightly whilst freezing, now it forms a vast plain of young ice several miles wide & many miles long, but it is considered as a frozen lead none the less.

It is in this lead that the above-mentioned crack occurred. The ice is continually "working", i.e. cracking in one place & forming pressure in another.

I have had a very busy day unpacking stores down in the lower hold.

Breakfast - Seal steaks, porridge.

Luncheon - Seal & celery stew.

Dinner - Irish stew & seal, Apricots & rice & cream.

Thursday, 8 April, 1915
Lat. 76.22 S.
Long 40.8 W.

The wind went down a bit last night. The temperature rose to +18 & then it started to blow & snow with a vengeance, but it feels absurdly warm.

At home a temperature of 18 would cause the Daily Mail to run into a column about Arctic weather & everyone would think it right & proper to wrap up & discuss the intense cold. Here, without wishing to exaggerate in the slightest, we remark on the extraordinary warmth of the day. It is entirely a matter of contrast. After having had temperatures of 20 degrees below zero it feels positively warm today. It was quite comfortable out without mits if one was sheltered from the wind, but it was unpleasant enough in the driving wind & wet snow.

The snow, instead of being dry & powdery as it usually is, was wet & soft like snow at home.

There has been quite a heavy snowfall, the deck is covered with about 3 or 4 inches of snow in spite of the driving wind & out on the floe the sledges, etc. were buried in snow. They had to be dug out today.

I think perhaps the reason that the cold does not seem so severe down here is partly due to the suitability of one's clothing, though as many of us only wear a thick vest & a sweater. At home one would have a collar & tie & a bowler hat & leather gloves. It is the woolen helmet & mits that make the greatest difference &, of course, the Burberry suit, though personally I have not found any need to take this into wear yet, as I have no prolonged outdoor work to do.

I have spent another very busy & useful, if uninteresting, day opening cases in the hold.

Breakfast - Curried seal, Porridge.

Luncheon - Seal stew.

Dinner - Stewed corned beef. Bread & butter pudding.

Friday, 9 April, 1915

Lat. 76.29 S.

Long. 40.14 W.

Sounding 273 fathoms.

Globeriginal mud & grit.

Temperature zero but extremely mild. Very little wind & although there was a good deal of moisture in the air it was quite comfortable to work in the open without mits on. I can't help thinking that one becomes a little acclimatized to these temperatures for I am sure that I for one am not particularly physically adapted to endure low temperatures.

It was so damp that there were intermittent periods of quite dense fog during the day. It was never bright.

Often we can see a bright horizon as if it was sunny over the land, now about a hundred miles to the eastward.

I spent the morning trying to get the motor to start.

Before using it last time I filled up the crankcase-sump with "Castrol". It ran splendidly on this but it seems that after use the "Castrol" congealed & "gummed" the pistons, etc. On the first two or three turns of the starting handle this morning I was

scarcely able to rotate the crank-shaft at all, but gradually by the aid of quantities of paraffin & petrol in the cylinders - quite a teacupful to each cylinder - and literally hundreds of turns I got it free enough to get a start. It was exhausting work & I sprained my back slightly, also my wrist & thumb.

The blizzard of the last two days had filled up all external parts of the engine, especially the magneto, with fine drift snow. I cleaned the worst of it off the high-tension terminals insulated wires & sparking plugs. Once free the motor started cheerfully & soon melted off the remainder of the drift snow, but the paraffin in the cylinders evidently washed all the lubricating oil off the cylinder walls with the result that there was very little compression & the engine stopped five times whilst winding in the trawl.

Breakfast - Salt fish, Porridge.

Luncheon - Pea soup.

Dinner - Seal steak & onions, Sago pudding.

Saturday, 10 April, 1915

Dull & foggy, a light breeze. Temperature +5 & felt comparatively mild.

After using the motor yesterday, I was requested to leave the gear engaged so as to hold the weight of the trawl on its shear legs & prevent the windlass wire from running out inadvertently. This I reluctantly did, leaving the leather-faced friction wheel pressed hard up against the disc on the engine fly wheel. This morning I found, as I had expected, that a "flat" had developed on the periphery of the leather faced wheel. It is not a very bad one but it is sufficient to cause a great deal of vibration to be transmitted to the engine & it is this vibration that opens up the seam of the water tank mounted on top of the engine. I shall have to true the

leather faced wheel up again as I did before whilst the trawl is running out and see that the gear is never left in engagement all night.

I have got the lubrication all right again with a mixture of engine oil, castrol & paraffin, but a little misfiring has developed. It is probably due to sooty plugs; unfortunately I can not take the present plugs out without taking the tank off as the priming cock on the side of the plug forms a large excrescence which prohibits the unscrewing of the plug - a really ridiculous state of affairs; but motors would lose their interest were it not for the infinite variety of their vicissitudes. It would be contrary to the traditions of the motor trade to make everything readily accessible.

After running in the trawl today I noticed that the leather faced wheel was showing signs of wear. I shall have to see to this.

Most of the day I spent tidying up the hold. I am gradually making a clearance there and hope to be able to contrive a little work bench therein.

Breakfast - Tinned fresh herrings, porridge.

Luncheon - Seal & bean stew.

Dinner - Tongue hash, cabbage, Jam tart.

Sunday, 11 April, 1915

A brilliantly sunny day. Temperature -20. The sun rises at 9 a.m. & sets about 3 p.m. now. At last I am back at table, after over four months of steward & messman. I have been so long on the pantry staff that I was beginning to degenerate, eat with my knife & so on!

Sir Ernest has had the table lengthened specially for my benefit to accommodate me. It is very good of him I am sure and I

appreciate my return to refinement as I have been having all my meals anyhow in the pantry, with the cook and the stowaway! This may have its advantages in the way of getting tidbits occasionally but more often than not cold leavings were our portion.

At any rate I would far rather have my meals at the table with the others. I still continue my duties as messman & storekeeper, laying & clearing the table & arranging the menus, condiments, etc.

It must not be supposed that I am the only one to do menial work. On the contrary I probably have had less of it than anyone else, for each of the others takes his turn daily as "peggy". Peggy's duties are to clean the table down after it is cleared by myself. He then has to sweep out the wardroom, keep the fire in, provide the coals and get the ice from the floe to keep the ice-melter filled up with ice & various similar functions. The night watch-man performs the duties at night. The biggest perquisite I have is that I am exempt from the rather arduous duty of night watchman.

Hurley was out today taking advantage of the brilliant sunshine & cinematograph pictures of the dog teams pulling the sledges. He took some of them from one of the sledges. If they are up to the usual standard of his work they ought to be good indeed.

Breakfast - Pig's liver & bacon, porridge.

Luncheon - Vegetable & "Turtle-cup" soup.

Dinner - Roast Penguin & Peas, Blackcurrant tart & cream.

Monday, 12 April, 1915

Rather dull, very mild, a slight Southerly breeze, but quite comfortable to work without mits for short spells.

The midnight temperature was -19 & midday +7.

Whether one can work without mits or not is one of the most important questions of the day with me; for fiddling about with a motor launch demands the frequent use of bare-hands.

When one is out for a walk it depends entirely upon whether one is walking with or against the wind. If with the wind - a gentle breeze of course - one can swing ones arms bare-handed, but against the wind one has to keep ones hands in one's pockets or else wear mits.

I am fortunate in having a pair of very thin wool-lined reindeer - skin mits which I bought at Gamages & with these I am able to do many manipulations which I could not possibly do with the rather thick mit supplied by the expedition.

So far I have not worn anything else but these Gamage mits, but now they are getting rather oil-sodden which seems to destroy their warmth retaining properties and I shall soon have to take the expedition mits into wear.

I have had a disastrous day with the motor. The leather friction wheel is torn to pieces & the bottom of the water tank has been knocked out.

The other evening the gear was left in engagement all night as detailed on 10th inst. I was unable to sufficiently true up the "flat" which resulted with the consequence that a certain amount of ever increasing slipping took place at this point at every revolution. This caused the leather to heat up & get baked & it went from bad to worse in a few minutes whilst the resulting vibration simply shook the tank to pieces. Sir Ernest is displeased & I am in despair.

Breakfast - Seal curry, Heinz India Relish, porridge.

Luncheon - Seal & bean soup (burnt).

Dinner - Stewed seal, beans, rice pudding.

Tuesday, 13 April, 1915

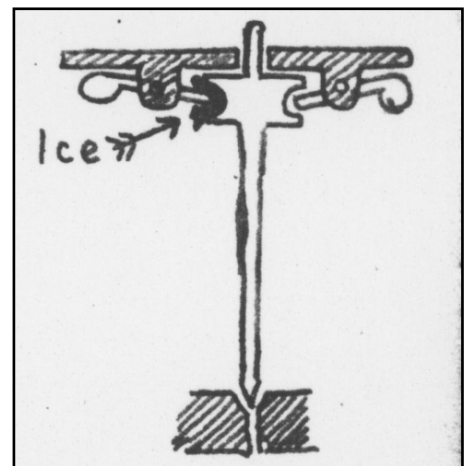
Long. 76.4 S.

Lat. 39.19 W.

Bright & very cold. Temperature -22, fairly strong breeze. I took a series of photos today.

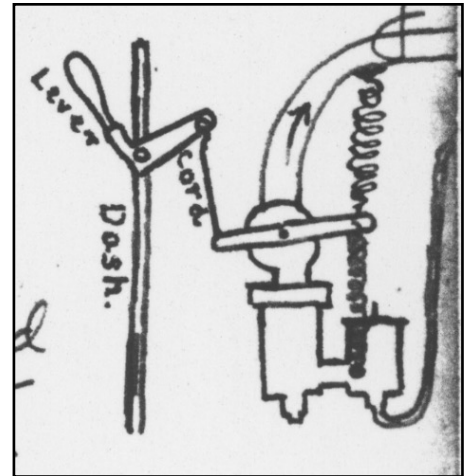
Although the motor was unable to be used I just ran the engine for practice. In spite of a temperature of -13 she started on the very first turn after priming.

As an example of the curious conditions one has to contend with, I found that after running a minute or two the engine died down & stopped, as if there was a stoppage in the petrol supply. By means of the routine process of elimination I eventually found this to be due to a particle of ice having got into the balance weight groove of the collar on the carburettor needle - a most unsuspected thing. The needle was, of course, jammed in the closed position. The only way to thaw it out was by putting it into my pocket for a few minutes as blowing on it merely caused particles of snow & ice to form on it, by condensation of the moisture in my breath. It had probably been formed by a water splash from the tank just before stopping last night.



Courtesy of Dartmouth College Library

Having got this right I still could not get any speed or power out of the engine. Everything appeared to be in order, until at last I noticed that the throttle was also frozen & jammed in the closed position. It depends on a stiff spring to open it, the control lever on the dash board merely closing it against the spring or correspondingly regulating its position. Even the strong spring could not overcome the ice-jam. It was the looseness of the wire-cord that called my attention to it & just as I had detected it, it thawed out. Had I been a second later I should never have ascertained the cause of the sluggishness & so would have remained mystified as one so often is with motors - always an unsatisfactory state of affairs.



Courtesy of Dartmouth College Library

Breakfast - Tinned fresh herring, Porridge.

Luncheon - Mulligatawny soup.

Dinner - Ox tongue & seal stew, Blackcurrants & rice & cream.

Wednesday, 14 April, 1915

Another very cold day. Temperature -23 in the forenoon but in the afternoon it clouded over & the temperature rose to -17. There was a stiff breeze and the drift (i.e. loose surface snow) was blowing along in a regular blizzard of low drift. This is always a curious effect. It is perfectly clear in the zenith and from the very moderate elevation of the ship's deck one can see over the drift which looks almost exactly like steam rising from the surface & the hummocks & being blown along by the wind. Down on the floe, however, one is blinded by the drift & cannot see clearly for any distance.

It is really the same thing as a dust-storm, only in this case the dust is snow & ice particles.

My cabin-mate, James & I were told off for a particularly disagreeable job today - to empty a large box of dirty, very dirty, water. It is a box into which all dirty water, slops, etc. are emptied - just an old strong packing case. As soon as anything is thrown into it it freezes almost instantaneously.

What we had to dispose of then was a large solid block of ice frozen into a box. First we hove it unceremoniously over the ship's side, then hoisting it onto a small sledge we took it over to a hummock about two hundred yards away & then proceeded to hack the contents out with a pick axe. The unsavory splinters of ice flew into our faces, but we succeeded eventually in getting the beastly thing fairly clean.

We are glad to learn that this unhygienic method of dealing with the "drainage" is to be superseded by a less primitive arrangement.

Sir Ernest was at work with a blubber stove in the big dog igloo. He insisted on my going in to admire it. Once inside he shut all ventilation! His face was quite black. Mine got pretty dirty in the few minutes I was there. I simply had to depart from my usual routine & wash before dinner.

Breakfast - Salt-fish, Porridge.

Luncheon - Seal stew.

Dinner - Stewed penguin, suet pudding.

Thursday, 15 April, 1915

Lat 75.54 S.

Long. 39.16 W.

A very bright day with a cold breeze. -8 at mid-day, -10 at night.

My turn, together with Greenstreet & Hussey, to scrub out the wardroom.

We did our best & certainly made the room look clean enough & duly received credit for the same. This is encouraging. I really believe that I am improving at this distasteful work!

When I first joined this ship I had not the slightest idea how to scrub. I did not even know that it was necessary to use a cloth as well as a scrubbing brush. Like everything else it had to be learned & there is even a certain amount of science in it too.

The wardroom, which is really the central part of the hold, is ever so much bigger than the original wardroom or saloon up on deck. It takes three of us a good hour and a half to scrub it out. It is done twice a week.

Later I scrubbed out our cubicle.

Quite a day's charring!

Very busy in the hold all the afternoon opening cases of provisions.

Lyles Golden Syrup - 56 - 2 lb. tins in a box is about the most unmanageable case I have to deal with.

The flour barrels are certainly heavier but one can roll them about.

There were some very beautiful sun phenomena this morning. Before sunrise a fine shaft of golden light shot up vertically from the horizon to a height of 10 degrees. It gradually faded & mock suns appeared on the horizon on either side of the sun at angles of 22 degrees. All this is due in some way to ice crystals in the air. Later still a ray of bright light, like a search light extended from the sun right across the floe to the ship. It was really extraordinary - almost uncanny.

Breakfast - Fresh herring, porridge.

Luncheon - Bean soup.

Dinner - Mixed stew, beans, pickled walnuts, bread pudding.

Friday, 16 April, 1915

Very mild all day, temperature zero & below. There was a very remarkable Sun effect this morning, shortly after sunrise. Through the haze one could see a fuzzy red bleary looking Sun with a wonderful pillar of golden red fire rising above it & two mock suns on the horizon.

The days are now rapidly shortening. The Sun rises about 9 a.m. & sets at 3 p.m. but there is a very long dawn & twilight - several hours of it.

At noon the Sun is very low - not more than about 5 degrees above the horizon.

We are now drifting more rapidly to the westward but not to the north as much as we should like to do & as much as was anticipated.

As our floe drifts along the bearings of the various ice bergs in sight vary, although as far as we can see they appear to be part of

the same ice field as ourselves, but it is well known that bergs often move in directions independent of that of the field-ice & vice versa. The latter is influenced chiefly by the wind whilst bergs are often impelled by the local marine currents. During the last few days a huge domed berg has come into our field of view to the westward. We appear to be approaching it comparatively rapidly, at a speed of several miles a day perhaps. It is to be hoped that we shall not come into too close proximity to it. As our soundings have decreased from 250 to 190 fathoms during the week there is reason to believe that it may be aground. There is also reasonable grounds for supposing that we are approaching land. If so this will be a discovery of great importance.

Should there be land in the proximity it is to be hoped that we shall get a sight of it before the sun sets for good.

Breakfast - Seal rissoles, Porridge.

Luncheon - Vegetable stew.

Dinner - Seal steaks, macaroni pudding.

Saturday, 17 April, 1915

I took the damaged leather wheel off the motor today and fitted a new leather. It involved a lot of really difficult work to get the new leather to run true but I think I have got it all right. Sir Ernest expressed a desire to inspect it before I took it apart, which he did & we had a long argument as to how the damage occurred. Seeing the counter sunk holes for the holding bolts in the fly wheel he naturally jumped at the conclusion that the leather had been cut by its being allowed to come into contact with these, a thing which I would admit at once if I believed it to be correct, in spite of the fact that it would indicate gross carelessness on my part. I am, however, absolutely certain that the trouble arose in the manner I have already detailed i.e. by a creeping slip due to a

flat, but it is no use trying to convince Sir Ernest if he had formed an opinion of his own.

He even called two other members to have a look at it & obtained their opinions. Theirs agreed with his, of course.

He then told me that I was either insulting his intelligence or lacking in my own. I replied that if either of the two were correct it was the latter and that ended the argument amicably, but I am writing a full thesis on the matter which together with the damaged leather I propose to submit to the makers when we get home, & then if they endorse my contention I shall - well I'll let Sir E. know it anyway.

(10-18-16 - Both went down with the ship which, perhaps, is just as well.)

As the original water tank of the motor is now irreparable I have made quite a satisfactory substitute has been made out of a 2 gallon petrol tin, cutting a suitable hole in the bottom and screwing it down direct onto the cylinder head.

Sunday, 18 April, 1915

The extraordinarily mild weather continues. For the time of year it is really remarkable down here in this latitude 76 S.

The sky is overcast, there is a gentle breeze from the north, & intermittent fog. Meanwhile we seem to be approaching the great flat berg which so suddenly loomed up out of the fog a few days ago after two or three days of misty weather. During those three days we had drifted about thirty miles to the westward. We are now moving much more slowly - only about a mile or so a day as far as we can judge. Sounding still show about 190 fathoms so

that there is every probability of the large berg being aground as it seems to be about 100 to 150 ft. high. As it lies north west of us the sun is behind it and it often looks just like a dark black island. It appears to be about half a mile long on the face toward us. It is domed and cleft by crevasses - an old barrier berg.

Sir Ernest played a remarkable trick on me today. Whilst reassembling the motor, I had, as usual, to leave off at 3:30 p.m. to go below & see to the tea. I left the countershaft of the motor on one of the skylights on deck meanwhile. When I returned after tea to continue my work it was gone! I searched and enquired for an hour to no avail and as it was then getting dark I got very anxious as I knew how hard it would be to find it amongst the snowed up litter on deck, should it snow during the night.

Captain Worsley & Marston were both searching for me. Acting on Wild's advice I then went & reported my loss to Sir E., who with a smile & a caution not to be so careless in future, produced the shaft from behind his cabin door.

Breakfast - Seal's liver & bacon.

Luncheon - Lusty's Bouillon (2 tins).

Dinner - Roast seal, Tinned plums & cream.

Monday, 19 April, 1915

Long. 75.59 S.

Lat. 40.11 W.

A clear but cold morning with a good deal of wind from the N.E. towards evening the temperature rose extraordinarily until it reached a maximum of +21!

This is a really remarkable occurrence & is generally believed to (precede) a blizzard.

Tonight we have all been out to witness a fine display of the Aurora.

This is the first really bright one we have had and it is indeed a wonderful sight. At first it looks not unlike clouds lit up by the light of the moon or even the glow that one sees over a large town in misty weather, but as there is neither moon nor town knocking around here one soon reconciles oneself to the idea that the bright part of the sky were actually producing their own light. As it develops it seems to take the form of a wide band across the sky like ----- . After this a second & even a third band ----- the first. All the while the glow is a greenish white similar to the fluorescence in an X-ray tube. Later the arcs begin to form what look like hanging curtains of glowing light and these change their shape, at times -----, that it gives the appearance of waving curtains. It is very wonderful indeed. I have seen a faint display of it in the north of Scotland but have often wondered what the real thing was like.

It quite surpasses my expectations.

Today I finished reassembling the motor as it certainly seems to be in tiptop running order.

We are still approaching the great berg.

It is not a very consoling thought; but Sir Ernest is not unprepared for emergencies. All stores are now handy to be unshipped at a moment's notice.

Breakfast - Tinned Pilchards in Tomato, Porridge.

Luncheon - Seal stew.

Dinner - Stewed kidney, Macaroni pudding.

Monday, 20 April, 1915

Lat. 76.0 S

Long. 41.04 W.

A real howling blizzard. The worst we have had so far & quite unpleasant enough. As usual, it takes the form of particles of drift snow being whirled along in suspension by the wind.

The velocity of the wind is about 40 miles per hour. Stronger winds than this are often experienced in England especially the sou'westers in the English channel, but it is the flying drift that makes it so peculiarly unpleasant here.

The temperature is still about +20. This is extraordinarily high for this time of year in this latitude, but it is very unpleasant out in the open. The drift half blinds one & one cannot see more than a few yards. Still there is always a certain amount of outside work to be done & it cannot be neglected, however unpleasant the weather.

I like to give the motor a run daily, so did so today & of course in the high temperature it started off on the first turn of the starting handle.

The six dog drivers have their dogs to feed daily whatever the weather, but they do not take the teams out for training unless the weather is fine enough.

We wonder where we are drifting today with all this wind, for our drift is almost entirely due to the effect of the wind on the floe & depends for its direction on the direction of the wind.

This wind ought to blow us to the southward which is opposite to the direction we would go for choice, but it may have the advantage of removing us from the proximity of the great stranded berg that we were so unpleasantly close to on Sunday 18th.

This morning I donned my miller's apron & shifted a lb. 120 sack of flour from the hold & tipped it into the flour bin in the pantry; it is always a bit of a struggle & sometimes I fall over with it & get in an awful mess.

Breakfast - Salt fish, porridge.

Luncheon - Seal stew.

Dinner - Stewed seal & calf's head, haricot beans, suet pudding.

Tuesday, 21 April, 1915

Overcast most of the day, but the blizzard died down during the night. The temperature went down to zero again and it really feels much more comfortable for a rise up to +20 means virtually a thaw on board.

All the passages etc. begin to drip water and all leakages in one's cabin which have long since frozen up thaw out & form little pools all over the place. Down here there are always a lot of little crevices in the ship which remain filled up with ice all the winter. This ice is formed from an accumulation of dampness which at home would dry off into the air, but here it simply freezes as soon as formed.

It may be due to steam from warm water or even to one's breath or just the ordinary moisture in the air which condenses on any cold objects, especially iron bolts running through the ship's side,

which are, of course, very cold seeing that they have their outer ends in contact with the outer air & are good conductors of heat.

This condensation is a perpetual trouble in one form or another.

It is dependent on a simple physical fact - the lowering of the point of saturation. If the door of a warm cabin is open the outer air streams in like steam - the actual fogginess being caused by the moisture in the air of the cabin condensing in the form of fog on coming into contact with the cold air in the room & that outside are both perfectly clear until they meet.

We have all been hard at work clearing the snow drifts away from around the ship as the weight of the snow tends to make the floe sink & might even drag down the ship with it.

Breakfast - Tongue & kidney stew, porridge.

Luncheon - Seal stew.

Dinner - Irish stew, Stewed figs & cream.

Thursday, 22 April, 1915

Lat. 76.1 S.

Long. 42.1 W.

A most beautiful day. Bright & cold. Temperature -8.

There is now a great difference in the Sun since we last saw him three days ago. It did not rise until 10 a.m. today. Its altitude at noon was only 3 degrees so that dawn & dusk were virtually merged into one continuous sunrise & sunset, and the effect will become increasingly noticeable during the next few days, ----- . It will be strange, but it is a good thing that we are being gradually accustomed to the final disappearance of the sun.

The glorious colours of the sunrises & sunsets are some consolation for our impending loss.

All hands, except the dog-drivers were again employed shifting the snow drifts which had formed around the ship. I was working with Holness, one of the crew. We had a large box on a little sledge all to ourselves & I think we did our share.

The motor was required at 4 p.m. to haul in the dredge and as usual I started it up during the forenoon to ascertain that everything was correct. Owing to my having neglected to squirt paraffin into the cylinders when testing it on Monday I found that the pistons had quite "gummed up" & at first I could hardly turn the starting handle round at all; but by dint of copious priming with petrol, and strenuous effort I eventually got it free enough to start it up and at 4 p.m. it started off with ease and hauled in nearly 400 fathom of dredge better than it has ever done before - in top gear and with a minimum of vibration. So I have evidently got the new friction leather on "true".

There is another fine aurora tonight.

Breakfast - Curry & India Relish, Porridge.

Luncheon - Pea soup.

Dinner - Stewed seal, Tapioca pudding.

Friday, 23 April, 1915

Another beautiful day, though the sun is so low that it seems anomalous to speak of it being a beautiful day when even mid-day is no brighter than an average English sunset.

At home one always means that it has been a sunny day when one says it has been a beautiful day. Here, however, a clear sky & calm

air always evoke the remark that it is a fine day. The actual sunlight does not make much difference and the temperature even less. The temperature has been exceedingly low all day - for a day temperature viz -21 and yet it has been infinitely more endurable than +20 was on Tuesday 20th with a howling blizzard, simply because it has been almost dead calm all day today. One could even work with out mits today for several minutes at a time which was almost impossible in Tuesday's blizzard.

Strange isn't it!

My duties have again been changed rather to my advantage though my responsibilities are increased.

Instead of each member in turn taking on the ice supply for the water tank, coal supply, keeping the fire in and sweeping up the room after meals, I am now to do all these things. In return I am exempt from scrubbing the floor which all the others have to do. For my part I think it well worth it and I am sure all the other members are glad to get off the coal & ice supply. So everyone is satisfied.

If fine tomorrow Sir Ernest proposes to get the motor sledge tractor out on the floe for a trial run. I have therefore refitted its paddle wheels to it. It was cold work & hard too owing to the solid congealed grease on the axle ends & inside the links of the wheels.

Breakfast - Tinned fresh herring, porridge.

Luncheon - Pemmican hoosh.

Dinner - Haricot mutton (tinned), French beans, Bread & butter pudding.

Saturday, 24 April, 1915

Mostly overcast, temperature -17 but mild & pleasant enough.

We hoisted the motor out & I soon had her running. She ran splendidly for a while at good speed, but stopped rather unexpectedly.

I attributed this to splashes of water from the tank getting into the carburettor. By dint of much cranking I got her home - about three quarters of a mile. On taking the carburettor to pieces, sure enough I found a quantity of ice in lumps & powder in the various parts of the carburettor, especially the float chamber.

I reassembled it later & ran the engine but as the whole sledge was sunk somewhat into a snow drift I was unable to extricate it single handed. The engine ran well enough. I think perhaps that some loss of power may have been due to the petrol used for doping washing away the film of lubricating oil which should always exist around the piston to make the latter gas-tight & thus ensure good compression. It is all these little things that matter. Under the conditions prevailing down here they present far greater difficulties than they would do at home. If one uses a thick lubricating oil it sets solid when the motor is not in use & causes no end of trouble next time one attempts to start up. On the other hand if one uses a thin oil it produces a loss of compression. What then is one to do? The range of temperature between the engine when cold & when running is so considerably greater here than it is at home that one has an entirely fresh set of conditions to face and the most effective way of competing with them is a task of some difficulty & mine for the present.

Breakfast - Salmon fish-cakes, porridge.

Luncheon - Seal stew.

Dinner - Stewed boiled rabbit, sago pudding.

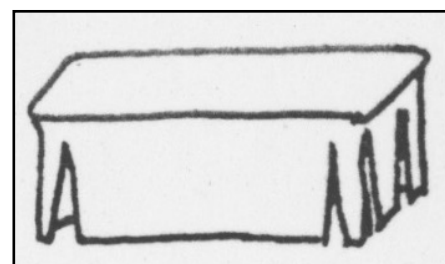
Sunday, 25 April, 1915

Lat. 75.56 S.

Long. 41.40 W.

Bright but bitterly cold. Temperature twenty below zero with an icy cold S.E. wind.

In order to stop the water splashing about on the motor I have made a rough lid, also out of an old petrol tank, by cutting the latter in half and cutting wedge shaped slits in it. This simply jams into the tank on the top of the cylinder which is open to the air at the top.

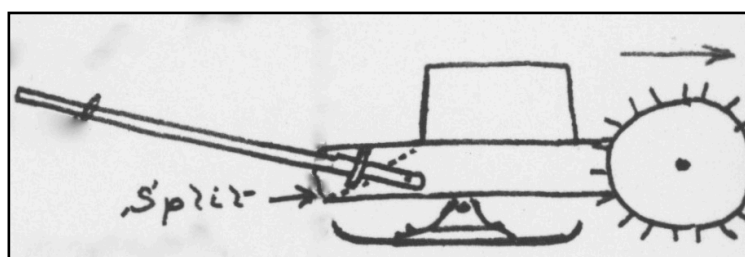


Courtesy of Dartmouth College Library

We took the motor out on to the large frozen lead to the north of the ship. Once out there she ran splendidly, at a speed of about 7 miles per hour. The steering is effected by a man running behind and guiding her by means of very long shafts fitted into iron sockets fixed on the wooden side members of the chassis.

We had one of the sailors to steer and he was nearly run off his legs but his steering was so strenuous that he split the wood of the chassis just where the shafts are attached to it. It can easily be repaired & reinforced.

We got her home easily enough. The improvised tank lid was not quite sufficient to



Courtesy of Dartmouth College Library

prevent every bit of splash so Sir Ernest brought out a real clean towel - a rare sight here - & lashed it over all, and we had no trouble with water splashing about. At times the motor did not run at quite full power. The symptoms indicated lack of compression due to the use of too thin a lubricant, and stoppage of petrol supply as if the needle valve of the carburettor had stuck down. A tiny pellet of ice in the guide in the float chamber lid would cause this latter to occur, but on examination it all seemed quite free & I am rather puzzled about it.

We were going out this afternoon but the weather was really too bad for this sort of work, so I made a few adjustments instead.

Breakfast - Boiled ham (hot), porridge.

Luncheon - Bean soup.

Dinner - Roast seal & peas, Raspberry tart & cream.

Monday, 26 April, 1915

Bright, hardly any sun, exceedingly cold but less wind than yesterday, -22.

I was busy with stores, shifting cases out of the bunker & opening them all the morning.

We took the motor out in the afternoon. To save time I used a blow lamp for starting up, playing the flame onto the valve pockets of the cylinders for about three minutes. She started up almost at once on the first injection of petrol.

In order to test her towing powers, we fixed on a train of the three loaded sledges. She pulled these in fine style with ease even over the very rough ground between the ship and the great frozen lead. There are some very big sastrugi and some considerable

pressure ridges (snow-covered) on this stretch and the way she took them was extraordinary. I should never have thought it possible. Sir Ernest, Lt. Hudson & Tom Crean were sitting on the sledges. I was sitting on the motor, and over the rough ground I had a lively time. It was as much as I could do to sit tight. At times she had one wheel in the air & at others she fairly jumped across a hollow place.

After a time she began to lose power. Sir Ernest seemed to think I ought to divine the cause at once which naturally had the effect of embarrassing me in my investigations. I cannot work if I am hustled. Anyhow I got her home towing all three sledges, but it was not until the last few yards that I detected that the trouble was due to one of the magneto wires being coated with ice which caused the high tension current to leak. It was sparking gaily all along the insulation. I am fitting a new wire.

Breakfast - Cold ham, porridge.

Luncheon - Seal stew.

Dinner - Sheep's tongue & kidney cottage pie, rice pudding.

Tuesday, 27 April, 1915

A perfect day & considering the low temperature -22, comparatively mild.

Sir Ernest suggested filling up the holes with "white-metal" the holes into which are countersunk the heads of the bolts securing the flywheel to the shaft.

This was an extraordinarily sound idea & one which I had rather wondered that the makers had not done originally when I first saw that motor, but I thought then that perhaps they had some good reason for neglecting to do this, that they had not seems obvious

when for the heads of the aforesaid bolts (i.e. the small part projecting through the nuts) are all riveted over so that it was evidently intended that the flywheel and the shaft should be practically a permanent fixture.

It was cold work on the fingers getting the flywheel off; all the nuts & the tools were so cold that they imparted a sensation of burning to my hands whenever I touched them bare handed, but I managed to get the engine off in about an hour & a half, and then took it down to the engine room where the engineers Rickinson & Kerr helped me (they did the work & I looked on) to fill up the holes with molten "white-metal" which we (they) melted in an ordinary glue pot after which we (they) smoothed the disc down again with a file. The disc & flywheel are of course synonymous. In order to get the glue pot I had to obtain a key from one of the dog-drivers who had gone out for exercise with his team, so to reach him I took a lift on Tom Crean's dog sledge on which he & Captain Worsley were already seated with a load of 300 lbs. of pemmican & a team of eight dogs.

I was lucky enough to catch them just as they were starting off. They went off at a great pace. It was fine.

I have so much work to do, what with motors, messman, and stores that I seldom get a chance to go out with the dogs.

Breakfast - Tinned Pilchards in tomato sauce, porridge.

Luncheon - Pemmican hoosh.

Dinner - Stewed seals, kidney in onion, Boiled sultan pudding cake.

Wednesday, 28 April, 1915

Bright but cold. Minimum -24, maximum -17/

Stores, having been neglected for some days on account of the demands of the motor claimed my attention this morning.

Considering that I have often to send up half a hundred weight of stores every other day I soon get in arrears with the unpacking of the cases.

It takes about a quarter of an hour to unpack a case and stow the contents on the shelves, for wood is so valuable that I am careful not to break the lids of the cases; also all the nails have to be saved also.

I have been constructing a lid for the tank of the motor. I don't know how it will work, but in order to avoid joints at the corners I have cut the sides & ends out of a single block of wood and nailed a rubber lined lid on to this. It will be held down to the tank by two spiral springs with hooks. In the top there is a brass pipe to allow the steam to escape as this has been bothering us a lot. The last time the tractor was out the steam rose in clouds, owing to its condensing so much in the cold air, and the tractor looked like a locomotive when going along. It quite prevented the steers man from seeing where to steer to avoid running into hummocks.

We are having great fun this evening. Everyone is being weighed & measured. Under- clothing only is the prescribed costume, and we are all poking fun at each others grubby garments.

Hussey, our irrepressible little wit, has just appeared with his chest & biceps well padded & is now posing. He is intensely funny. It is now my turn. I weighed 174 lbs., this is about 27 lbs. above my normal weight which speaks well for our feeding here.

Friday, 29 April, 1915

Cold during the day then a sudden rise in temperature from -13 to +13 probably due to leads opening up somewhere in the vicinity & to its clouding over.

We had the motor out for a run on the frozen lead astern of the ship. She ran splendidly & the way she takes the sastrugi & hummocks between the ship & the lead is simply wonderful. At times she heels over so much that I think every minute she will come over on top of me, for I sit on the edge of one of the side members of the chassis. I really have no proper seat but I manage to huddle myself up & get some protection from the steam & wind. At times the splashes & steam freeze in a continuous coating all over my clothes, but it soon thaws off when we get in & does no harm.

I am afraid my wonderful water tight lid is not quite the success I had hoped, but such things are merely refinements & they are all very easily capable of rectification. The main thing is the engine, the form of toothed snow-wheels and the transmission.

The two former have amply demonstrated their suitability for the work & there is very little fault to find with the latter. Considering that we had no eliminating trials of any kind whatever I think the tractor does Mr. Girling its designer the utmost credit especially as he was almost entirely uninformed of the conditions down here when I first sought his aid in the matter.

As it was getting dark we did not stay out very long. The engine misfired a good deal on the way home. I could not ascertain a precise cause & had not time to stop to do so, but I suspect it was water splashing on the plugs or carburettor. It was subsequently found however that one of the exhaust valve springs had lost its

temper through my playing the blow-lamp on it the other day when warming up the engine before starting.

Friday, 30 April, 1915

Very clear & bright but with a rather cold wind.

We took the motor out again & ran it up & down the frozen lead. (Incidentally doing a bit of hummock climbing.)

It went splendidly & the way it surmounted the hummocks was wonderful. Sir Ernest & Captain Worsley accompanied me & it was as much as they could do to keep up with the motor.

The new lid was not an unqualified success; the water manages to work round & drip on the carburettor & magneto & cause trouble. It did. During the ensuing investigation on my part Sir Ernest & Captain Worsley danced together on the floe - a one step - whilst I sang & whistled, "The Policeman's Holiday." It was most amusing & not a little incongruous to see the great polar explorer thus gyrating on the Antarctic ice.

That is Sir Ernest all over though.

He is always able to keep his troubles under & show a bold front.

His unfailing cheeriness means a lot to a band of disappointed explorers like ourselves. In spite of his own great disappointment & we all know that is disastrous enough, he never appears to be anything but the acme of good humour & hopefulness.

He is one of the greatest optimists I have ever known. He is not content with saying, "It will all come right in the end." It is always otherwise with him. He merely says that this is but a little setback

not altogether unforeseen & he immediately commences to modify his programme to accord with it, even working his future plans out to given dates and to meet various possible contingencies. He enters the lists every time with the spirit that every prize fighter enters the ring with.

As most of our members are prone to regulate their demeanor by his, perhaps it is just as well that he is able to conceal his disappointment by his strong will so splendidly.

Saturday, 1 May, 1915

Lat. 75.27 S.

Long. 42.0 W.

An extraordinarily mild day, considering that it was a bright one. Dead calm. Our enjoyment was tempered with sadness however for we saw the beautiful sun for the last time for four months. It has not happened without due warning of course for one knows long before one comes here that it will be so and it has been getting lower & lower every day for a long while, but when the long anticipated event occurs I must say it is an awful wrench.

Today the sun rose (save the mark) i.e. it just appeared above the horizon at about 11:30 a.m. & moved along on an apparently horizontal course from west to east for an angular distance of about 20 degrees & then slowly slipped away. It was just a very red shame-faced looking sun, but nevertheless the great health bringer & light giver whose light, if not whose face one has been accustomed to see hitherto every day of one's life. Well, it has gone so it is now up to us to make the best of the long winter ahead of us.

Of course it will not be pitch dark all day yet for another month or so.

As compensation we have the moon and tonight she shone with unwonted splendour and marvellous to say there was an aurora around & under the moon bright enough to be clearly visible in spite of the moonlight. This is an especially remarkable thing I believe.

I went out for a cycle ride by moonlight this evening, following the dog team track for about three miles out & back over the frozen leads. The surface was excellent but inclined to be a little soft in places.

During the day I did a good deal of work on the motor, removing the petrol-tin tank, adjusting valves, cleaning magneto.

Sunday, 2 May, 1915

Overcast & very warm, +15, no wind. The surrounding ice is evidently working a great deal for this morning several new cracks & some open leads were visible.

The dog teams went out as usual for their daily three mile round, but the drivers had orders not to cross any "working" cracks i.e. cracks through which any water is visible.

The ice often cracks, & after being a working crack for some time, the crack may freeze up again. Sometimes it will open a few feet before freezing up again. In either case as soon as it freezes it ceases to be a working crack.

On the other hand if a crack opens up more than a few feet the open water in it is termed a "lead" and as soon as it freezes over, a "frozen lead". We are surrounded by "frozen leads".

The ship's head is pointing roughly south. There are two great frozen leads running east & west i.e. at right angles to us, one ahead & one astern of us each about a quarter of a mile away from us.

It is on these that the dog teams are exercised & on them that we take our walks & I my cycle rides.

To reach them one has to go over some fairly hummocky ice.

Captain Worsley has wonderful eyesight. From the masthead he spied a seal about 3 1/2 miles away. He, Wild & Hurley went out with the Wild's dog team to fetch it. When they reached it, Soldier the leading dog of the team boldly attacked the seal. It is a wonder he got off unscathed. The seal was shot. It was an old female Weddell seal, in an unfit condition for human consumption (owing to its being pregnant).

I went out on my bicycle but the surface of the snow had got soft & I had little enjoyment. I had a much needed hot bath and got enough water to wash a quantity of dirty clothes.

Breakfast - Seal's liver & onion sauce, porridge, honey.

Luncheon - Vegetable soup.

Dinner - Roast seal & peas, Pineapple & cream.

Monday, 3 May, 1915

The unusually mild weather continues, overcast, absolutely no wind and a temperature of +12.

It really feels ridiculously warm by comparison with -20.

Gloves are quite unnecessary unless one happens to be using metal tool, of course.

It so happens that I have found it convenient to dress in ordinary orthodox costume - collar & tie, etc., - as I have taken the opportunity to wash my expedition brown sweater & it is not yet dry. We are badly off in facilities for drying things. The stove in the ward-room is only a very small one & is always entirely surrounded by a collection of wet mits & ski boots which of course get damp when one is out, besides it has quite rightly been decreed that no washing shall be hung up in the wardroom. My general plan is to hang the things up in my cabins for a day or so until they get fairly dry & then to take them up to the galley & hang them over the stove if there is any room there and so finish them off.

As the motor was required for dredging at 2:30 p.m. I made a new tank for it out of another old petrol tin.

These petrol tin tanks answer the purpose splendidly for a time but I am afraid they do not last long; the engineers are, however, making a very strong tank out of sheet iron.

I did a little work on the motor, fitting a new exhaust valve spring in place of the burnt one.

After tea Wordie & Captain Worsley were seen returning from a walk driving three Emperor penguins before them. One or two of us went out to help they & I collared one by the flippers, bent them back behind him & dragged him home. They are an awful

weight & as strong as a small man. They can give one a terrific blow with their flippers.

Breakfast - Cold corned beef & horseradish sauce, porridge.

Luncheon - Vegetable soup.

Dinner - Seal & corned beef dry hash, Rice pudding.

Tuesday, 4 May, 1915

Still mild & a low fog i.e. it was foggy all around but clear overhead so that the fog could not have extended upward for more than a hundred feet or so. It is often like this, & as was the case today, the fog is generally due to the proximity of open water.

The large crack near the ship which opened up on Sunday has now widened into a great lead several hundred yards wide. As fast as it widens it gets covered over with thin ice & whilst watching it today it began to close. The thin ice cracked all along the middle and one layer slipped quietly over the other, moving very slowly but irresistibly - pressure on a small scale, but very interesting.

The ice was scarcely more than an inch thick. It moved in an almost unbroken sheet. Had it been old floe ice a foot or two thick, it would have broken up into great slabs which would have piled up one upon another into a great wall of "pressure", such as we have seen it do quite close to the ship some weeks ago.

The actual temperatures today have been +7 at 8 a.m. at noon +5 at 4 p.m. and -5 now (8 p.m.). As there was only a very slight wind it was possible to work for good long spells without mits and I put in a good deal of work on the motor, fitting a new exhaust valve spring & a new petrol-tin-water-tank. This new tank is quite water tight which the last one was not. It will answer all right until the new (iron) one the engineers are making is ready.

At noon the motor hauled in an exceedingly heavy fish trap from 200 fathoms. The engine ran splendidly; the new exhaust-valve spring has entirely remedied the misfiring which had been causing some trouble.

Cheetham & Kerr brought in another Emperor penguin & the three we got yesterday were killed. They form a grand addition to our larder.

Breakfast - Salt fish, porridge.

Luncheon - Vegetable & seal soup.

Dinner - Boiled rabbit in white sauce, suet pudding.

Wednesday, 5 May, 1915

Bright & cold again mean temperature -10 & a keen little breeze blowing which made it impossible to work for more than a few minutes without mits.

It has been so fine & mild the last few days that I have been using Castrol lubricating oil in the motor rather freely, and paid for it accordingly today by finding the engine "gummed up" solid.

By dint of copious injections of paraffin & petrol I freed it, but it took a long time before I could get it free enough to start up. As a matter of fact I never did really get it to start up or even to fire, as only one cylinder was in working order, for I had removed the compression tap from the other cylinder to make a slight alteration to it & grind in the barrel which seemed to be leaking a little.

The motor was not required for use so I had a good opportunity to get on with my work in the hold, unpacking cases & replenishing the shelves.

It is part of my duty as messman to lay the table for all meals. Being very forgetful about such things I often omit some article or other. This morning I forgot to lay the small side plates for bread & butter - very negligent of me of course. Sir Ernest was more than usually vexed about it, sent for me afterwards & told me that it was equivalent to lack of efficiency.

Well I suppose it is if he says so, so I shall have to adopt some system of checking things as I lay them.

Yet another Emperor penguin was caught this morning. We now have five of them, enough to keep us in food for six weeks alternating with tinned meats, of course.

There is a slight parselene round the moon this evening; the first we have seen.

Breakfast - Fresh herring (tinned), porridge.

Luncheon - Seal & vegetable soup.

Dinner - Stewed seal's liver & onion, stewed figs & cream.

Thursday, 6 May, 1915

Same weather.

We are settling down now in the new wardroom which was once the hold of the ship & is now so comparatively palatial that we call it the "Ritz".

Our routine is as follows. Rouse at 8:30 a.m. Breakfast 9 p.m. Dog drivers take out sledges & scientists do their own work until luncheon which is at 1 p.m. We are then free to spend the afternoon as we like, but practically everybody prefers to do some sort of more or less useful work. Tea is at 3:45 p.m. and dinner at 6 p.m. After dinner everyone reads & writes or mends clothes etc. until the Blanchard 300 candles power lamp is extinguished at 10 p.m. After this we are free to burn a lamp or candle in our cubicles as long as we like. I am really continually on the go all day for as messman it is my duty to lay & clear up all meals & get the tea entirely. After breakfast I scrub the table down, wiping it down after other meals with a damp rag.

We use the bare table without any cloth. I also brushed the floor after each meal, get the ice for melting & replenish the ice-melter as necessary. In the evening I see to the night watchman's supper & turn over the fire & the ice to him at 8 p.m. Of course I have the stores to attend to & the issue of all provisions besides the motor, so that my time is nearly always comfortably occupied. Our meals are simple but thoroughly substantial. Besides the dishes mentioned daily we have for breakfast, bread, butter, jam or honey, tea & coffee; for luncheon, bread, (no butter), dry biscuit, jam, treacle, potted meat, and for dinner dry biscuit, one dried vegetable, almost indistinguishable from fresh vegetable, and tea or cocoa.

I will describe the various stores & provisions another day.

In taking off the contact breaker of magneto to clean & adjust the platinum contacts I twisted off the head of the cone-headed screw holding contact breaker on owing to its having nested in so had to take down the magnets to remedy it.

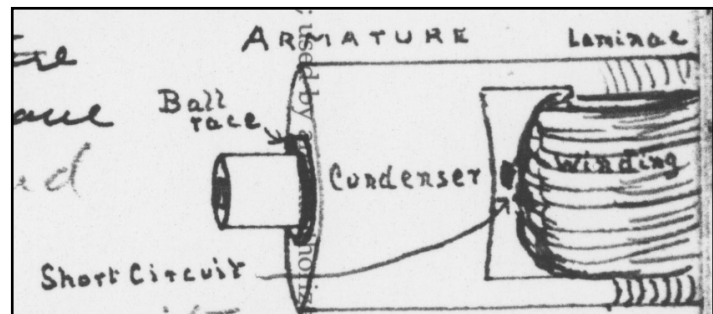
Friday, 7 May, 1915

Bright & clear but very cold & a cold breeze blowing.

I got on with my magneto, first with drawing the armature complete.

It is an Eisemann & differs in some details from the Bosch to which I am most accustomed.

I was unable to draw off the ball race on contact breaker end of armature & therefore unable to take the condenser off the armature which I could so easily have done with a Bosch. I had therefore to tackle it in situ.



Courtesy of Dartmouth College Library

Rickinson saw me toiling over it, took pity on me and together we drilled out the remains of the old screw, about half an inch of it in all. Finally we broke up the remaining shell & then cleared out the thread with a screw tap. On reassembling it I was surprised to find that it did not work & on close examination of the armature I saw that it was "short-circuited" by means of some minute pieces of steel which had been driven through the hole by the screw tap & which were actually embedded in the wires of the coil itself.

This is a most serious piece of damage & the more regrettable because it was preventable. I must see what I can do for it tomorrow but I must say I am rather despairing of it. I am not certain whether it is the high tension or the low tension winding which is penetrated. I am inclined to think it is the latter. If the former I fear there really is no hope for it.

As the motor was out of action today we hauled the dredge in by hand in the same manner as yesterday only more so. It took fifteen of us more than an hour & even ten we had to have frequent halts. The dredge contained at least 2 cwt. of mud, nothing else! It was bitterly cold work.

I finished (skinned) my penguin; a tedious job.

Breakfast - Cold sheep's tongue & beetroot, porridge.

Luncheon - Pemmican & celery stew.

Dinner - Penguin, seal & cornbeef stew, sago pudding.

Saturday, 8 May, 1915

A magnificent polar winter's day, -17, clear, bright & frosty. The midday sky resplendent with the lingering hues of the absent sun whose orb we saw for the last time a week ago & do not expect to see again for some four months. But lo! a miracle of atmosphere refraction takes place and we think we see a tiny arc of the sun itself peep above the horizon, then a segment, a semi-circle & finally the full red disc itself dispels all doubt. There stands our sun as if called back & held bound by some polar Joshua come to say goodbye & reassure us that he is still there & not gone forever - a veritable solar resurrection as beautiful in reality as it was in sentiment. I am sure it awakened in all alike much the same emotions though some may give vent to their feelings more readily than others. I, for one, am not ashamed to admit that such a spectacle filled me with an almost pious emotion.

Scientifically it was a unique phenomenon. The refraction must have exceeded two degrees which is abnormal. (Refraction, I understand, is bending of the light rays due to their passing through strata or areas of air of varying temperatures.)

To my immense relief I have succeeded in rectifying the damage to the magneto of the motor. I quite thought it was done for irreparably damaged. With extreme care & deliberation I hooked & picked away with a long strong needle & extracted in fragments a good 1/8 of an inch of screw from the armature winding. It had buried itself in just opposite the contact-breaker-taper-pin hole which passes through the condenser. The insulation was cut & the winding short circuited as I had supposed. I reinsulated it with a disc of vulcanite & it is now quite allright.

Breakfast - Curried seal, porridge.

Luncheon - Lusty's soup.

Dinner - Boiled salt-beef & beans, cakes.

Sunday, 9 May, 1915

A beautiful bright day, with a dry low temperature -16. A Swiss winter day less the sun. It seems odd to speak of its being bright when the sun does not appear above the horizon at all now. Nevertheless on such a day as this one has all the pleasant sensation of its being a bright day i.e. the sky is beautifully clear the air is calm and crisp, and the hidden sun casts a magnificent crimson glow in the sky from about 10:30 a.m. to 1:30 p.m. making it light enough to do "nut work" (unscrewing & screwing up of nuts) during that time, provided the nuts are not in too inaccessible a place or dark a corner.

The light at noon now is about the same as the light an hour after sunset on a bright summer's day in England.

If this was London the street lamps would not be extinguished at noon but if it were a provincial town they would be out from 11 a.m. to 1 p.m. That is about the best gauge I can think of.

This has been a great day for the dog teams. Six teams of seven dogs each. They were put to the test. The test was a twenty mile run carrying two men to each sledge and 400 lbs. of provisions. I should have liked to have gone, but being "major domo" this is the very occasion that I could not go as I had to stay at home to look after the meals for those left on board & get food ready for the sledging party who returned at 3:30 p.m. with rapacious appetites.

We "stay at homes" had a delightfully quiet day & treated ourselves to a fancy luncheon. I seized the occasion to surreptitiously enlarge our cabin still further at the expense of the pantry. Gramophone concert now going on.

Breakfast - Boiled ham (hot), porridge.

Luncheon - Vegetable soup, sardines, cheese.

Dinner - Roast penguin & peas, stewed raspberries & currants & cream.

Monday, 10 May, 1915

Long. 74.59 S.

Lat. 42.6 W.

Bright & clear with a slight wind from the west. Temperature -19 min. The sounding today was only 152 fathoms - the shallowest we have yet had.

There is a strong probability that there is land to the west not very far off - say twenty to forty miles. It would be a great satisfaction if we could drift a little more to the westward and sight land there before the now rapidly failing light prevents our doing so.

Sir Ernest is going to try wheels on one of the dog sledges so I took the wheels & axles off the aero-sledge this morning - very cold work, so many fiddley little nuts and split pins to manipulate.

The rubber tyres were as hard as wood so I brought them in to thaw. On inflating them I found several punctures in the tubes. On removing one of the covers I found that the inner tube was too large for the wheel by several inches! It is extraordinary how all expeditions seem to get supplied with these sort of misfits and very exasperating too. The spare tube is about six inches too large for the wheel.

Of course I can open up the "join" and rejoin them to the correct length, but I have only a very little rubber solution and the "joins" are vulcanized, which is quite unusual for thin grey rubber tubes such as these are. It is no easy matter to open up a vulcanized joint without a vulcanizer, but I daresay I shall be able to do it by heating it in front of a hot fire.

Breakfast - Curried penguin, porridge.

Luncheon - Bean soup.

Dinner - Penguin & kidney stew, rice pudding.

Tuesday, 11 May, 1915

Rather foggy & overcast with a northerly breeze & rise in temperature to -5 betokening in all probability a two or three days blizzard. Sounding 157 fathoms. The wind is rising, there is some snow falling this evening and a little drift blowing. These all point to an approaching blizzard!

I had an unusually busy morning. After my usual duties as messman which generally occupy me up till 11 a.m., I went out with Sir Ernest and we tried how we could best fit the aeroplane

wheels on to the large dog sledge, and as soon as we had settled this I just managed to take the engine out of the tractor, by a "tour de force", before luncheon time.

The aeroplane wheels which we have as adjuncts to the aero sledge are some rejuvenated secondhand ones that I got from an aeroplane builder in Euston Rd. & to which Messrs. Dunlop kindly fitted new tyres. They are very strong & very light, but the tyres being of large section & small diameter and ----- on variety are the very devil to manipulate. In replacing one of them I have nipped & cut the tyre no less than three times, in spite of my really long experience with tyres of all kinds. As an example of their stiffness I have had to use no less than five levers to remove & replace the covers.

On refitting the magneto to the engine yesterday I found that the whole of the lubricant had gummed up in the engine. Indeed the engine was so stiff that I could scarcely turn the flywheel by hand & then only half way when it seemed to jam. I thought it best to have it off & investigate.

I have had that of night watchman added to my duties & am on duty tonight for the first time.

Breakfast - Cold tongue & beetroot, porridge.

Luncheon - Pemmican soup.

Dinner - Stewed seal, boiled sultana pudding.

Wednesday, 12 May, 1915

We take watchman in rotation & thus one's turn comes once every 18 days.

I am doing my night watch and am much enjoying it. The duties consist of keeping alight the fires in the wardroom, the upper-deck wardroom, Sir Ernest's cabin & the fo'c'sle. As they each want attention about once an hour, there is plenty to do. At midnight & 4 a.m. I went out & took the meteorological observations and do likewise at 8 a.m. I have the galley fire to light at 6 a.m. It will, of course, be like meeting an old friend, though I have reason to believe that this operation fills some night watchmen with the terror of despair. The first part of the night I occupied in examining my engine which had managed to lift single-handed onto the pantry sideboard.

I do not know its exact weight but it is satisfactory to know that it can be manipulated by one man at a pinch.

Later, 9 p.m. I do not find that a night out disagrees with me, on the contrary I felt rather extra fit today & only pleasantly sleepy now. The night watchman can, & usually does, spend the following day in bed, but as there is always a lot of noise going on & I am an exceptionally light sleeper I considered it is useless trying to get to sleep, so tuned out the hold instead of turning into my bunk, & felt none the worse for the rather heavy work. There is no doubt that the regular living, good food and climate keep one in splendid health.

On the other hand sciatica is troubling me a good deal and like Sir Ernest & several others I am very wakeful at nights.

To "celebrate" my first nightwatch, the other members made an organized raid on the pantry & practically gutted the place. I held the door valiantly for a while, but could not stand long against overwhelming odds & it was over my prostrate body that they stole the sardines.

The predicted blizzard came alright.

Thursday, 13 May 1915

The blizzard has abated somewhat but it is still too bad to do anything but urgent work outside the ship.

With the weather overcast & thick as it is today there is very little light at all even at midday.

It makes a lot of difference having everyone on board all day. It interferes with my work of keeping the place clean & tidy and they make an awful mess of the place working and romping about.

Usually the six dog-drivers are either out with their dogs from 11 a.m. to 1 p.m., the scientists have their outside observations & work and the ship's officers are generally engaged in taking soundings in the morning or mixing up the dogs "hoosh" which they now have to do, but in weather like this all these noisy undesirables congregate in the wardroom and having neither hobbies nor duty, they pass the time in rioting.

A few find legitimate work to do, one or two sew & a couple of quiet ones play draughts. Of the workers, Clark, our biologist, is skinning a fine Emperor penguin on the dinner table! Hurley, who is always busy & making something useful, is engaged upon the construction of an ice melter & water heater, his own patent, made from two oil drums, one within the other & a coil of copper tubing something like a geyser. Kerr & Rickinson have been working at the motor tank in my workshop - the pantry & I have been working on the engine, marking the flywheel with an arrow to indicate piston position and soldering a broken oil pipe union.

The temperature in the wardroom has been up to 60 degrees today which feels oppressively stuffy.

Breakfast - Penguin's liver, porridge.

Luncheon - Vegetable soup.

Dinner - Seal & penguin dry hash, Tapioca pudding.

Friday, 14 May, 1915

Bright. Temperature zero.

The blizzard has ceased but there is still a good deal of wind from the N.

There are new lines of pressure along the edge of the great frozen lead to the N. (astern of the ship).

The ice of the frozen lead, about a foot thick only, has cracked along an almost straight line for a mile or two and the edges have ridden over each other for a total distance of about ten yards only forming a long low bank of piled up ice blocks & fragments. It is these banks that are called pressure ridges, or often simply "pressure".

I went out for a run on Marston's dog sledge with a team of seven dogs pulling us two and a load of six boxes of pemmican, weighing 50 lbs. each box. Our combined weight was over 350 lbs.; sledge 50 lbs.

Total weight per dog about 100 lbs. 150 lbs. is about a maximum per dog.

The dogs average 65 lbs. each.

The surface today was splendid for sledging. It was pretty cold out in the wind. We got off & ran a good deal.

I was wearing two woolen helmets, woolen scarf, combination under garment, flannel shirt waist coat (no coat), flannel trousers, two pairs of socks, sea boots, a suit of Burberry overalls, a pair of fingerless mittens & a pair of fur mits.

There is a great deal of drift snow around the ship again. The motor-tractor body was almost filled up with snow I had great difficulty in clearing it out.

I took off the wheels & axle of the motor & we lifted it on board again for the winter.

I have marked the arrow on the flywheel so that it is at the top when the piston of No. 1 cylinder (the one nearest the timing gear) is at its top dead centre.

Breakfast - Salt fish, porridge.

Luncheon - Vegetable soup.

Dinner - Seal stew & peas, cornflour pudding.

Saturday, 15 May, 1915

Lat. 75.27 S.

Long 43.9 W.

Wind & temperature both rose last night & it is blowing a blizzard again tonight but at midday today it was clear and the wind had moderated somewhat so the dog teams went out and I accompanied them on Hurley's sledge.

We only had four 50 lb. provision boxes on but I must say his dogs pull very well. We went through about three miles of snow-covered hummocks.

At the speed we were going it was almost as exciting as bob-sleighbing from Davos to Klosters.

Often the sledge was at such angles that it slipped bodily sideways. Twice it overturned on us. When this happens the dogs are unable to go ahead on account of the weight and so they stop, but on several occasions we were shot off the sledge and then it is a very different matter, especially homeward bound, for, relieved of the extra weight, the dogs, always eager to get back, increase speed, and by the time one has collected oneself it is just as much as one can do to catch up again with the sledge.

Of course if there is one man left on the sledge he can if necessary, pull the dogs up, but if both driver & passenger are thrown off there is a good chance of the sledge reaching the ship in charge of the dogs only! There are so many deep drifts amongst & between the hummocks that it is almost impossible to run fast without plunging one's leg up to the thigh into a hole.

To drive amongst the hummocks at all takes a very responsive leader indeed but Hurley's dog "Shakespeare" is particularly good in this respect.

Hurley gave an interesting lantern lecture on New South Wales tonight.

Breakfast - Penguin dry hash, porridge.

Luncheon - Vegetable soup.

Dinner - Roast penguin & cabbage, Batter pudding.

Sunday, 16 May, 1915

Strong wind nearly all day accompanied mostly by drift. About midday there was a remarkably sudden lull in the wind, the recording anemometers, a "Dine's" and a "Robinson" both stopped temporarily and after a few minutes the wind began to blow with equal force from the opposite direction. It seems therefore that the exact centre of a cyclone must have passed over the ship - a very singular thing.

The inclement weather confined us all to the ship & the day was spent very quietly.

I took the opportunity to remove the cylinders of my engine, grind in the valves & scrape the carbon deposit from off the pistons & combustion chamber; but before I could effect their removal I had to cut down my box-spanners to get at the cylinder-holding-down nuts. I have never seen more inaccessible nuts. Certainly they came off easily enough once I had started them but it is too bad of the makers not to supply a special spanner for the purpose, especially as these nuts are of two different sizes. I also drilled the compression taps out from 1/16 to 1/8 gauge in order to take the priming charge more easily, for air locks often used to occur.

All this kept me busy until 11:30 p.m. when I made cocoa for Sir Ernest and for about half a dozen night hawks who were sitting up round the wardroom fire, retailing reminiscences by the light of the night watchman's hurricane lamp.

I weighed myself again today - 175 lbs.! nearly two stone above my normal weight!! It is customary down here to add a little to one's weight, but two stone - !

I am told I look fat & gross rather than plump & comely. I can actually feel that my back and arms are plumper than usual.

Breakfast - Liver & bacon, porridge.

Luncheon - Vegetable soup.

Dinner - Roast penguin & cabbage, Stewed plums & cream.

Monday, 17 May, 1915

Hardly any wind. A little snow. Very mild. Temperature +2.

I fixed the engine in the tractor again. I can just lift it single-handed but to place it on its bed I have to enlist assistance. Holness the lamp trimmer usually officiates & did so today.

Dr. Macklin also helped me momentarily.

Somehow or other the engine slipped a little and jammed on its holding down bolts, cracking one of the aluminum bed-plate lugs.

It is comparatively immaterial but all the same I wish it had not occurred. At home I could have taken it off & sent the part to be re-welded by the oxy-acetylene process & got the crack repaired for a shilling or so, but here it is all so different. I wanted Sir Ernest to allow me to bring an oxy-acetylene welding plant but he did not approve of it. I wish now that I had it. (But its weight precluded it.)

This afternoon Hurley & I were brazing the copper circulating coil of his water heater, & this evening Kerr & I have been endeavouring to free the sprocket on the axle of the tractor which seized the first day we started dredging with the motor, but we were unsuccessful in shifting it & intend to try more stringent measures tomorrow.

We have, unfortunately, drifted about twenty-five miles to the southward during the last few day's blizzard.

Yesterday the whole floe we are in, and with it the ship's head, swung round fifteen degrees in about an hour so that the ship's head is now pointing due west.

We still have about four hours of twilight but it is a very poor light on an overcast day like today.

We got three more Emperor penguins today.

Breakfast - Penguin steak, porridge.

Luncheon - Vegetable soup (burnt), Walnuts.

Dinner - Stewed seal, rice pudding.

Tuesday, 18 May, 1915

Clear & cold, average temperature -20. This is not really cold by comparison with the winter temperatures recorded on the "barrier" by Amundsen but here, over the sea, where there is always a certain amount of moisture in the air, it probably feels as cold as -40 on land. One has to keep on the move pretty briskly when out for a walk. I find ordinary clothes & ordinary leather boots (sea-boots) sufficient, provided one wears thick under-clothing and two pairs of socks.

I have been fixing up the aeroplane wheels & axles ready for fitting to the large sledge, to try wheel traction versus runners.

Hurley & I were again brazing up the circulating pipe of his water heater. We both have done a little brazing before but neither of us are very expert which accounts for the fact that we had to do it

twice before we got it entirely satisfactory & it was only after I had left him to himself that Hurley finally got it just right, which does not say much for my assistance.

Now that the winter darkness has practically set in & there is little of event occurring from day to day. I propose to write this diary in the form more of a continual narrative than a mere stereotyped record of daily happenings. I shall describe our quarters, our food, our plans, our external surroundings, the dogs & lastly in turn, my comrades and our leader himself, prefacing the top of each page with notes on the days work.

I always seem busy from morning until late at night. Except at I never sit down, & I never read except after 10:30 p.m., in bed, & yet, as at home, I never really seem to Dinner - Stewed penguin, suet pudding & treacle.

achieve anything. How is it?

Breakfast - Cold, tinned roast mutton, porridge.

Wednesday, 19 May, 1915

We all manage to live very happily here on board in spite of conflicting interests and the fact that most of the members are what one might term definite personalities and of somewhat different stations in life.

Probably the best thing to do is to determine when one comes down here to exercise self-restraint to the last degree and to swallow one's pride to the very limit rather than quarrel. There is no real need to have quarrels of any kind with one's comrades. Amongst gentlemen quarrels should be and can be avoided and there is no reason therefore why that should not be the case down here. Of course one likes some better than others, and in

certain jobs it is not always easy to avoid a little friction especially if one is not gifted with tact, but on the whole things have run smoothly so far.

We have had side spitting fun this evening. Everyone submitted to having their hair cropped close with shears. Rickinson, our chief engineer, really has very handsome dark, wavy hair and was not at all anxious to have it off, so in fun he told Sir Ernest that he would let him cut it if Sir Ernest would afterwards permit him to cut his.

This Sir Ernest readily agreed to, so now we are all practically bald, leader and all. Hurley, whose hair runs to black wool was also reluctant to part with it, but finally submitted and really he looks the better for it.

Later he took a flash light group of us all.

Thursday, 21 May 1915

Marston painted a horrid little face on the top of Wild's shaved head. It caused no end of fun at dinner this evening.

Sunday, 23 May, 1915

This day I celebrated my birthday believing myself to be thirty-six. I don't feel it, but my friends say I look it every day.

My darling little Renee is six today also, bless her little heart. How I wish I could just hear that she is well. But that is one thing we have to bear in patience. No post, no morning budget with its surprise packets, its bills and request for rates, etc. Well this part of the world has its advantages after all. No where else could one be so free from cares, worries and responsibilities. All one has to do is live at peace with one's comrades.

Tonight they drank my health and sang "He's a jolly good fellow."
The usual thing, but good of them all the same.

Wednesday, 26 May, 1915

Wild, our excellent second in command, harnessed his team to the wheel sledge this morning with three members on it.

It was a failure on the present surface but he did not give it a very extended trial. He did not go far enough to get out on to a fairly hard surface.

On the rare occasions when time hangs one can always find plenty to do fitting up one's cubicle.

The cubicles are six feet wide by seven feet long and are arranged along the ship's side on either side of the hold.

There are four on the starboard side and the same number on the port side but of these latter one is given over to the carpenter as his workshop and the occupants of the next two (Hurley, Hussey and Doctors Macklin and McIlroy) have taken down their partition and thrown the two cubicles into one room 12 ft. x 7 ft. which we call the Billabong (Australian pond) from the word occurring in an amusing song which Hurley often sings. He is an Australian.

The remaining cubicle on the port side is occupied by Lees and James. It is next to the pantry very conveniently for Lees so that as he lies in his bunk he can see all that goes on in the pantry without being seen himself and so guard the stores for which he is made responsible.

In spite of all of his vigilance awful depredations sometimes occur in the night for some of the younger members are up to all sorts of boyish pranks.

The fore and aft partitions between the cubicles and the wardroom do not quite reach the ceiling so as to allow of a free circulation of air. The space between the fore and aft partitions 10 ft. x 24 ft. comprises the wardroom, but the staircase hatch etc. take up nearly one quarter of this space.

Friday, 28 May, 1915

Marston our affable artist repaired all our boots, sewing new soles on them in quite a professional manner. He is wonderfully handy at certain things, once he gets started but he is inclined to be a little lethargic and takes a bit of starting at times.

He, Wild, Captain Worsley and Tom Crean live in the original upper deck wardroom i.e. just above the hold.

They have divided the space up into four cubicles and so have one each, quite a luxury. They look like little horse boxes and so are always alluded to as the "stables".

They have a fine little stove and are very cozy.

Marston has ideas of his own, mainly artistic, as to how a cubicle should be arranged and so has fixed up a sort of opium den settee about 4 ft. x 4 1/2 ft. which really occupies almost the entire available space of the cubicle.

It is covered with fine reindeer skins which he as clothing officer is in charge of and really it is a delightful nest, but how he manages to curl up on it at night is a puzzle. He is by no means tall which

is lucky and so he probably fits in diagonally and draws his knees up a bit for the rest, but imagine sleeping from corner to corner of one's bed every night instead of straight up and down; so unsymmetrical.

Saturday, 29 May, 1915

Cold, clear, bright, very little wind so although the temperature is -25F it does not feel at all uncomfortably cold outside.

One quite looks forward to one's night watch and always contemplates doing a far greater number of odd jobs than one ever actually has time to accomplish.

Tonight I had intended to wash myself and my clothes, sort out a box of bolts and nuts and write up numerous blank spaces in this diary!

It has been as much as I have been able to achieve to have a bath and wash my clothes, consisting of 1 Viyella shirt, 1 woolen under vest, 1 Jaeger combinations, 1 bath towel, 3 pairs socks, 3 handkerchiefs, 1 pair stockings. Washing clothes is an agony to most of us. Its terrors much enhanced by the meagerness of the facilities available. One has first to stoke away at the fire for hours to get enough hot water in the ice-shelter to make a start with then one has to use a tub on the floor in the uncertain light afforded by a stable lantern. One really cannot see effectually whether the piece has been soaped all over or whether one is merely going over old ground. To avoid missing places one has to go over the article twice; takes twice the time.

As the night watchman has to keep the fires going in the old wardroom, the present one, Sir Ernest's cabin and the fo'c'sle and take various meteorological observations at intervals, he is kept

really busy especially as our coal is not very suitable for small combustion stoves. These latter have a nasty knack of expiring suddenly without any ascertainable cause or premonitory symptoms. Then there is one's midnight supper to get - a most important item.

One or two self-diagnosed cases of insomnia (a complaint often brought on by post-prandial naps) generally turn up quite unashamedly at night-watchman's supper time and cheerfully share with him, or in other words deprive him of, part of his much needed sustenance, slinking off to their respective lairs, as soon as their gastronomic desires have been satisfied. No wonder then that desultory depredations occasionally occur, but they are always in good part and never of so serious a nature that we cannot afford to wink at them. Often the night prowlers join in the raid.

The prospective night watchman has the privilege of "turning in" during the afternoon immediately preceding his night watch, and the day following his night watch he is at liberty to sleep all day if he so desires. Of the former privilege he generally avails himself, though the noisiness that goes on all day precludes any real slumber.

Nearly all of us suffer in varying degrees from Antarctic insomnia.

To sit up all night is the finest cure for insomnia there is. The usual weekly gramophone concert takes place tonight.

Monday, 5-31-15

Changeable weather again. Temperature was 8F at 10:30 a.m., but -8F at noon, a drop of 16 degrees in 1 1/2 hours. Rather an unusual thing.

Imagine the temperature at home ranging from a degree above freezing point (33F) to 17F say in 1 1/2 hours. All the puddles would freeze solid in a few minutes, pipes would burst in every house and people would be getting frostbitten right and left.

General consternation and newspaper articles.

Here one grows accustomed to regarding this sort of thing with equanimity.

We are glad of the moon at noon now.

The place where the sun ought to be really gives no light worth speaking of, much less writing home about, at the same time (same time as the moon is shining) there is still a magnificent red and crimson line across the northern horizon at noon. Even this will be practically non-existent by mid-winter's day to which we are all looking forward with keen anticipation. It is the day that marks the beginning of the sun's return towards us, though we do not actually expect to see the great luminary until the middle of August! A four month's night!

It is not nearly so bad as one expected it to be. Certainly one notices a little grumpiness and irritability in one's comrades and they notice it very especially in theirs (that's the writer) and they don't forget to say so either. One has to exercise one's self-control. One may go a little further than this and try one's hand as intermediary in one or two little differences, with results that one's humble efforts as peacemaker occasionally bear fruit.

Resentment and estrangement are vile at all times but here they would entirely mar the harmony that, for the most part, exists amongst us.

Tuesday, 1 June, 1915

We are getting through winter very nicely. It is only three weeks to mid-winter's day. All explorers make a great festival of mid-winter's day and we do not intend to be any exception. We have our eye on one or two special delicacies which we intend to commandeer for that day.

We are all kept busy enough at work all day, in spite of the darkness.

It is wonderful how well Sir Ernest manages this. The dog drivers go out with their teams almost every day. We have had so little bad weather that it is quite exceptional for them to be prevented from going out.

The scientists have their observations and researches to make.

The two mates, Hudson and Greenstreet, take turns daily at making the dogs' hoosh (hot food).

The engineers are always busy making coal shovels or parts for the motor and so on.

The sailors quarry the ice for melting, keep the decks and gangways free from drift snow, clear away all the rubbish and keep a water hole clear around the rudder in case of fire. Apart from this they have nothing to do but look after themselves, in fact they only work from 10:00 a.m. to 1:00 p.m. and sleep most of the remainder of the twenty four hours. They do not have to attend to us in any way, we look after ourselves entirely. Scrub out our wardrooms and cabins, etc. As for myself Sir Ernest leaves me entirely to myself and, as I don't think he ever sees me idle, I presume he is satisfied.

Wednesday, 2 June, 1915

As an example of the lazy way the sailors live: all but one were in their frowzy bunks in the fo'c'sle all this afternoon whilst the one who was up passed tea around to the others at 4 p.m. It is astonishing how they can spend so much time in bed as they are compelled like ourselves to have their lights out from 10 p.m. to 8:30 a.m. We find this time all too long and one wonders how anyone can succeed in sleeping for a longer period.

We are all allowed to burn candles after "lights out" and so we all read for an hour or two in our bunks after turning in but the crew do not seem to avail themselves of this privilege.

No, they just sleep the time away as best they can and never seem to look for any occupation. Our trouble is generally to keep pace with all we have got to do and the time simply flies.

There is nothing like congenial work for killing time.

Of course, little differences occur from time to time, some fellows give way to their prejudices more easily than others but nothing in the way of serious animosity ever occurs. Sir Ernest keeps a sharp eye on our mutual dispositions and is too good a leader to permit any estrangements to survive. The little idiosyncrasies of some fellows cause resentment in others at times, but strange to say jealousy is a far more potential cause of friction than anything else. One has a good deal to contend with in one way or another, but the exercise of a little self-control is all that's required to "keep it under".

Thursday, 3 June, 1915

It is dead calm not a breath of wind but the uncanny distant roar like a great waterfall or the noise of distant trains. It is the ice rafting i.e. one sheet of ice sliding over another and forming pressure lines. We like to hear it for it means practically no danger to us but that the ice is working and that we are on the move.

In spite of some contrary wind in the last week we are still gradually going north at the rate of a mile or so daily but not nearly fast enough to enable us to get out early enough to repeat the trans-Antarctic attempt in time next year.

One can but hope for the best.

Meanwhile all are happy and, what is of far greater importance, healthy.

We were weighed last night. Most have lost a few pounds. I have not! I weigh 175 lbs in combinations only!!

We fired a rocket at noon and drank the king's health tonight, this being his birthday.

Friday, 4 June, 1915
(Comments on weather)

All these little things provide topics for conversation at table. It is surprising what a vast difference a daily paper and visits of friends make in one's table topics. Although none of us are in any way depressed yet often nearly a whole meal passes in comparative silence merely for want of something to talk about. To obviate this one or two of us make a special point of getting up controversies at table.

We generally manage to keep it going pretty well at one end of the table or the other.

Then we discussed whether it was best to talk about "nothing" or to talk about nothing at all. No conclusion was arrived at.

James is a good provider of table topics. He is our physicist, magnetician, etc. a B.Sc., and really very learned, so we always find it very interesting to discuss scientific things with him, such as pressure of gases, vaporization, freezing, atmospheric phenomena etc., and he always has an answer for every question. Lt. Hudson and Greenstreet, the ship's officers, sit next and opposite to him respectively but sometimes they make such facetious remarks during our scientific discussions that poor Jimmy shuts up as he does not think science compatible with humour.

Breakfast is the most silent meal but then that is not peculiar to the Antarctic and even our leader is not an exception!

Saturday, 5 June, 1915

...One would have thought that one could always see what was immediately beneath one's feet, but one cannot. When it is dark the Antarctic night can be deadly dark; but this does not depress us much, as we all seem to keep in excellent spirits in spite of the gloom. One hears no end of hearty laughter and some member is always playing jokes on another.

Sir Ernest is an inveterate joker. His jokes are always kindly and in good taste and he can tell amusing yarns to perfection. Things might be very different with a less cheery leader.

Sunday, 6 June, 1915

A quiet day on board and the coldest yet -27F.

A beautiful clear dry morning made the intense cold scarcely appreciable, but it clouded over with fog and a strong wind from the south and is beastly.

We have spoken a good deal about the war today. Naturally it is a matter of anxiety to us but as our anxiety cannot possibly be relieved until we escape from our ice-bound prison, our surmises and speculations are not very profitable. To several of us, who feel that we might be employing our time to so much better a purpose on service than wasting it to no use down here, the knowledge that war is raging is especially grievous.

An almost equally depressing subject of conversation is our unsatisfactory northward drift. We are constantly comparing it at a great disadvantage to what Filchner, our German predecessor, did. It must not, however, be supposed that this subject makes us in any way downhearted, on the contrary we are all very hopeful of getting free next summer, but we are all quite ready to go through another winter with equanimity.

To most of us it is more exasperating than depressing to contemplate the possibility of another winter, short of food, light, coal, etc. for it must be admitted that the stores for the ship were only intended for one year and it was never expected that they would be required for anything like that period even.

At the present rate of consumption, which is really quite moderate, flour, sugar, tea, oatmeal, cocoa, milk, butter, lard, suet dripping - all essentials - will be used up before this time next year.

All we shall have left will be a small supply of cereals such as rice, tapioca, etc. & a good deal of tinned meats & bottled fruit, tinned fish &, of course, all our sledging pemmican.

Breakfast - Liver & bacon (seal's liver), porridge.

Luncheon - Pemmican hoosh.

Dinner - Fresh pork, fresh potatoes, salt cabbage, tinned pears & cream.

Monday, 7 June, 1915

A nasty cold day about -10F.

Captain Worsley was night watchman and somehow managed to let the temperature in the cubicles drop to 28F, so he was not at all popular this morning. He said it was due to the strong south wind blowing down the hatch and so on. We don't think so.

After lights out at night (i.e. the extinguishing of the beautiful Blanchard lamps) we generally have some sort of a romp.

Generally it is singing of songs delicate and otherwise, sometimes it is "dressing up".

Members appear as ballet girls, decidedly abbreviated, or as ghosts of previous polar explorers and so on; but a very favourite form of amusement is mutual impersonations. One or two of the members, unmindful of their own, are particularly observant of others' little weaknesses and ever ready to display their lack of histrionic ability by "taking off" their fellow members. As these mimicking representations are generally unsparingly uncharitable they are likewise, to say the least of them tactless and in poor taste.

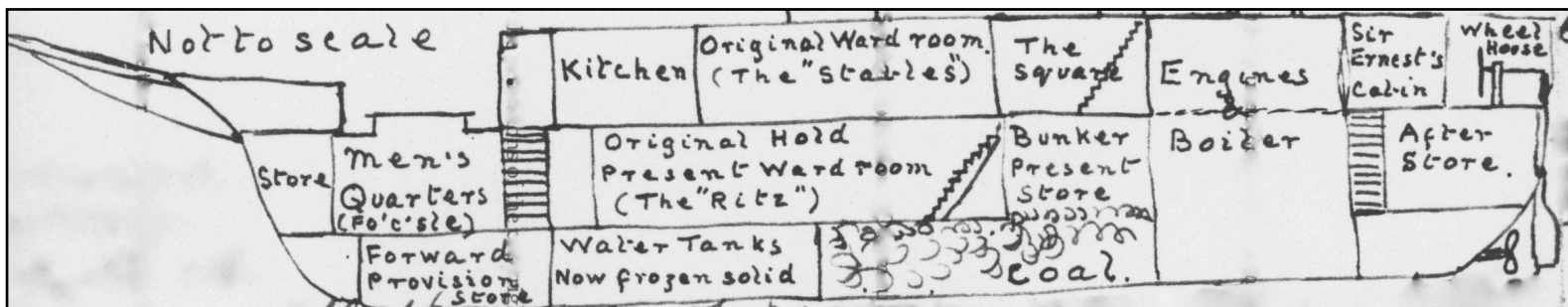
Lees is inclined to be a little over anxious to please Sir Ernest at times and last night Dr. McIlroy "took him off" cleverly as follows:

(Dancing about in a most effusive way) "Yes sir, oh yes certainly sir, sardines sir, yes sir here they are (dashes to pantry and back) and bread sir, oh yes sir, bread sir, you shall have the night watchman's bread sir." (Another dash to pantry and much groveling effusion and so on) "And may I black your boots sir," and so on.

Lees is in disfavour just now because he has stopped the supply of bread for the general run of the members at night and given biscuits instead. Still all said and done, there's no smoke without fire, and perhaps the broad hint will do him good. Better to be called a toad than a toady.

Tuesday, 8 June, 1915

I don't know what it was like outside as I spent the whole day from 9 a.m. to 9 p.m. in the coal bunker. I was not shifting coal however, though I got pretty black by the time I had finished as I shifted a large quantity of timber - the wood from the "hut" - from off the coal to make way for the stores which have been stored in the bunker ever since the hold was converted into a living room.



Courtesy of Dartmouth College Library

All the cases of provisions were then shifted out of the hold into the coal bunker which is on the same level as the hold and connects with it by means of two small trap-hatches. At the time the things were just bundled in higgledy piggledy & very roughly stowed.

The place was completely filled right up to the hatch and it has been the task of weeks to get sufficient space to work the cases & sort them out & rearrange them systematically - the only way that I can really keep touch with the things in a methodical manner.

Of course, a list was made of them when they were hove in but that is no key as to where to find anything in particular just when wanted. Sir Ernest always likes to see a thing produced promptly when asked for & so far I think I have never failed him for he has only asked for things which were close at hand luckily. He asked me the other day how many onions we had. I told him at a very rough estimate 800. I counted them today & there were 833. That was a bit of luck. I now have every case with its contents-mark arranged so as to show outward. It takes time but it is worth it.

Breakfast - Cold corned beef, porridge.

Luncheon - Vegetable soup.

Dinner - Stewed penguin.

Wednesday, 9 June, 1915

A beautiful bright day. Temperature -24, minimum -27. Just one of those calm clear days when the low temperature is entirely unappreciable. It feels cold, of course, but then one expects it to be so & is prepared for it, but I am quite sure I have felt a temperature of +24 in England with a bitter east wind to be far more noticeably uncomfortable than it is here today.

I took full advantage of the weather to take some open air exercise. I am afraid I do not get nearly as much as I ought to. My duties as messman, fire tender, ice-man & so on do not give me much time to get out, as I do not like bothering other people to do my job whilst I am out. I did so today however. First of all I went for a short walk to try the condition of the surface along the sledge track & finding it suitable I then went for a cycle ride but the valve rubbers were perished with the cold & as I found I had to blow the tyres up pretty often I returned, got my ski & went out towing behind Marston's dog sledge. This is always very enjoyable. The surface was very rough & hard, rather unsuitable for skiing & I had two spills through getting my skis crossed whilst turning.

My feet got very cold; my toes were aching with cold as one's toes often do at home, though personally I seldom suffer from cold feet. Suddenly the aching stopped & I felt a delightfully comfortable sensation in my feet. This I knew meant that several of my toes were frostbitten. I only had on sea boots & two light pairs of socks; insufficient for such a low temperature. The toe straps of the skis tend to stop the circulation which all predisposes to frostbite. I at once took my skis off & ran back - about a mile - to the ship. The offending digits soon began to return to life, but the pain was fairly acute during the process.

Breakfast - Seal's liver, porridge.

Luncheon - Pea soup (a woollen helmet was found in it just before serving!)

Dinner - Stewed seal & corn beef, cherry tart & cream.

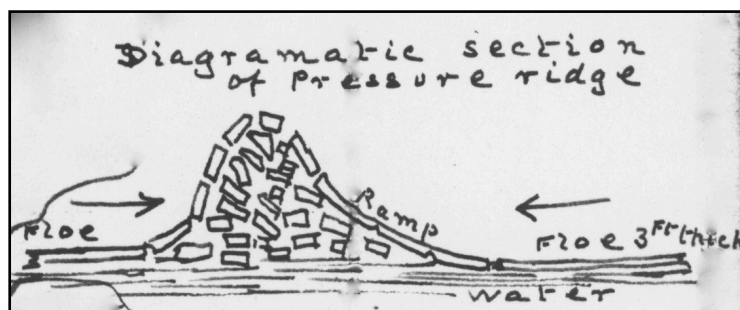
Thursday, 10 June, 1915

Temperature -28. The low temperature & fine weather continue. It is very pleasant & encourages me to get out & take more exercise than I have been doing of late. I need it & I find it does me no end of good. I went for a most interesting walk yesterday afternoon. I heard that some working pressure, i.e. ice actually in the process of forming pressure ridges, was to be seen about half a mile from the ship so set out to seek & see it.

It was very dark, no moon, & I soon lost sight of the ship. On reaching the place I heard a weird noise like an Emperor penguin with a sore throat & in the dim light saw what I took to be a very big specimen quite close to me. I prepared to attack it with my ski sticks but soon saw it was our delightful 4th officer Mr. Cheetham, some little way off, making noises like a penguin so as to attract any of these birds from the cracks of open water should there be any about. We often lure them out in this way. There are plenty about & we have caught about 25 of them in the last two months. They have been a godsend to us as far as food is concerned as we have always relied on the antarctic fauna to supply us with much of our diet. We did not, get any today. The "pressure" was really wonderful. Instead of the usual thin ice rafting over itself, it was great huge blocks of ice

from two to four feet thick weighing many tons each, broken out of a great floe & piling themselves up one on top of the other to a height of fifteen feet or so. At one spot the whole floe had bent up

without breaking & had formed a great ramp at an angle of about 20 degrees. There must have been a great open cavity underneath it. Ice ridging up in this way is called "tenting", because in its most



Courtesy of Dartmouth College Library

characteristic form it looks not unlike an ordinary gable tent. It freezes rigid as soon as it is raised.

Breakfast - Porridge, curried seal.

Luncheon - Vegetable soup.

Dinner - Roast penguin, Banbury cakes.

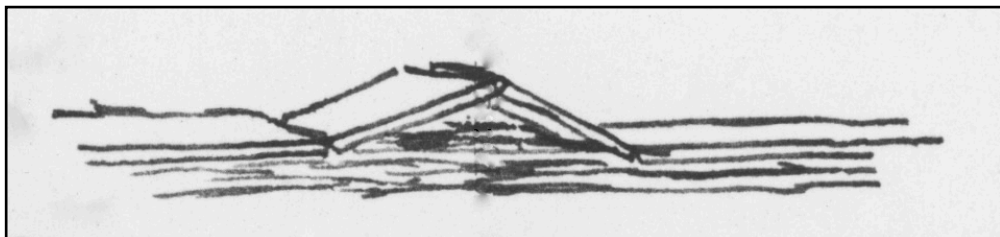
Friday, 11 June, 1915

Foggy overcast & a rise in temperature to -10.

We let down the biological dredge net & hoisted it in by hand. This hand hoisting is a big undertaking and occupies all available hands. About fifteen of us put the wire over our shoulders; it passes over a pulley on a derrick, and we just tramp away with it. When we get about a quarter of a mile away from the ship the wire is slipped round another pulley, a snatch-block, & we all walk back to the ship with it. In the dim light that prevails we must look a weird troupe, all dressed in motley polar costumes, some with Burberry suits, most of us with reindeer hair finnesko boots & all in various head gear, but all muffled up, for it is often cold work, waiting about for orders.

This afternoon Captain Worsley & I went out to have a look at the pressure ridges. There was some very typical "tenting"

Tonight we heard loud pressure in the distance, like the noise of



Courtesy of Dartmouth College Library

trains passing or a heavy sea on a rocky shore. I went out with my

hand lantern to examine it. It was an eerie walk all alone in the stygian darkness with the roar of the crunching ice all around one, but what I saw well repaid me. Large sheets of ice, eighteen inches thick were "rafting" over one another impelled by a mighty unseen force, whilst here & there where the edges met with hummocky obstructions the edges bent upward, snapped off & tumbled over on to the ice still sliding underneath them: pressure actually in the making.

Guided by the constellation of the Southern Cross, which seems to hang right over the ship I found my way back again easily enough, for I was out of sight of the ship.

It was worth seeing a sight I shall never forget.

Breakfast - Tinned fresh herring, porridge.

Luncheon - Vegetable soup, raw onion.

Dinner - Stewed seal & peas, ginger pudding.

Saturday, 12 June, 1915

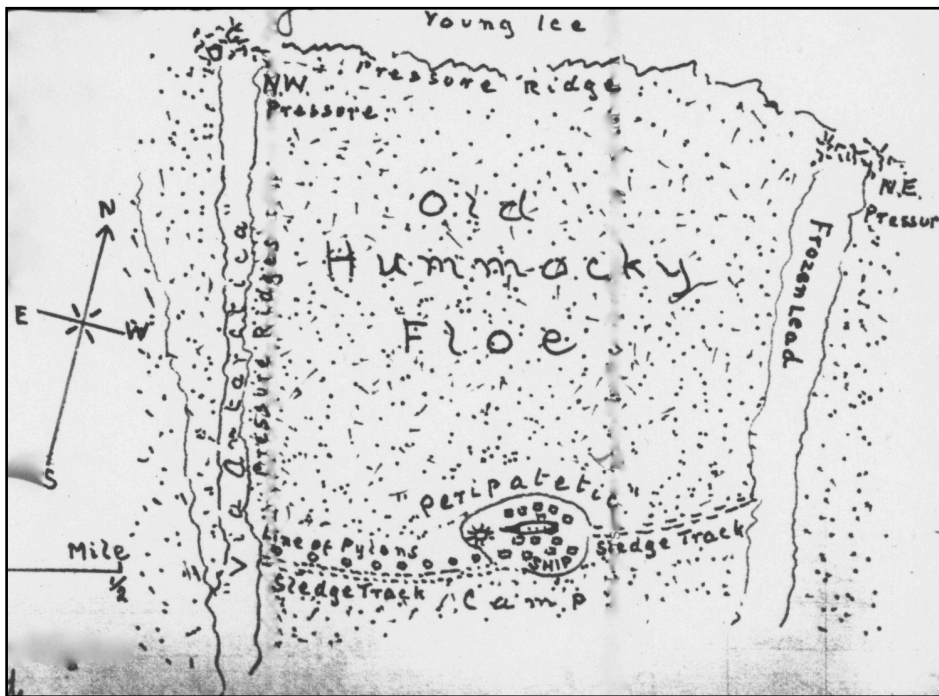
Weather same as yesterday but darker & foggier. +3.

Tonight we can hear loud pressure roaring not far off but it is too risky to go out & watch it. Firstly because it is such thick weather that one could easily get lost & secondly one liable to tread on new ice & go through in the dark.

I went out earlier this afternoon when there was some dim diffused light, and went over to see the pressure on our starboard quarter i.e. to the northeast. I then made across the hummocky floe to the pressure on our starboard bow, endeavouring to strike the frozen lead right ahead of the ship which we call Northumberland Avenue and "Via Antarctica".

Walking was hardly the word for it for it was a prolonged stumble from start to finish. One absolutely cannot see the irregularities of the surface at all. One minute one stumbles into a deep drift between two pressure blocks up to ones waist in snow with ones feet in slush or water & the next minute one walks bang into a hummock the size of a cottage which is absolutely invisible at a distance of a foot. It is due to the perfect diffusion of the very dim light. There are none of the usual shadows which throw the undulations of the surface into relief under normal conditions. The only analogy to it at home is that one builds a snowman it will be found that from certain positions and in certain lights he because almost invisible against a background of snow for lack of shadows, especially most twilight.

The diagram below gives some idea of our position with reference to the pressure & frozen leads.



Courtesy of Dartmouth College Library

Breakfast - Penguin steak, porridge.
Luncheon - Pearl barley broth.
Dinner - Stewed sheeps' tongues, Tapioca pudding.

Sunday, 13 June, 1915

Sir Ernest and Wild were out with a team of seven dogs and a sledge with four cases of petrol on it. Weight of petrol and cases about 400 lbs. Coming home they picked up a passenger and the dogs brought all three in at a pace of quite eight miles per hour!

Wild is our second in command and quite the most popular man (save our leader) amongst us. He has rare tact and the happy knack of saying nothing and yet getting people to do things just as he requires them. He acts as Sir Ernest's lieutenant and if he has any orders to give us he gives them in the nicest way, especially if it is instructions to carry out some particularly nasty work such as "trimming" coal in the bunkers or scrubbing the floor.

His competence is his outstanding feature; whatever there is to be done he knows just how to do it and yet he never appears to be dogmatic about it. His polar experience is unrivaled. He was with Scott's first expedition in the Discovery 1901-4, of which, of course, Sir Ernest was also a member. He took part in Sir Ernest's own expedition 1907 and was one of the three who accompanied Sir Ernest to within 100 miles of the South Pole and finally he was in command of the western base party on Sir Douglas Mawson's recent Australasian expedition to Adelie Land.

He is a direct descendent of Captain Cook, the great circumpolar navigator.

Forty years of age, he is rather small of stature, but as wiry and tough as they make 'em.

Eyes blue and very alert, hair rather thin on top. He has a fine bass voice, has been in the merchant service and in the Royal Navy, in which latter he had just passed for warrant officer when he left for the Discovery expedition.

Monday, 14 June, 1915

Very dark, even at mid-day. Colder -10 F. It was however so calm and mild that one member was out for about three quarters of an hour with just an ordinary cap and nothing over his ears.

This mildness, when the temperature is so low, is not easy to explain in writing. There are days when the temperature might be nearer 20 degrees, which feel infinitely colder than it does today.

The actual temperature is really no criterion whatever. It is pretty much the same thing when the temperatures go down to -40 degrees and -60 degrees. The lower it gets the drier it gets and the drier it is the less one seems to feel it. It seems to be a matter of relative humidity: for it is well known that the human body is far more susceptible to moisture and dryness of the air than to actual temperature variations.

Roughly speaking temperature and humidity seem to vary inversely.

Being over the sea it is probable that the air is a good deal moister than it is on land and in some respects, although the temperatures appear to be less strenuous than those usually encountered on shore in the Antarctic, it seems likely that we are submitted to more perceptible cold than if we were in a hut on shore. Moreover, the ship is far less draught-proof than a hut.

Some people, curse them, simply can't shut doors in spite of our sticking up elegantly printed notices "Kindly shut the door". They are deficient of the door shutting sense; born without it. There are two doors to the wardroom. The cubicle most adjacent to one of them has a poor time of it. Its occupants in the early morning lie in bed and freeze and swear vengeance on their inconsiderate comrades who leave the door open. It is a fact that the temperature in the cubicle is frequently below freezing point and where the draught comes it is much below.

Tuesday, 15 June, 1915

Still very mild, foggy and almost quite dark.

Much excitement was afforded us today by the dog drivers settling a controversy as to whose team was the fastest by putting them to the test.

The start was fixed about half a mile away from the ship and the teams raced home against time.

Sir Ernest acted as starter and competent time keepers checked the starting and arrival times.

The teams consisted of seven dogs each with a total weight of about 700 lbs. including the driver.

The order and times were Wild 2 min. 16 sec., Hurley 2 min. 26 sec., Crean 2 min. 39 sec., McIlroy 3 min. 2 sec., Macklin 3 min. 19 sec., Marston scratched.

The star was taken from the driver's order "Mush".

There are only four orders one gives to dogs: "Mush" (probably a corruption of March or Marches) to start; "Ha", turn to the left; "Gee", turn to the right and the usual "Whoa" for stop. There are generally a good many unofficial orders and expletives added, but whether they really do any more than give relief to the driver's exasperation when the dogs go wrong one is unable to say.

It is extraordinary how responsive a good leader is to the orders "Ha" and "Gee".

It is only the leaders who are trained to understand this order. They are no doubt selected from a very large number of dogs as being the most intelligent and they must require very considerable training. Probably they start as team dogs and the fact, that they pick up the "Ha" and "Gee" order independently of their leader is noticed by the driver, and from then onward they receive special training until proficient.

Absolutely dark all day. North wind & a big rise in temperature to + 13.

All our leaders were already trained when we got them, and, like all the other dogs, were specially selected.

If we had to train leaders without being able to select them from the teams in the manner indicated on the previous page, I think one could do it by taking an intelligent dog, harnessing him in the position of the leader & whilst running - whilst the team was on the move run beside the leader & give him the order "Ha" or "Gee" repeatedly & at the same time pull him or whip him over to the corresponding side.

This would be training the dog by making him take the line of least resistance which, in main principle, is the method by which all animals are trained.

These dogs are all said to have some wolf in them, though I must say, that many of them show no outward trace of it. There are many almost pure collies some half collie half sheep dog, some almost pure sheep dogs & a few partial St. Bernards and Esquimaux dogs. On the other had there are several which look more like wolves than dogs. This being the case one has no qualms in correcting the slightest disobedience with the whip. They are very quick to see & take an advantage on the slightest chance offering and, like a great many silly people, are liable to mistake kindness for weakness.

They are affectionate enough & when chained up to their kennels one can make much of them with impunity, but to do so in harness is quite fatal to their discipline.

Actually there is not one that is not to some extent a mongrel.

They are called "huskies". Perhaps this is a corruption of some Esquimo word. They are from the Hudson Bay district.

Breakfast - Corned beef, porridge.

Luncheon - Pemmican hoosh.

Dinner - Seal steak, Raspberry & red currant tart & cream.

Thursday, 17 June, 1915

A sledge with its dog team running over the limitless polar ice is a fine sight.

The team always consists of an odd number so that the leader can run by himself in front, the remainder in pairs behind.

Considering that the whole of the pulling gear merely consists of one long thong or wire to which the respective harnesses are attached by means of short single traces and snap hooks. It is wonderful how the dogs keep their places with as little confusion as they do.

Of course, they occasionally get a little mixed up, or their traces get one or two twists around the main thong, especially in very rough country, but it is only the work of a moment to either lift the dog back into his place or else to unhook him and disentangle his trace; but it is just whilst doing this that some other dog may commence to roll or walk about and get tangled. It is very seldom that anything gets foul whilst the sledge is on the move, though a dog may occasionally get over on to the wrong side of the main thong whilst running.

Curiously enough, although they are inveterate fighters on the slightest provocation, or without it, when in their kennels, it is very rarely indeed, that the members of a team make any attempt to fight amongst themselves when in harness. When they do it is a battle royal ending in a glorious tangle and a severe castigation all round.

Friday, 18 June, 1915

The dog harness we have is very neat, the same pattern that Amundsen used on his recent expedition to the south pole. First there is a miniature collar, much softer but very similar to a horse's collar; from this two web traces run to a small swingle tree behind the dog and to this swingle tree is attached the single trace that runs to the main thong.

There is also a light girth round the dog's middle put on quite loosely and fastened to a snap hook. Its function, together with some cross webbing, is to keep the traces up against the dog's flanks.

Although it means hard work and often a hard licking, the arctic dog dearly loves his harness and his excitement is great in the morning when he sees his master bringing it along.

He pushes his head into the collar with delight and exhibits the utmost enthusiasm to be off. The teams always start off like a whirlwind but soon moderate down to a steady pace which they maintain with great regularity and endurance, but they always increase the pace again when they know they are going home.

"Home" to them consists of a comfortable snow kennel to which they are chained the whole time except when they are out pulling. They have one substantial meal per day of either seal meat and blubber or dog biscuit and pemmican made up into a hot broth.

The kennels are all just far enough apart to prevent the dogs reaching each other and fighting.

Saturday, 19 June, 1915

Lat. 74.36 S.

Long. 47.3 W.

A beautifully fine day & fairly light. Temperature zero. I went for a fine sledge ride with Marston's team.

Strange as it may appear the dogs, as often as not prefer to sleep in the open outside or on top of their kennels. This may be an

inheritance from their lupine progenitors who perhaps avoid sleeping in any natural cavity (such as a hole in a tree) for fear of getting snowed up during the night by a blizzard.

Their coats are so long that they entirely insulate the dog from the snow & there does not appear to be any moisture produced in the little depression in which they elect to lie.

They sleep out thus in the coldest & most tempestuous weather with their very hairy tails over their noses, acting as respirators. The fact that they sleep outside in greater numbers during blizzards leads one to attribute this preference to the above suggested origin.

Certain it is that it is no hardship to leave them chained up in the open in any weather for any length of time. They are said to have wonderful powers of pertinacity. Cases are known of their having gone for over a fortnight without food & without being greatly emaciated. Fortunately our dogs are not likely to be subjected to any such privations.

The devastating disease & internal parasites, which at first ravaged the pack & caused the death of no less than 20 dogs is now a thing of the past, & thanks to Drs. Macklin & McIlroy & improved feeding there has been no casualty for over two months and all the surviving fifty have increased in weight from ten to twenty percent.

There are three bitches in the pack: each has produced a family; four, three & one respectively; there were more but they succumbed at birth by neglect or by being overlaid

Breakfast - Dry hash, porridge.

Luncheon - Vegetable stew.

Dinner - Cottage pie, pancake.

Sunday, 20 June, 1915

Unusually clear & light at noon. Temperature zero.

It is very pretty to see the dog teams coming in together. A dog team at work with their sledge is a most charming sight. If in good form they trot along at about eight miles an hour with their tails up & wagging as they go. As they tire, or if overloaded, they droop the tail a little.

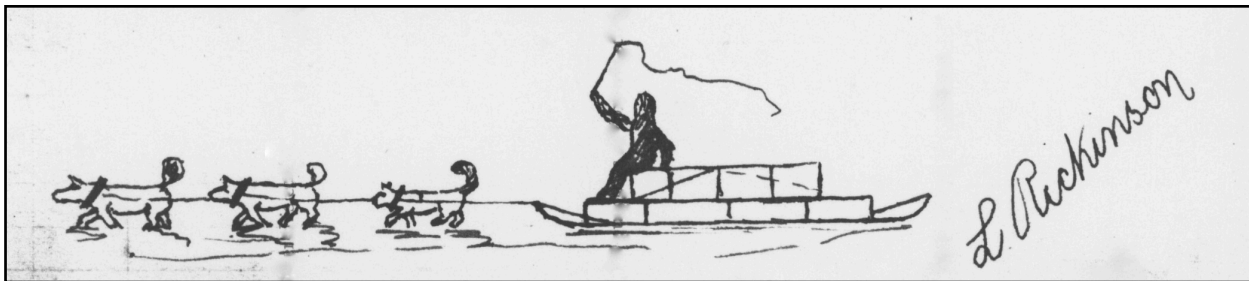
In ordinary circumstances with an average surface they will pull up to one hundredweight, or even a hundred & fifty pounds, for a big dog, for many miles per day on a ration of only about one pound of food daily.

As a physiological machine they are probably the most efficient of all quadrupeds equipage is the absence of any contact between the driver & his team.

There are no reins. The whole control is carried out by orders as previously mentioned and yet, given a good leader, an average driver can manoeuvre his team almost as sensitively as a carriage horse responds to the coachman's rein. It is truly astonishing what can be done amongst hummocks, where the slightest divergence from the selected route would inevitably capsize & possibly even damage the sledge.

The leaders seem to acquire a special sense of surface conditions & on the level they pick out the route for themselves to a large extent, always taking the sledge where there is least friction.

The remaining dogs in pairs keep very close to each other. Our chief engineer has kindly contributed this sketch.



Courtesy of Dartmouth College Library

Breakfast - Bacon, porridge.

Luncheon - Lusty's Kidney soup.

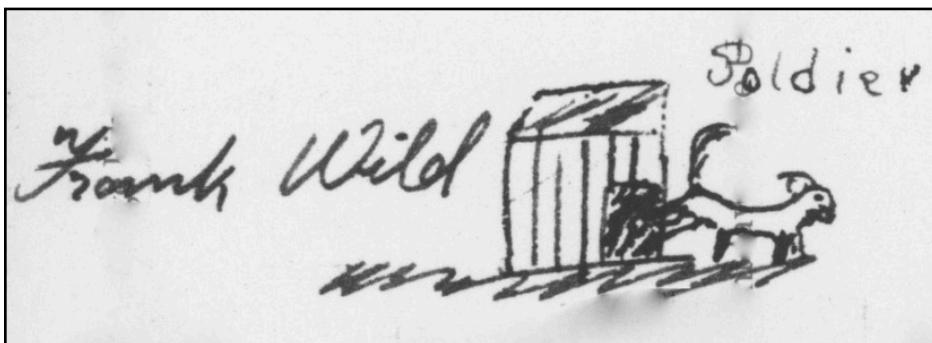
Dinner - Tinned Haricot, Mutton, Tinned Rhubarb & cream.

Monday, 21 June, 1915

Very strong wind from S.W. driving us northeast. We have gone six miles north in the last 24 hours.

This is an "etching" by Wild of "Soldier", the leader of his team, a

most elegant little red dog. He is the only dog of his kind in the pack. His coat is a rusty red with white markings, lop ears, a gentle demeanor &



Courtesy of Dartmouth College Library

very expressive eyes. He is quite the most intelligent dog we have but by no means the most obedient and an inveterate fighter regardless of the size of "the other dog".

At one time it was intended to name all the dogs with words beginning with the same initial letter as Sir Ernest's name, S, but this was found impracticable as we could not contrive sufficient suitable names with having several very similar ones. Even now there are several names very much alike in sound.

There are six teams of eight or nine each as follows:

Wild's team.

Soldier, so called from his red coat.

Bummer, an awful looking mongrel but affable enough.

Slippery Neck, who is always slipping his collar.

Elliot, was named after the engineer of the ship the dogs sailed in.

Lupoid, resembles a wolf somewhat, hence the name.

Blackie, a coal black & very friendly little animal.

Sub, any old thing.

Tim, a fine dog, part St. Bernard, probably brother to Surly.

Marston's team.

Steamer, (leader). Makes an odd panting wine, very friendly.

Hercules, the biggest dog, supposed fierce but is an old fool.

Judge, looks very wise & is so, but is too old to lead.

Dismal, has a most comical melancholy expression.

Janie, the smallest dog (52 lbs.). Always getting loose.

Wallaby, has some of the characteristics of his prototype.

Upton, named after Upton College who subscribed to the expedition.

The other dogs I will describe another day when I have little else to write about, but tomorrow is midwinter's day - the great orgie day of antarctic life.

Breakfast - Curried seal, porridge.

Luncheon - Pearl barley soup.

Dinner - Roast penguin, rice pudding.

Tuesday, 22 June, 1915

Mid-winter's Day, the great Antarctic festival, and a perfectly glorious day here. During last night it blew a hurricane from the south and we are now nine miles further north than we have been since we started drifting helplessly to and fro. This is satisfactory and encouraging.

We were up early (7 a.m.) this morning in order to decorate the room with flags. At 8 a.m. there was a fine flying aurora to the south, its usual position, and also the rarer phenomenon of a strong line of aurora to the north.

For breakfast we had Harris's tinned sausages, (we only have a very few of these unfortunately) and porridge with the much appreciated Viking unsweetened condensed milk instead of the powdered skim milk we usually have. For luncheon Bovril took the place of soup and was highly appreciated, followed by some Cheddar cheese and delicious tinned smoked salmon slices, called Lax and made in Norway. At tea we had a beautiful cake from Fullers and for dinner roast fresh pork with petits pois, concluding with tinned plum puddings and cream.

The event of the day was a really fine concert, as described later.

It lasted for over three hours during much of which even the most phlegmatic of us were convulsed with laughter.

The "make-ups" were outstanding notwithstanding the paucity of materials available.

Each one of us had to do something and as everyone took some trouble over their turns none of them were so very bad.

As our songs are mostly topical and some satirical we did not invite the sailors in, and they of course found the usual grievance in the fact, but no doubt they also found consolation in the ample tot of rum and gifts of sweets, fruits and tobacco which Sir Ernest generously provided for them.

Thursday, 1 July, 1915

Lat. 74, 8 S., Long. 48.0 W.

Very mild indeed. Overcast and dark. Temperature +4. We hauled in the dredge but obtained nothing but mud from 255 fathoms.

I have not done with James yet.

He is my cabin mate and as such he is a perfect pest for untidiness. I am bad enough but He is worse, much worse, (and he isn't even Irish). He "hangs" everything on the floor from his shoes upwards!

One saving grace; he does not snore; (but he says I do. It's a lie, I know, but it's the only way he can get a backhand hit at me.) One of his specialities is to let the sink under the wash-hand basin overflow whenever it is his week to empty it. Not only once but many times. I often tell him that it is in danger of overflowing but he only answers me with veiled insults, so last time we were flooded out (I told him what I thought of him and that it served him right) we had a bit of a fracas about it and called each other endearing names. (Finding it nearly full, I purposely overfilled it so as to teach him a lesson.) It was unfortunate that much of the water found its way into my clothes box and not into James's which (I had) pushed into the most likely position. This only made

me the more angry, I was livid with rage and emphasised my comments with unwonted acerbity.

We take it in turns, week by week to scrub the cabin floor, dust up and empty the sink. I hardly ever let it overflow. I am afraid we don't keep the cabin over clean, but as it is very dark and we seldom have a light in it, James having broken our lamp chimney the day after we settled in, it is not very noticeable.

Our bunks are one over the other. I seized the top one. When we lived in the "Rookery", Jimmy had the top bunk and used to wipe his shoes on the side of my bunk as he got in and out of his. That is why I determined to have the top one down here.

Breakfast: Penguins liver, porridge.

Luncheon: Pemmican hoosh.

Dinner: Roast seal, rice custard.

Friday, 2 July, 1915

Temperature +4.

Very mild but enough wind to make it cold. About the darkest day we have had as yet, as the moon has gone on a holiday.

Jimmy is always constructing things of his own invention, generally out of old biscuit tins. He made the "candle-extinguisher" already referred to and now he has made a thing which looks like a toy engine. It is really an electroscope. He thinks a lot of it and rubs an ebonite ruler with a cat's skin and then waves it about over the apparatus, says he has now charged it up, and squints through a little hole in the side, gets quite excited, says it is all right now and is holding its charge.

All I can see in it is a hair waving in the wind, but I suppose it is some good. Really he has some facility with a soldering iron but not so with carpenter's tools. When we settled down into our cubicle he said that he liked to see books about a room and considered a book-shelf an ornament so proceeded to take out a "claim" on the wall and make one. He made it. I said I could have made one better with my foot. This made him put it up out of pique and on the wall. He loaded it with books out of all proportion to its strength. It came down with a run a few days after. I believe he suspected me, but I am innocent, I swear. Anyhow I have since secured it firmly but it is a poor thing at best; (not a patch on my shelves at the back of the cabin though Jimmy says they are horrid and unsightly.) Still in spite of frequent altercations we do really get on very well together. We have one point in common; we never make our beds. We just get into them as we leave them, but then they are sleeping bags so it doesn't matter much. Thank goodness there are no sheets to wash. We sleep in our clothes more or less.

Breakfast: Salt fish, porridge.

Luncheon: Pemmican hoosh, nut food.

Dinner: Roast seal and peas, pickled walnuts, jam tarts.

Saturday, 3 July, 1915

A very fine day. Clear and cold with quite a good light at noon, streaks of red on the horizon giving promise of the returning sun. Marston and I went for a very long run on his sledge about seven miles or more. I had my skis with me and was on them most of the time, sometimes running alongside alone, more often holding on to a line fixed to the sledge, but for quite a long way I had one of the team, the big dog Hercules, out of the traces and let him pull me along behind the sledge in the manner of skijoring as the Norwegians often do behind a horse.

That one dog could pull me so easily is enough to say that the surface was particularly good for sledging, though it was very otherwise for skiing, except where there was a light covering of freshly fallen snow on the flat fields of new ice which occupy the recent open water areas. For the rest the surface of the snow was mostly as hard as polished ice and very uneven, so that one could maintain no sense of direction with ones skis, (i.e. the groove under the ski did not bite) and one was constantly in danger of crossing one's skis. To obviate this it was necessary to keep ones legs very wide apart to give the skis a chance to "wobble" a bit longitudinally, but even so I had a couple of undignified headers.

The experiment, however, was very interesting indeed. (I was distinctly fatigued when I returned as the distance was so much greater than my usual runs and I am a little out of training.) At first my feet got rather cold but later on I got so warm that I found it convenient to discard scarf, hat and gloves. My costume then was ordinary leather ski-boots, pair thin socks, pair stockings, combinations, pair knickers, sweater, ordinary blue serge coat and waist coat. This amply proves that as long as one is on the move and there is no wind one does not require any very special clothing in moderately low temperatures.

Breakfast: Curried seal, porridge.

Luncheon: Lusty's bouillon, raw onion, cheese.

Dinner: Corned beef pie, and carrots, tapioca pudding (nearly raw).

Sunday, 4 July, 1915

A great deal could be written about the surface of the snow on the polar ice pack. The actual surface in any one part varies, of

course, from day to day just as the surface of snow does in temperate zones, though with the difference that it is never actually subjected to any thawing down here. Wide variations of temperature below the freezing point, however, seem to produce relative effects on the surface. There is some reason to suppose that the actual adhesion between the minute crystals of the mass is greater in very cold weather than it is in temperatures only a little below freezing point.

Snow never falls in flakes here, but always in the form of powder, generally quite imperceptibly. Probably a little precipitation takes place every day.

The chief factor in moulding the surface, as distinct from merely covering it, is the wind. The fine snow-powder is whirled up by the wind and carried along in aerial suspension until it is deposited in the form of drifts behind every pressure ridge and hummock. For some reason some patches of snow are harder than others and often a hard patch underlies a soft one. The soft snow gets blown off and leaves the underlying patch; but the hard patches always present a rounded or curved surface, just as sand dunes do, when similarly eroded by the wind.

All these movement combine to give an undulating character to the surface, sometimes soft and sometimes hard, whilst ice blocks (also generally snow-covered) project here and there through the general surface and are called hummocks.

The approximate age of any portion of the pack can be easily estimated by the general appearance of its surface.

Breakfast: Bacon, porridge.

Luncheon: Pemmican hoosh.

Dinner: Roast fresh pork, red currant tart and cream.

Monday, 5 July, 1915

Lat. 74, 6 S., Long 49, 15 W. Temperature -18.

A beautiful day, rather a cold wind. Striking increase of light at noon. We could see icebergs 4 miles away. Hummocks may be anything from a small detached block, no bigger than one might see on a fishmonger's slab, which has got tossed up on the edge of a floe, to a great iceberg fragment ten or fifteen feet high, but in general they are the more elevated portions of a pressure ridge which have become isolated and may be made up of a confusion of ice blocks no more than two or three feet above the general surface. Being always snow-covered and rounded off by drifts, they seldom rise abruptly from the floe, as those who have never seen them might suppose, but it may rather be said that they form the eminences of the surface undulations of the floe.

Pressure ridges on the other hand, often comprise a long series of continuous hummocks and are not unlike hedge rows and banks and ditches, whilst very heavy pressure ridges may stand up fifteen feet or more above the floe exhibiting a vast confusion of great blocks like the debris of a city wall after demolition.

It is very hard to give an easily understandable description of all these ice and snow formations, but a glance at some of Hurley's really excellent photos will convey more than pages of writing, <mine especially>.

Sometimes the floe on one side of a heavy pressure ridge will be tilted up bodily or even bent up, and of these little slopes we occasionally find one suitable for ski running. <I have just been out for my usual daily run to the Kyber pass and back with my little dog friend Noel; he is a delightful little dog with a very long coat and is I believe especially

attached to me, judging by his demonstrations when he sees me. He is not, however, what is considered a first rate sledging dog.

We luckily got two Emperor penguins this afternoon.

Breakfast: Seal steaks, porridge.

Lunch: Pemmican soup.

Dinner: Macaroni seal, rice pudding.

Tuesday, 6 July, 1915

Temperature -21.

The best day we have had since the sun went. It was as light as twilight at noon. No wind.

The general health of all has been excellent, and now that midwinter is past, there is no reason to suppose that it is likely to be any otherwise. Scurvy is, of course, the one great danger, but our diet is so varied and includes so much fresh meat that I feel sure we shall have none of it now.

This is mainly due to Sir Ernest's insistence on everyone taking daily outdoor exercise.

There is no very definite objective in our walks other than their hygienic motive but we have several well defined tracks, & the Kyber Pass, the Flipper Berg, the new pressure or the latest open water crack generally constitutes the goal of our little peregrinations.

Roughly speaking one can only walk along the surfaces of the more recently frozen over "leads", for it is here only that the surface is comparatively smooth & the snow not deep.

Everywhere else the floe is broken up, hummocky & snow covered & if one tried to take a bee line across such a surface one is soon in difficulties & drifts up to the waist. At times, even, one stumbles into a snow covered chink between pressure slabs & disappears almost out of sight. There is no danger as a rule, except amongst quite new heavy pressure, where one might slip down a hole into open water or water covered with thin new slushy ice.

If one is on skis and the light is good enough it is quite possible & sometimes even preferable to take to the hummocky floes, but care has to be exercised to avoid the hummocks themselves and sharp ice points projecting up above the snow surface.

I find one can cross moderate pressure ridges on skis, but anything over six feet high presents an almost insurmountable obstacle.

Breakfast - Cold pork & beetroot, porridge.

Luncheon - Soup?

Dinner - Roast seal & spinach, roly poly (black currant).

Wednesday, 7 July, 1915

Temperature -10.

Another beautiful day, I went for a very long walk about 8 miles with McLeod, one of the sailors, taking Noel the dog with us. Out sledging as Marston's passenger again. Marston is much to my liking. Marston is busy with his painting, working up sketches by artificial light.

He is one of those solid comfortable people, square in his nature & appearance, who inspire confidence. His genuineness & integrity are his most outstanding features. He is, in a way, extremely versatile, being an excellent artist & a really good singer & actor

but he is hardly what one would call industrious, and yet when he has anything to do which necessitates calling into play any handicraft his work is always beautifully finished. He will make a dog whip better than anyone, is quite a passable carpenter, as a bootmaker, he soled and heeled a pair of ski boots for me far better than I could have got them done by any average professional repairer.

Certainly he never goes out of his way to look for work but when it comes his way he does it thoroughly, though he hardly breaks his back in doing it. On the other hand he is no shirker & always does his share when it is a case of "all hands".

I suppose it is his artistic temperament. His cubicle up in the stables is certainly the most comfortable spot in the ship and when sciatica gives me extra bad fits I hie me thither & enjoy a lounge thereon so far as my indisposition will allow me.

Sciatica is certainly troubling me a good deal physically & indirectly mentally. I am so afraid that it will render me unfit to undertake the trans-antarctic journey should Sir Ernest ask me to go with him next year. Until then I do not think it incumbent upon me to divulge my slight infirmity to him for so far it has never been so bad as to noticeably affect my activity or efficiency. Like me, Marston is married & has one baby girl.

Breakfast - Seals liver, porridge.

Luncheon - Carrot soup.

Dinner - Roast seal, Prunes & cream.

Thursday, 8 July, 1915

Temperature -20.

Bitterly cold with a strong wind from the S. The diffused light at noon was almost like daylight.

On mid{summer}winter's day I opened several packages from home and the contents have given me & others extraordinary pleasure. A fine plum pudding made by our cook Mrs. Stack afforded great gastronomic satisfaction to all on the evening of my last night watch but what afforded particular entertainment to all was the first five numbers of the Times History of the War which Mrs.W. kindly sent me.

Of course these set us thinking, some of us half regretfully, especially those of us who are in the service, for we cannot help but feel how our time is being wasted down here owing to the ship getting icebound.

On the other hand, they have given us food for conversation & conversation at food too. Anything to stimulate our dinner table topics is very desirable, for even with Sir Ernest's versatile conversational powers topics are occasionally reduced to exhaustion & debates degenerate into facetious attempts at witticism.

New items for discussion and positive facts to substantiate them are therefore very desirable.

Amongst my other discoveries are a box of chocolates in fine condition & a couple of Jigsaw puzzles sent to me by a friend of a friend - a Mrs. Haycroft. It was eagerly seized upon & have been constantly in use ever since first produced. I had had a number of others from the same kind donor but together with some beautiful artificial holly & flowers for Xmas from a Miss Dixon they were irreparably damaged by some seawater getting into the

locker in which I kept them. Some of the flowers, however, are still in use.

I also open a long letter from my wife which she had asked me to keep. (Crossed out)

Breakfast - Penguin steaks, porridge.

Luncheon - Pemmican & rice broth.

Dinner - Seal a' la mode, carrots, bread pudding.

Friday, 9 July, 1915

Temperature -25.

A beautiful calm cold crisp day with a fine "sun-glow" at noon. Went sledging with Marston. Very considerable changes have taken place in our floe during the last few days. On Wednesday, when I went for a long walk with old McLeod the denizen of the f'o'csle who is on the sick list with a frost bitten finger, we passed over at least five & twenty open cracks, most of them with open water in them & varying in width from a few inches to six feet or so. Some were much wider but being frozen over were strong enough to bear us & we were able to cross them in safety. So many manifestations of movement in the ice unmistakably indicated the approach of a gale & the gale came last night. Many cracks have appeared. Some of them are 20 ft. wide with open water. It is all calm & tranquil today.

It is curious that a strong wind is nearly always preceded by "pressure" in the ice. Cracks are really the opposite to pressure but when they occur in considerable numbers it is probable that pressure is going on not far away.

It always seems very extraordinary that there should be so much movement in what appears to be one limitless sea of ice. From the masthead the whole field of vision seem a solid unbroken expanse of ice as far as the eye can reach all around the horizon: but before the sun left us we saw, & no doubt when the sun returns we shall again see, that there are always a few small pieces of open water somewhere about, & in our turn, leads open quite close to us. It is wonderful how all this movement originates & is maintained but there seems no doubt that it is mainly due to the wind & modified by the ocean currents & configuration of the nearest land.

Sometimes we remain for days almost in the same spot but last night we were being carried along broadside firmly fixed in our floe at several miles an hour.

Breakfast - Dried salt fish, porridge.
Luncheon - Rice & pemmican hoosh.
Dinner - Roast seal & peas, sago pudding.

Saturday, 10 July, 1915
Temperature -23.

A splendid day. So calm that one hardly felt the cold at all out, but it is cold in the ship.

Our course and position are really becoming interesting. We are much further to the west than any ship has even been before and have actually drifted over what has ever been before and have actually drifted over what has for years been supposed to be land. In 1863 (?) a navigator called Morrell claimed to have sailed along coast in this very vicinity. His proofs & details were unsatisfactory, his observations were admitted to be erroneous & Morrell-land

was always considered a little doubtful, but at the same time it is shown in most charts.

We have now been able to demonstrate the non-existence of its southern part at any rate. This alone is of the highest geographical value & quite justifies our existence in this spot. It is not, of course a complete compensation for Sir Ernest's terrible disappointment at getting thus ice-bound but it to some extent reconciles us to our misfortune. The ship has lately gone to the westward by leaps & bounds & seem to continue to do so. There is a remote possibility that she may be in some drift which will carry her through some hypothetical strait between Graham's Land & the continent of Antarctica & so make the sensational discovery that Graham's Land is an island & not part of the continent as has always been supposed. We are now practically in 50 W. Longitude & Graham's land is 60 W., only about another 150 miles or so. A glance at the map will show at once how interesting our position is becoming.

As soon as we have the sunlight back we shall be able to get a longer range of vision from the masthead & we confidently expect to see land again soon.

Meanwhile the indications & advent of the returning sun have put us all in a good humour and antarctic amenities are subsiding correspondingly.

Breakfast - Dry hash (seal & ox tongue), porridge.

Luncheon - Yesterday's soup (diluted), fresh raw onions, lime juice.

Dinner - Boiled salt beef & carrots, mince pie!

Sunday, 11 July, 1915

Temperature -23.

Another beautiful clear day though not nearly so light as yesterday. There was much pressure going on so Captain Worsley & I went over to watch it.

I have often mentioned Captain Worsley, our skipper. He is a vital spark. His activity & keenness are extraordinary. In accidentally wintering here he is achieving a lifelong ambition. I am sure he must be invaluable as a helpmeet to Sir Ernest. A New Zealander by birth he is of Yorkshire extraction. About 44 years of age he looks ever so much younger & is far more nimble than most men half his age.

Although some fellows are a little inclined to chaff him rather uncharitably about his little whims, his excess of zeal & his over anxiety to make sensational discoveries, yet there is no doubt that everyone recognizes his undoubted suitability for the post he holds. Personally I have always found him a sound counsellor & firm friend and I have great respect for him, but it must be admitted that some of our members are experiencing sub-mission to discipline for the first time and do not perhaps realize its advantages quite so easily as those of us who have spent a good many years in H.M. service.

The skipper's principle whims were his eagerness to announce at every port at which we touched on the way out that this was, "Sir Ernest Shackleton's flag ship Endurance bound for the Antarctic on a voyage of discovery", and his persistence in declaring that the cabins etc. on board are so stuffy that he had to sleep outside in the passages, which is what he actually does; but he is very much "all there" in spite of these quaint little peculiarities, and after all who had not their own idiosyncrasies when one comes to examine oneself: it may only be the hoarding of string & paper or

leaving the plums in ones cake to be eaten last, but we all do some queer little things peculiarly our own.

Breakfast - Bacon, porridge.

Luncheon - Lusty's Bouillon, cheddar cheese.

Dinner - Roast fresh pork, mashed fresh potatoes, pears & cream.

Monday, 12 July, 1915

Temperature -12 to -21.

It blew a strong gale during the night, damaging the wireless aerial, but, as we have obtained negative results from it, Lt. Hudson dismantled it today for good. There are numerous new cracks. For the last three days I have been out both morning & afternoon watching the formation of pressure ridges, & have been fortunate enough to hit off several regions of maximum pressure, so to speak, just at the moment of their maximum activity.

Glaciology is an extremely interesting subject, especially down here as there are so many factors to take into account and so many opportunities of observation. "Pressure" in the making is only one of the manifestations of ice movement, but certainly not the least impressive. When the movement is so rapid as to be readily visible, the operation is, to me, absorbingly thrilling. I simply stand still & watch it for half an hour at a time forgetful of the prevailing cold until an aching toe on the verge of frostbite bids me bestir myself.

To see huge blocks weighing many tons snap off the edge of a floe like breaking a biscuit, & then to watch them being gently but irresistibly raised up on end & poised one on another as if they were mere lumps of sugar being pushed up from below by a

mighty unseen hand brings home to one in a directly graphic manner ones own puniness amongst the mighty forces of nature.

The desperate but unavailing resistance of the ice itself and the effortless evenness of the motion are the most impressive features of ice pressure.

One could write so much & convey so little of the process, whilst a moments glance at the actual phenomenon enables one to realize what is so hard to express in words - the vast impressiveness of it all.

Breakfast - Seal steak, porridge.

Luncheon - Thin soup.

Dinner - Roast seal, tapioca pudding.

Tuesday, 13 July, 1915

Temperature -32.

Fine day and not a bit cold in spite of the low temperature. Wind & temperature rose after noon & it then felt much colder. "Pressure" may be any thing from light to very heavy, depending on both the thickness of the ice & the amount of movement. Light pressure may take place amongst very thick ice, when there is only enough movement to cause the two sides of a crack to rub together & chafe the floe edges, but what is usually understood as light pressure is where the movement takes place amongst thin ice. This movement may be very considerable and rapid as well but it would still only be light pressure for obviously thin ice (less than 3 or 4 inches) yields at once and cannot form anything in the way of a big pressure ridge.

The impelling force is always a general movement of vast areas of ice in a certain direction under the influence of wind or currents or both.

The pressure takes place whenever the moving mass comes in contact with a stationary mass. In other words, the movement of vast ice fields does not, of course, occur simultaneously throughout the field. If one supposes the wind to be the activating force, it will necessarily impart a certain motion say from south to north to the ice in the vicinity of a given spot, owing to the ice over any immense space being thin in comparison to its superficial area it is readily conceivable that any amount of collapse & crumpling may take place before the motion has been imparted to another portion of the ice field a hundred miles to the northward.

Breakfast - Cold roast mutton (tinned) & beetroot, porridge.

Luncheon - Pemmican & rice hoosh.

Dinner - Roast penguin, currant pudding.

Wednesday, 14 July, 1915

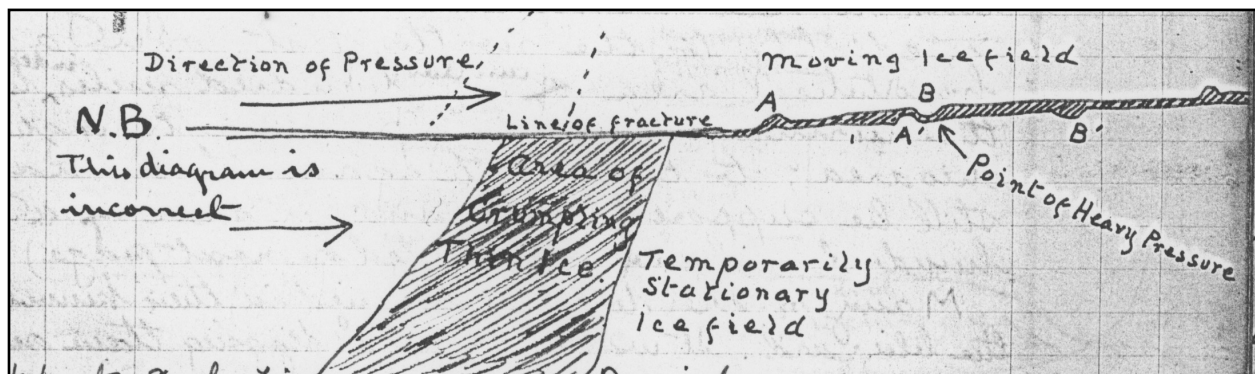
Lat. 75, 48 S., Long. 48, 50 W.

Temperature -33.

It is blowing a howling blizzard. Almost impossible to remain out in the open for more than a few minutes. It is easy to see why "pressure" will take place at any spot or line in the ice field where the ice is quiet thin, such as a recently frozen over "lead", for the thin ice becomes virtually as a pole in compassion between the moving portion & the stationary portion of the ice field, and as a pole would do under such circumstances, it simply buckles up & swaps, "tenting" or rafting as the case may be according to the degree & amount of the pressure, thickness & condition of the ice & duration of the action. That is the simplest case: where a line of

weakness, such as a recently frozen "lead" runs at right angles to the general direction of movement, but where these lines of weakness run obliquely to, or even in the direction of the movement, the effects will be modified accordingly. As often as not the whole frozen "lead" splits along its entire length and the relative motion between its opposite sides will be that of sliding or sliding & pressure according to the degree of obliquity.

Should the split be very nearly in the direction of motion, pressure may occur only when one projecting piece on the one side happens to come in contact with a projecting piece on the



Courtesy of Dartmouth College Library

opposite side as they slide past each other, as shown in the rough sketch below which represents an area of many miles.

Thursday, 15 July, 1915

Temperature -25.

Blizzard continues, but we were all out shoveling snow. Many of the dogs were buried in their kennels by the blizzard. It was cold work digging them out. Whereas light pressure may occur spontaneously anywhere in thin ice preceded by cracks across the thick floes. These cracks are of rather obscure origin. Some think they may be due to a general contraction over large areas

following upon a decisive drop in temperature, others to a general state of tension in the ice due to a reassertion after pressure, but whatever the cause of cracks across thick floes may be the cracks as often as not open out into "leads" as much as ten or twenty yards wide in a single day, freezing over almost as fast they open out.

When the sources of pressure again predominate, these "leads" begin to close up; at first light pressure takes place amongst the thin ice on their surfaces, but as soon as the original edges of the lead abut heavy pressure comes into operation. As a rule there is very little wind whilst pressure is going on, but the wind usually follows shortly afterwards so much so that we generally regard pressure as presaging wind.

The whole sea of ice is apparently forever on the move and from my own incompetent observations I am inclined to think that something of the following kind happens. Suppose a wind to be blowing from south to north and blowing over an area having a depth of say, one hundred miles. This wind will set in motion the ice over which it blowing, this latter will in turn tend to set in motion the ice lying immediately to the north of it, over a hypothetical area another one hundred miles in depth to this area; to the north again there may still be supposed to be another area a hundred miles deep. As the weather, the temperature & the meals remain practically the same now week in week out there seems no further need to refer to them daily.

Breakfast - Curried seal, porridge.

Luncheon - Pemmican & rice hoosh.

Dinner - Roast seal, sago pudding.

Friday, 16 July, 1915

As the weather, the temperature & the meals remain practically the same now week in week out there seems no further need to refer to them daily.

This then gives us three areas extending in succession from south to north for a distance of one hundred miles each. We may for simplicity call them "A", "B" & "C". "A" being the most southerly. Meanwhile the area of wind shifts to the northward say 100 mile & affects area "B" which now becomes the stationary portion. The wind continues to move forward & the respective areas become moving, pressure or stationary areas according to the position of the area of wind.

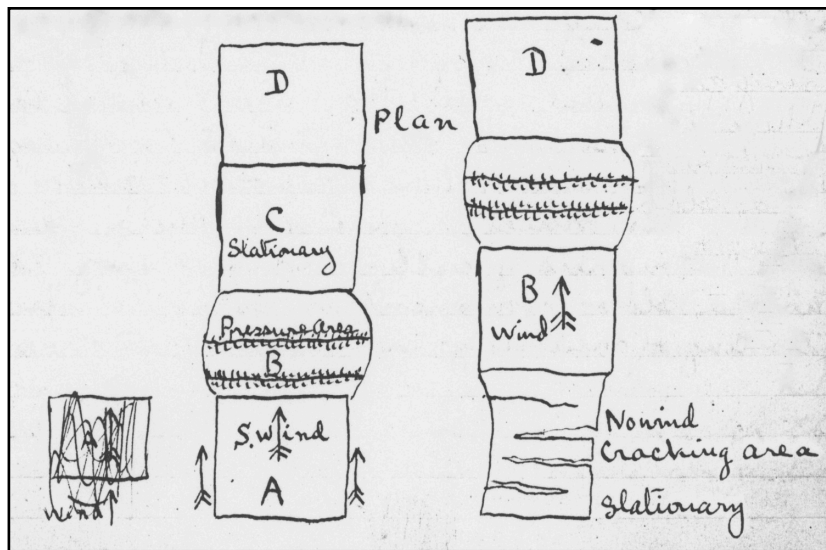
Now there is nothing illogical in supposing that as the wind area leaves each succeeding ice area & sets in motion the area immediately to the north of it each area in turn may become an area of tension which would account for the formation of cracks other circumstances being favourable.

The following diagrams will give some idea of the theory which I advance very much open to correction.

Woe betide the ship that happens to find herself in one of the pressure cracks and broad-side on to the direction of motion. If the ice is at all thick a nip & destruction by crushing are the inevitable consequence.

Saturday, 17 July, 1915

Some of the "leads" which have opened recently are of singular interest for they have cut through some of the thickest portions of the floe & in so doing reveal in cross section the actual thickness of the latter. In many cases they have cut clean through



Courtesy of Dartmouth College Library

big hummocks & heavy pressure ridges besides many sastrugi & drifts. It is surprising how straight some of them are. They convey the impression of canals frozen over, many of them being about the width of an average canal. Others however which have been alternately opening & closing have now very ragged edges.

Many of them are quite short, no more than half a mile long others seem to extend indefinitely.

When pressure is taking place it usually occurs only at a few points at a time and not along a whole line of weakness but the more localized it is the more rapid the movement.

This is best explained by considering the thin ice covers a "lead" as offering little or no resistance compared with the promontories of the heavy floe. When these projections come in contact they have to take the whole force of the movement like buffers, but being thick they are unyielding & only collapse under terrific force, therefore when they do so there is tremendous splitting &

upheaval which continues until two other points take up the struggle elsewhere & so it goes on.

There is much noise on these occasions but it varies greatly and in thin ice with a slow movement it is sometimes merely a ticking & creaking sound.

Sunday, 18 July, 1915

The movements of the ice & their causes are an unfailing theme of conversation at table.

The following is amongst the theories advanced as the reason for the occurrence of cracks & "leads" the following has the merit of probability.

Assuming that an area of ice is in motion past another area stationary or moving less slowly, then where projections on the respective areas engage the contiguous edge of the moving area is impeded or even arrested temporarily whilst its main mass continues to proceed. It is reasonable to suppose that this would set up all sorts of torsional strains in both areas and cracks & a general opening up ensue.

When one considers how very thin the ice really is relatively to its immense area it is quite easy to reconcile what actually occurs with the above theory.

Again it is probable that certain areas develop a slight rotary tendency for the same reasons & this alone would be conducive to splitting up.

The immense areas one has to deal with make it a little difficult to conceive how such slight variations in motion & direction can

produce such comparatively large movements, but it must be remembered that the masses & their momenta are correspondingly vast.

As one is never really sensible of any general motion of the pack or ice field, for it is too slow to be visibly noticeable, one does not at once realize that when one part is in motion another part fifty to a hundred miles away may be at rest, and that between the two places there are areas having every intermediate variation of speed.

Monday, 19 July, 1915

Two other causes of cracks may also be noted.

Any current of air (i.e. wind) must have a maximum velocity along a certain line in the general direction of the wind, presumably its centre line.

For instance a current of air 200 miles wide will probably be moving faster at a point 80 miles from either edge than it is at the edges themselves. The ice along this line will therefore be impelled at a faster rate than the adjacent ice; this causes a difference in momentum between the various parts of the ice-field some going forward whilst other parts lag behind.

Movements of this sort might even be so localized as to cause a certain area of ice to be split by a moving section acting virtually as a wedge.

Another of splitting certainly due to direct impact or pressure of one floe against another. We call these cracks "biff-cracks". When a floe is thus in a state of direct compression it will either split in

line with the direction of the force pressing against it or else form lines of pressure ridges at right angles to the line of force.

The very simplistic case of pressure ridges forming is when a wind begins to blow over a stationary ice-field. The wind tends to set the whole field in motion but owing to the very great inertia of so large an area a great deal of crumpling in the form of pressure ridges will take place in that part of the ice-field first subjected to the action of the wind before the momentum of the remoter parts of the ice-field is overcome.

Tuesday, 20 July, 1915

Reverting once more to pressure ridges & their causation one is rather liable to slip into the error of supposing that the wind continues to blow in only one direction. What may happen is that as soon as a strong steady wind has set in motion an area of ice that ice will continue to move by its own momentum for a considerable time after the actuating cause has ceased to operate; meanwhile the wind may veer round or spring up in a contrary direction at quite another place forming a new force tending to oppose or divert the moving ice-field.

No check or change of direction can be accomplished without the formation of cracks or pressure ridges or both.

Another case of some interest is where a moving field of light ice is driven against a phalanx of harder ice; before the motion is transmitted to the hard ice & its inertia overcome no end of pressure ridges will be formed all along the line which marks the difference in thickness of the ice.

The above theories are the sum total of all our opinions on the subject. This really seems to have dealt with the phenomenon of pressure exhaustively, if not very systematically.

No very good parallel can be demonstrated on a small scale, but I think that a film of very thin ice on a pond would behave in a similar manner to these polar ice-fields if we were to replace the wind by a plank used to push the ice forward. The portion of the ice nearest to the plank would, no doubt crumple up & form miniature pressure ridges before the whole of the ice on the pond were in motion. To eliminate the effects of coastal adhesion which certainly influence the ice movements in the Antarctic one might suppose that the ice on the pond.

Four Emperors were obtained today a great addition to our larder.

Wednesday, 21 July, 1915

As, I think, I have before mentioned, pressure generally manifests itself in three ways, "rafting", "tenting" & "piling up".

The former usually takes place when the movements occur in fairly thin ice. I have not observed true "rafting" in ice over six inches thick. It simply means that one sheet of ice slips over or under the other; usually the moving portion appears to slip underneath the stationary portion, but it is no always possible to tell which is the moving portion as the apparent movement is only relative & one is apt to surmise that the stationary portion is the part on which one happens to be standing at the moment.

The other day I was watching some pressure and it appeared to me that the adjacent floe was sliding towards me over our floe. On stepping onto the moving ice the exact opposite appeared to

be the case, it seemed then that I was standing on a stationary floe and that our floe was sliding underneath the ice I was on.

"Tenting" I have previously described. It occurs when the edges of two floes, i.e. two sides of a crack, of course, in pressing against each other, rise up without actually breaking off before the movement ceases.

Tenting may be complicated when after a good deal of ordinary pressure & piling up, or rafting, has taken place, but when the final movements give rise to tenting. There will then be a "tent" over a pressure ridge.

One other & less frequent form of "pressure" is where the opposing edges are much snow covered & the movement reciprocating; the result is then a crack filled with frozen slush or brash very treacherous to step on.

We again got the fine bag of four Emperors today which would seem to indicate that there is a number of these fine birds about.

Thursday, 22 July, 1915

Pressure is always accompanied by more or less noise as is only to be expected.

Heavy "piling up" will at times make such a roar that one can not make oneself heard above it. On the other hand the sound of light pressure is often no more than a mere creaking or even an intermittent ticking, but if the motion is fairly rapid it may amount to a considerable groaning noise.

I know of nothing quite like it that I could liken it to. The creaking of a bough of a tree is something of the same sound, but there is

no music in the ice-groan. It is, rather, uncanny & intimidating. As a rule the noise does not persist in any one place for long. It generally seems to alternate between two or three places a few hundred yards apart, lasting for ten minutes or so at each place. It seem that these different places act as the outposts or buffers of the floes and that the two floes adjust themselves gradually each promontory taking up the whole of the pressure in turn &, so to speak, fending off the rest of the floe.

The crumbling away of the faces of these promontories constitutes pressure.

As to the rate of movement I can only say what I have seen, "rafting" moves at speeds up to six inches to a foot a minute, but the two sides of a crack may move longitudinally past each other at nearly double this speed. The night watchman distinguished himself tonight by putting ice on Sir Ernest's fire by mistake for coal & put the fire out to the accompaniment of much spluttering, steam and, I believe, some swearing. It happened in this wise. Outside Sir Ernest's door are two similar boxes one filled with coal & the other with broken ice for the kettle. In half light the watchman, who is a bit of a blind bat, used the wrong box. It appears that someone had "amusingly" exchanged the usual positions of the two boxes.

Friday, 23 July, 1915

It is a pity that I have here to resort to pencil. It cannot, however, be avoided for I am writing lying on my back & I find that my fountain pen refuses to "fount" in an inverted position though it always seems to do so quite well when in my pocket.

Sciatica has at last got the better of me.

Sir Ernest, in the nicest way, tells me that I have been imprudent in my dress; not wearing enough clothes, and although I can honestly say that I have never once felt the cold, I daresay he is right. Certainly I must admit that I have been out a good deal lately when the thermometer stood at about -30 in just the ordinary things one would wear on a mild cold day in England.

Until now my costume has always been as follows 2 pairs socks, sea boots, combinations, pair thin tweed knickers (generally a pair of flannel tennis trousers over the knickers) brown sweater & ordinary cloth jacket. When I go out I simply put on a woolen scarf, two woolen helmets &, of course, one, or sometimes two pairs of mits.

As I have no outdoor duties, at present, I am able to please myself whether I go out or not & therefore I practically never find the need of Burberry clothing.

If the weather is such that the dog drivers all go out in Burberry clothing then I either remain on board or else only go for a short run in the immediate vicinity of the ship.

Anyhow they ascribe my present attack to going about insufficiently clad especially as to my boots. I rather think however that it is due to the icy cold draught through the cracks of the door against which I sit at meals, and perhaps it was brought to a climax by my being out in the blizzard for rather a long time a week ago today, shoveling snow, though I had my Burberry's on then. I felt I was in for it on the 17th but as I had some extra urgent work shifting packing cases from the deck into the hold I stuck it for a day & went sick on the 18th.

My breakfast, luncheon, dinner consisted of "slop".

Saturday, 24 July, 1915

I am afraid I am in for a rather bad attack of sciatica. I have now been immovable on the flat of my back for a week, quite unable to sit up or even raise my head much.

At first I was in my own bunk lying in indifference & almost complete darkness all day, but it was draughty there and knowing warmth to be the best cure Sir Ernest had me taken up to his own cabin and placed in his own bunk! Here I have lain in the utmost comfort but severe pain for the last fine days whilst Sir Ernest has coiled himself up as best he could on a narrow little bench much too short for him!

He is a wonderful man. He takes the minimum of sleep; seldom more than three or four hours a night, sometimes less, but how he manages to get even that on such an uncomfortable couch is a puzzle.

His parental kindness in having me here at all needs no comment. Instead of reproaching me for being ill at all, which he would be quite justified in doing, he looks after me himself with all the tender care of a trained nurse, which indeed he seems to me to be far more than merely my leader & master for the time being. He attends to me himself, making up the fire day & night, making me a cup of tea during the night if I happen to say that I am thirsty, reading to me & always entertaining me with his wonderful conversation, making me forget my pain by joking with me continually just as if I was a spoilt child. What sacrifices would I not make for such a leader as this who gives up his own comfortable bed to cure a sick subordinate; but this is typical of him.

Left to myself I cannot help reproaching myself for being ineffective, especially just now when there is so much to be done. I feel, however, that I am done for as far as the expedition is concerned. I had some little hope that I might be chosen for the trans-continental party next year. I am afraid, now, that that is out of the question for I cannot but be regarded as physically unreliable & it would be too great a risk to take such a one on such a journey.

Sunday, 25 July, 1915

On this & the six succeeding days I was unable to write so am writing these pages up a fortnight after their actual date.

I must first set forth my deep gratitude to Sir Ernest for having me up in his own cabin, to which fact my recovery is almost solely due, for sciatica is I believe very unamenable to drugs & as far as my experience goes heat alone gives relief & induces a cure. It would seem at first that heat was not easily procured in the polar regions, but this is exactly what I have been able to obtain in Sir Ernest's cabin almost better than I could have had it in a hospital in England.

Sir Ernest's cabin is extremely small (about 9 ft. x 5 ft. or rather less) and is heated by a little bogie stove. The stove though a small one is really too large for so small a room and by closing the door the temperature soon runs up to 80 or even 90. Uncomfortable as this may sound it is exactly what I required and Sir Ernest, who certainly does not enjoy such torrid heat endured it night after night for my benefit.

It is an indication of the strange effects of a polar climate that in spite of the thermometer just over the bunk standing at 80 a kettle of water standing on the floor froze solid entirely through

the slight draught finding from the small crack under the door, and tins of milk in the cupboard under the bunk were likewise frozen solid.

If the door is left open for a few minutes the temperature drops twenty to thirty degrees in two or three minutes.

The cabin opens into the main deck passage. The temperature in the passage is always about zero.

Monday, 26 July, 1915

Lat. 72.51 S., Long. 47.40 W.

Sir Ernest has a wonderful character. Living (not dying thank goodness) in Sir Ernest's cabin & being with him so much all day I have had unique opportunities of studying his wonderful character in a way that I never could otherwise have done.

It may be rather mean of me to take advantage in this way of the accident & Sir Ernest's kindness which places me in a position to do so, but no doubt those who read this will not mind that; and Sir Ernest won't see it.

Perhaps the most remarkable thing that may at once be said of him is that, unlike most people, there is no underside to his character. One could not be on more intimate terms with him than I have been and yet, to my surprise, I find that he is precisely the same in intimacy as he is in public, in fact his outstanding frankness is, to my mind, his most characteristic attribute.

I have no hesitation in saying that whatever he says to his subordinates in approbation, in chiding or in giving advice or information is exactly what he really means, and at the same time

he is always tactful without being in any way noticeably circumspect. He bears no resentment in private nor is he ever guilty of the slightest favouritism.

These qualities alone endear him to one and all and inspire that respect & confidence which make him pre-eminently the leader he is.

He is always careful to give his comrades the impression that he has absolute confidence in them, each in their own special sphere & yet he keeps a watchful eye on all.

For instance, I am in charge of all the provisions - a very responsible post - for on the accuracy of my issuing and checking the ultimate comfort of all largely depend, and yet, although I know I am far from perfect at such work, Sir Ernest has always left me entirely to myself to carry out the distribution of the provisions as I think best.

Of course, I have frequently asked his advice & sanction on certain points but apart from that he has never once come "spying" in my storerooms nor even asked me to render an account of my stewardship.

The reliance he places in one is certainly by far the best incentive one could have to do one's work conscientiously, and one always feels that if at any time it was found that one was wanting in one's efficiency he would at once go right into the matter and appoint someone else to take over one's job - the most awful reproach that could befall a member of an expedition.

His intimate knowledge of many subjects connected with an expedition and his wonderful power of applying himself wholly to any branch when the need arises place him in a position in which

he can afford to look on complacently on our respective duties so long as we are duly performing them in accordance with his wishes.

On the other hand he is particularly shrewd, and a little inclined to be suspicious, as if at one time someone had endeavoured to throw dust in his eyes.

It would be almost impossible to "bounce" him & woe betide anyone who tried.

Wednesday, 28 July, 1915

As to his more personal attributes he is sincere in the extreme, and his intensity of purpose is best shown by his determination to fulfill his obligation to his supporters in bringing this expedition to a successful issue in spite of this crushing set back, which would dishearten almost any one but him & cause them to abandon the whole project in disgust.

He is obviously clever & versatile or he would not be what he is, but, though very well read, he is not what one would call academically brilliant and yet, as is well known, he has a fine literary style.

As an instance of this, it may be mentioned that his last book, "The Heart of the Antarctic" is the only book in use throughout Holland officially as an English reader in all the schools, it having been chosen at once for literary style & descriptive writing.

I too have always considered it a most delightful interesting & readable book - not that my opinion is worth much.

Being a very rapid reader, Sir Ernest reads a great deal and is particularly fond of poetry. He has an extraordinarily good memory and can recite pages of almost any known poet, many of which he has read through but once or twice.

Likewise his memory serves him in good stead in all the details of every day routine. I notice that if one asks him casually about one's duty etc. over night, he invariably refers to it in the morning, though at the time he seems to have taken hardly any notice of the request.

He associates with us at table without the slightest distinction, in fact I often think that he errs on the side of over familiarity and does not rebuke members who occasionally address him with a lack of respect that makes my "service" blood run cold.

I think it is that he does not approve of too strict a discipline on an expedition & does not expect it from fellows who have never been subjected to it. In this he is the very reverse of Captain Scott and maybe he is quite right, though I beg to differ on the point myself.

By the same token he is extraordinarily ready to agree with one on little matters and does not resent, but even acts upon, advice submitted to him by the humblest of us. As an instance of this, he has been sitting up all night practically every night for the last 12 days on account of the unsettled state of the ice, and in consequence he has slept in the after-noons. Being dead tired at 6 p.m. he has once or twice said to me that he was too done up to go down to dinner, but when I have suggested to him that he should go down for the sake of order and because the members expected to see him there he has at once seen the force of this and sacrificed his much needed rest for the sake of setting a good example in observing the routine.

How few leaders would do this & much less at the instigation of a subordinate; but he is forever sacrificing himself for the sake of policy.

He can do with less sleep than any one I have ever known. He can go for weeks with never more than three hours sleep in the twenty four.

For breakfast, luncheon, dinner, tea, "slop" is all there is for me.

Friday, 30 July, 1915

Sir Ernest has a very powerful physique combined with a robust constitution. He always seems fit & strong and yet he takes very little organized exercise.

About his only undesirable idiosyncrasy is a strong propensity to unnecessarily hustle things. He will quite suddenly give an order, say, to shift the whole of the cases out of one of the holds and immediately has the whole thing done with a rush and a scramble when there is not the least need of undue hurry. This has happened, much to my discomfort, several times. The result is that after weeks of labour in getting things in order one suddenly finds everything completely muddled up and nothing get-at-able, and one has to start all over again getting things straight. He is just the same in other departments, expecting things to be done in an unreasonably short time.

It might be thought that he did so merely by way of testing one's efficiency but I am of opinion that this is not at all so. Strange to say, in spite of this, nothing gets on his nerves more than seeing anyone else attempt to do anything by a "tour de force".

At table he is the life & soul of the party - a genuine humourist, with an inexhaustible fund of delightfully amusing yarns, inimitably told.

Amongst his other curious contradictory characteristics may be mentioned a horror of figures & statistics and yet the ability to wrestle with computations of all sorts, rations, wage bills & navigation.

He certainly seems to possess in a high degree that power of overcoming his natural prejudices by a mere effort of his indomitable will.

Saturday, 31 July, 1915

This week has been one of the greatest anxiety to Sir Ernest. The ice has been splitting in very direction and large cracks have now made their appearance close alongside the ship.

Several times we have felt severe shocks just as if the ship had been shaken by an earth quake and as these shocks have been accompanied by rumbling noises the illusion has been the more complete. I can see plainly that Sir Ernest is much exercised by the possibility of danger that may arise if the ship gets nipped in a focus of ice pressure, which looks rather likely. As an indication of the seriousness with which he views the situation I may mention that he got me to draw up a complete list of sledging stores for 28 men for 72 days & has since had these stores placed on deck in case of our having to abandon the ship should she founder in the ice. This seems a very wise precaution, as we might be able to sledge over the ice to either Paulet Island where there is known to be a large depot or even to Wilhelmina bay where there is believed to be a whaling station. It would be a big undertaking but

no doubt under Sir Ernest we should do it living on seal & penguin until rescued.

He has hardly taken any sleep for a fortnight except three hours in the afternoons. As he is obviously in need of proper rest I have prevailed upon the doctor to have me shifted to the "stables" into Marston's bunk so that Sir Ernest can have the use of his own bunk, & I am glad to say that I am to be moved this evening.

One or two members declare that they saw a bit of the sun's edge thrown up by refraction above the horizon. Be that as it may, it is getting delightfully light at noon now.

We got one emperor today.

Sunday, 1 August, 1915

It is exactly one year today that the ship left London & it appears that the events of today bid fair to live as long in our memories as those of Aug. 1st 1914 for the long threatened break up of the floe, in which we have been included so many months, is now taking place. Lying ill in bed, I am able to jot down these notes while the actual disintegration of the ice is now in progress, whilst all hands are with desperate energy bringing the dogs on board & making such other preparations as our sorely tried leader considers necessary.

From my corner of advantage in the deck cabin I am able to hear, observe all that is going on.

There is no confusion, no shouting, no noise except the barking of the bewildered dogs & the soft patter of the fur shod feet of the men as each dog is rapidly removed from his kennel on the floe & brought to his appointed place on board.

The work is carried out with the smoothness & precision of an evolution on a man o'war.

As I commenced writing the first dogs were being tied up aft, now they are coming up amidships, right beside me. The ship is once more full of dogs. It took 8 minutes only. The wind began to blow last night, & Sir Ernest, as he has so often been of late, was up all night, not that the night was any more threatening than many that have gone before. Early this morning Sir Ernest went into the "stables" to tell Mr. Wild, who sleeps there, that fresh leads were opening with heavy pressure all round.

Breakfast passed off as usual, but immediately after as Sir Ernest was standing on the floe just ahead of the ship the ice parted at his feet.

He came in at once & was telling us about it & we were, as usual, discussing the situation, when suddenly we heard a loud rumbling & the ship began to heave. We knew at once what this meant and within a minute all hands were on deck; within ten the dogs were all onboard as above detailed.

The floe has split up in every direction, all the familiar landmarks are either passing from us or being engulfed in the general cataclysm meanwhile the groaning of the ship in the pressure & the roar of the splitting ice is incessant whilst the ship lists over from side to side.

Monday, 2 August, 1915

Temperature -5.

Still blowing hard from S. (force 9) about 40 miles per hour steady 50 miles an hour in the gusts. Overcast with drift.

The night has passed off without further untoward incident other than the general state of activity into which all hands have been thrown by the necessity of taking stringent precautionary measures, keeping nocturnal vigils and accommodating ourselves to the new order of things. Until further orders each member takes an hours watch on deck & this is kept up continuously day & night.

The tramp of the watchman along the deck all night and the hourly relief of the watches makes an unaccustomed disturbance which will take some getting used to.

The gale continued to rage with undiminished force throughout the night. There were a few creaks & groans accompanied by some vibration but the ship has not righted herself, still remaining keeled over at an angle of -6.

This is not very much of a "list" certainly, but when one feels the ship suddenly lifted up bodily, keeled over 8 degrees to starboard & as rapidly thrown over to port again by a solid force, in every way different to the rolling of the open sea, I must say that the person who is not filled with a certain amount of apprehension hardly exists.

For my own part, it reminded me exactly of the great earthquake on the Riviera which I experienced as a child. The movements, the sound & the sense of potential disaster were almost precisely similar.

Lying comparatively helpless on my back in bed I was unable to witness the general cataclysm which seemed to have so much impressed all my comrades.

I gather from their reports that at first the floe split terrain along the line of the ship. For a moment the ship lay afloat rising a little to a new water line at the same time.

A brief stillness followed & therewith apparently irresistible force the two sides of the ice edges of the divided floe advanced towards each other as if to crush the ship as in the jaws of a vice.

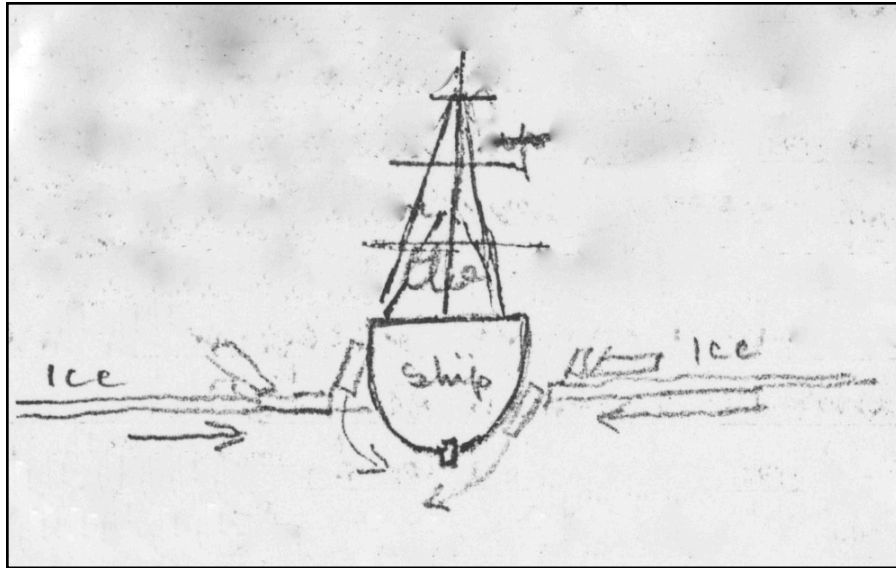
At first it seemed as if the ship was going to check the advance of the ice, for it seemed momentarily to come to rest, then with an uncanny creaking of beams the ship "found herself". A few beams split slightly others opened up & the knees & several of the trenails (wooden pegs in the ship's side worked in or out in adjusting themselves).

Tuesday, 3 August, 1915

Temperature zero.

The wind slackened at 8 a.m. but freshened later and continued to blow strong from the south. Still overcast.

In taking the first shock of the pressure the ship certainly "gave", but the "give" was probably no more than was necessary to take up the slight amount of slack that can not be avoided in the building of a wooden ship. As soon as this was over, or, as they say, as soon as the ship had "found" herself, the strain was taken up evenly throughout the hull and immediately the ship passes through her moment of trial. Who could tell what was going to happen? Would she rise up on the ice, as intended by her designers, or would the ice gain the mastery & stave in her bulwarks? To those of us who could watch it all in progress it was a breathless moment, as, with a final scrunch that made the whole ship shimmer, the six-foot-thick ice split all along at about six to ten feet from the ship.



Courtesy of Dartmouth College Library

The oncoming ice gently but firmly pushed up into the air the great blocks so formed & again advanced insidiously underneath them. Again the ship withstood the onslaught, but this time the blocks were everted & by some curious process, seemed to slip down the ships side & pass more or less harmlessly underneath her.

By a continuation of this there was soon a large quantity of ice below the ship so that she was presently raised up in a cradle of ice & canted over as before mentioned.

As soon as the ship seemed to be clear of immediate peril, attention was directed to the dog kennels & the little settlement of igloos of various kinds with which the ship has been surrounded for so many months.

One by one these began to pass out of existence. Stout wooden dog kennels were just whisked up & crunched to pieces against

the ships side of between blocks of in like so many empty match boxes.

Some of the igloos were partly constructed of heavy cases each containing four petrol tins. These were similarly crushed up, the tins bursting & the petrol pouring out. It was well no one threw a light overboard or there might have been a very serious conflagration with so much liquid petrol floating about.

A sounding gave 250 fathoms.

Wednesday, 4 August, 1915

Temperature +3.

Clear. The sun rose about 11 a.m. & set at 1 p.m. It would have been visible these last two or three days for a few minutes daily only the sky has always been too obscured to see it. It is very cheering to have the sun back but other things have taken up our attention so much lately that I am afraid we have become almost indifferent about the sun.

Besides we had got so accustomed to its absence, and it does not perceptibly increase the light yet nor will it produce much warmth for quite another month. We probably shall not see the midnight sun this summer as we did last for though the sun might be above the horizon at midnight for about six weeks in the latitude in which we are now 72 S. the period lessens rapidly as one goes north, until at the antarctic circle 66.31 S. the sun is seen at midnight on only a single day, Dec. 21st - midsummers day & north of the circle the phenomenon does not occur at all, and we confidently expect to have drifted north of the circle long before midsummer.

We seem, at last, to have begun to make a more constant drift to the north. During the gales of the last few days we have travelled nearly one degree (60 miles) to the north and seem likely to keep this up now. It is all very uncertain as yet when we shall actually be able to make good our escape.

Until the ice breaks up generally we must be content to drift with it entirely at its mercy.

Forty tons of coal is all that we now have left & this alone must impose strict limitations on us.

We certainly shall not be able to afford to do anything like the amount of ice-ramming that we did on the way down, for it is a very coal-consuming expedient and we shall have to husband our coal in the highest degree.

Once we refill the now empty boiler & get up steam we shall have to keep the fires constantly going, whether the ship is held up by the ice or otherwise, to prevent the water in the boiler getting cold or freezing.

Filling up a boiler & getting up steam is a long business & cannot be done repeatedly as a matter of routine.

Once the decision is made to get up steam it would be a serious consideration if we were again held up for a month or so waiting for the ice to open up.

Thursday, 5 August, 1915
Lat. 71.42 S., Long. 49.21 W.
Temperature zero.

Fine & clear. The sun is now well up. I too was up for an hour pottering about, having a good wash etc. and saw the sun for the first time for over three months, just 100 days. It has been a long, but not altogether unpleasant, night. It is dead calm today.

Things are settling down to their normal routine once more. Nothing untoward has occurred since an extremely long crack passing within about a quarter of a mile of the ship has been observed from the masthead, but like numerous previous cracks of this description it will probably freeze up again. At any rate it has not opened out into a lead, which shows that the ice around us is still in a state of compression.

The crack itself is probably the direct result of compression & very likely runs in the direction of the compression. Ice in tension may be assumed to form cracks in directions at right angles to the general line of tensional force; such cracks usually open up at once into leads.

It is like old time having the dogs all on board again, though they are rather noisy shipmates. For the first two days they seemed rather overawed & were very quiet; this might have been due to the fact that they had to weather the blizzard without any shelter, as their kennels being all broken upon the floe & having none ready on board there was no alternative but to chain them up in the open on deck if we were to rescue them at all. It certainly seemed to upset their sense of routine for not only did they fail to bark as usual at dinner time but they even forgot to give vent to their usual howling morning & evening "song".

They have made up for it since with a vengeance. They are now all provided with good kennels again.

Four emperor penguins were caught today which is a fortunate thing as we are rather short of seal meat for the dogs & do not expect to get any more seals until September.

We have suddenly drifted from off the submerged "continental shelf" of comparatively shallow water (about 200 fathoms). That we have followed for so long, and are now in deep water 1140 fathoms today.

Friday, 6 August, 1915

Lat. 71., Long. 42.

Temperature -8.

Very fine again. Sunshine from 10:30 a.m. to 1:30.

All around the ice is congealing once more into one firm vast solid ice field & the ship is again the nucleus of a well defined floe having an area of about a square half mile.

That is there are well marked pressure ridges and frozen leads all around us at a distance of four or five hundred yards from the ship which will probably form lines of least resistance & will therefore be the ultimate boundaries of our floe when the piece that we are in finally separates out from the rest on the general break up of the whole ice field.

Hourly watches are still being maintained: the tramp tramp of the night watchman as he scrunches along the snow covered deck just over ones head all night is rather disturbing especially as I find it difficult enough to get any proper sleep at all at nights just now.

Some of the dogs too are rather noisy at night. They are continually on the fidget, rattling their chains. Fights are frequent.

The instant a fight commences every dog comes out of his kennel and starts barking excitedly & before the watchman has had time to beat the combatants into submission there are generally one or two secondary fights in progress. One often has to give them a terrific hiding before they will stop fighting. It is a wonder that the heavy blows they sometimes get do not do them serious injury.

It is a pity that they have this unbreakable propensity for fighting. It makes one like them so much less than one would otherwise, for, but for that, they are fine little characters, plucky hard working & willing.

As far as possible they are arranged with regard to their mutual friendships, each dog being between others that he can tolerate, for one soon gets to know which dogs are friends or the reverse. They seem to make well established friendships & antipathies amongst themselves. Owing to limits of space the kennels are all constructed adjoining each other, and it is impossible to chain them in so closely that they are entirely unable to get at each other, hence fights do occur as already stated in spite of all our precautions.

Another Emperor put in an appearance today & failed to return to his family. They really shouldn't come running such risks as this.

Saturday, 7 August, 1915

Temperature zero.

Fairly calm. Some wind from S. in the evening. Fine sunshine from 10 a.m. to 2 p.m.

Sir Ernest must have gone through terrible anxiety lately though he is so inscrutable that no one could have detected anything unusual in his manner. I know for a fact that he did not once lie

down for three days & I don't think he has undressed for ten days. Even when he did condescend to rest a little it was only for about three hours at a time.

He thinks of nothing but his responsibility for his subordinates & he never troubles to spare himself.

One cannot help but admire him.

He seems always on the alert, especially at night, having certainly been up every night for the last three weeks.

All hands are beginning to feel the restriction of being confined on board once more as they have been since the ice-quake of Aug. 1st., or it is a good thing that permission has now been given for members to go out on the floe again for exercise. The recent cracks & interstices amongst the pressure ice having all frozen up solid again & the likelihood of any immediate break up appears improbable.

Another emperor penguin was secured today. Poor things they have to pay dearly for their inquisitiveness. They come walking towards us in a dignified manner probably believing the ship to be a rock & us penguins.

It has to be done though. Our need is the greater. I have been up for an hour today. It has been rather a strain on me as I find I am surprisingly weak and, by comparison with what I was, I am now very thin, having lost nearly two stone in weight, I should not have thought that such a simple sort of complaint could pull one down so much. Perhaps the drugs I have been taking - Salicylate, Morphia, Arsenic & Strychnine have all contributed to my present weakness.

We still continue to drift northward at a good rate. It is very satisfactory.

Sunday, 8 August, 1915

Temperature +2.

Overcast. Some wind from S.E.

The dog teams are beginning to go out again and Tom Crean has commenced to train his four white puppies, born 6th Jany, whose mother Sally is about to have a fresh litter.

Their father Samson is a fine strong dog but a horrible cringing yapper when it come to having to correct him with the whip. The puppies take after him to the full in this respect; they yell if one looks at them menacingly, so we expected a fairly lively scene when they would be first put in harness & we were not disappointed either.

The first day (6th Aug.) that they had the harness on they merely lay on their backs , waved their legs in the air & screamed like pigs.

Each received a sound hiding, was lifted up, carried to the sledge & put in its proper place. Three old dogs were harnessed in front & the signal "mush" given. Then ensued a most harrowing spectacle of puppies being run over & scattered in all directions by the on-coming sledge whilst the air was rent with piercing howls.

After a few repetitions of this performance & a certain amount of corrective chastisement it seemed to gradually occur to them that if they ran with the old dogs and kept in front of the sledge they would at least avoid being run over.

By today, however, they have quite come to realize what is wanted of them & are even pulling a little so it show that it does not take very long to train a dog to pull a sledge.

Although technically puppies they are really quite grown up now & weigh 70 lbs. to 80 lbs. each they are heavier than a third of the dogs in the pack.

Breakfast - Bacon, porridge.

Luncheon - Lusty's Bouillon.

Dinner - Roast pork. Stewed plums & cream.

Monday, 9 August, 1915

Temperature zero. A beautiful day. Very mild. Now that we can again take walks on the floe we can obtain conception of the effect of the recent upheaval. I was up for three hours for the first time for over 3 weeks, was able to take a little walk out on the floe.

I must say that the sight that met my gaze absolutely amazed me.

My comrades very much understated the effects of the debacle in describing it to me.

The general dislocation of the old landmarks and disruption of the floe are truly extraordinary.

Not only does the ship appear to have been forced forward about a hundred yards through ice six feet thick but an adjacent floe seems to have pushed itself through our floe for the same distance bringing with it the old sledge track with its row of guiding pylons and at the same time our floe being very solid seems to have in

itself resisted the strain to the utmost & to have been pushed through several other floes before it finally broke up & telescoped.

The ship is at present lying in the very middle of the biggest pressure ridge I have yet seen.

The blocks composing it are four and five feet thick of solid ice and many of them must weigh forty & fifty tons. How this little ship survived amidst such a mighty upheaval is almost inconceivable. As it is she lies very much on her side with her rudder cracked & surrounded by great piles of ice blocks rising as high as her decks.

We used to step out onto a comparatively level floe, now, on stepping outside, one finds oneself immediately in a labyrinth of ice blocks & gullies & scarcely a level stretch any where near the ship.

My walk has done me a world of good but I find I feel the cold more now that I am so thin.

Breakfast - Penguin steak, porridge.

Luncheon - Bean hoosh, plum pudding.

Tuesday, 10 August, 1915

Temperature -3.

Cloudy.

Yesterday all the dog teams went out - the old sledging routine being resumed. The dogs were kept out for about two hours to "shake them up" a bit as they were beginning to get very obstreperous through being too well fed, getting no exercise and on account of the mild weather.

Their pugnacity varies entirely with their food warmth & work.

On short rations, in cold weather & doing hard work they are as peaceable as one could wish them to be.

When the weather is mild they ought to have less food & more work and vice versa.

I have been watching Tom Crean train his puppies. One can hardly say that it is all done by kindness; perhaps the kindest thing to say that it is done by persuading the dog to take the line of least resistance - the line of most resistance, of course, being the driver's whip. After much shouting & yelling his team dash off in a whirlwind of snow & oaths. All the same it is really wonderful what Crean has already done with these four unruly little animals which he has brought up with almost a mother's care.

In spite of this he certainly does not spare them when it comes to learning their "raison d'etre".

There are also two little brown puppies coming on, about four months old. These are under Dr. Macklin's charge. There were four but two died of congestion of the lungs. Their mother is a pretty little brown bitch called Sue.

The only other bitch, Sadie, a pie-balled collie had half a dozen premature pups of which one survived under Dr. McIlroy's care. It was a most amusing little creature; we called it the guinea pig in token of its resemblance to one, but unhappily it died of eating shavings etc. two days ago in the second month of its life.

Breakfast - Tinned curried rabbit, porridge.

Luncheon - Macaroni cheese.

Dinner - Stewed tinned mutton, jam roly-poly.

Wednesday, 11 August, 1915

Temperature -4.

Fine but a cold wind. I have been up for four hours again & out for one, but being so thin & weak I feel the cold in a way I have never done before & I shall have to get acclimatized to it all over again. This phase is really of considerable interest for I think that it proves conclusively that one really does become acclimatized to the cold down here. I have previously referred to the great increase of weight we have all made and I think it seems clear that this increase of weight is mainly formed by a fattening of the subcutaneous tissues.

One thus acquires a layer of fat all over in much the same way that the indigenous fauna of these latitudes, seals & penguins, are provided with a layer of blubber under their skins. Blubber is merely a very oily fat.

On seals the blubber is about an inch to an inch and a half thick, on penguins at most an inch. The main use of the blubber is to prevent loss of heat when in the water, as radiation in the water is so much greater than radiation in air, water being a very good and air a very bad conductor of heat.

It seems also that both seals & penguins are able to draw upon their blubber as a source of energy during the long periods that they spend out of water without food.

Penguins certainly go without food for seven or eight weeks during the breeding season and the moulting season.

I am pretty sure that if one was suddenly transported from a temperate zone to the polar regions one would feel the cold severely but by becoming acclimatized to it gradually as we have one is hardly cognizant of the steady decline of temperature as winter proceeds.

As for the supposed hardship of cold most of us I would far rather spend the rest of my days in this climate than once jump through the ice into the Serpentine with the hydromaniacs who bathe there every Christmas day.

Breakfast - Seal steaks, porridge.

Luncheon - Bean & pemmican hoosh.

Dinner - Seal stew, stewed figs & cream.

Thursday, 12 August, 1915
Temperature +2.

A beautiful day. Very mild, no need to wear gloves out. This is rather unusual.

The dogs are rather troublesome again. It really seems that some of them have got a little bit "above themselves" since returning on board. Perhaps they look upon it as a sort of promotion coming to live with us humans! Anyhow not content with fighting amongst themselves one of them, Surly (who is really not a bit surly) bit his master Tom Crean today whilst out sledging.

This is quite unprecedented. They have occasionally bitten some of the crew but there has never been a case of master-biting before. Poor Surly got a very severe hiding for it but Crean had to have the bites attended to by the doctor - one on the arm and one on the thigh.

Occasionally a dog gets loose by breaking his chain or slipping his collar. When this happens there is instantly a pandemonium of barking and the loose dog has to run the gauntlet of the other dogs and is lucky if he gets off with no more than one or two lumps of fur bitten off. On the other hand the three bitches and the young dogs (late pups) are always loose & move about at will & quite unmolested amongst the kennels, and it is extraordinary how readily all the dogs discriminate instinctively with out so much as looking up, between these privileged dogs and a dog that has got loose improperly.

Many of the dogs now have such thick coats that when they get fighting, unless they get bitten in the face, nothing much happens as a rule except bits of flying fur. Their aim, however, is to bite the other dog in the face. Sometimes two will get their jaws locked. When this happens it is not always easy to separate them. Occasionally we have to have recourse to pepper.

Breakfast - Cold sheep's tongue & beetroot, porridge.

Luncheon - Thick soup (very poor).

Dinner - Roast seal, baked potatoes, tapioca.

Friday, 13 August, 1915

Temperature zero. Minimum -11.

Another fine mild day. Not a breath of wind; still we continue to drift northward at six miles or so daily. The exact distance may be seen from the latitudes; by subtracting one day's latitude from another we get the distance drifted per diem. It is only the last two figures of each day which should be thus subtracted as these five the odd miles; the first two figures give the nearest parallel of latitude to the north of us. If it so happens the sub-traction

involves numbers where the first two figures differ then it must be remembered that each degree equals sixty miles & so it is a case of borrow sixty in the subtraction.

For example one day the latitude is say 69.55 while on the preceding day it may have been 70.05 - 69.55 equals 10 miles.

The miles are geographical miles, of course. A geographical mile is about 6080 feet or about 267 yards longer than an ordinary mile.

The fecund Sally has just given birth to eleven pups, seven of which are dead, either overlain, stillborn or frozen at birth whilst waiting for their brothers, still she has four and really that is quite enough in this hard climate. She is just the type of an old washerwoman with a large progeny, whilst pretty little Sue is the flirt and Sadie is even worse. Sue is thinking of setting up house again we hear although she still has two sturdy four month old pups at her heels.

These two pups under Dr. Macklin's care will make very fine sledge dogs. They are both brown with very good heads, though no particular breed.

Breakfast - Salt fish, porridge.

Luncheon - Pemmican hoosh.

Dinner - Corned beef-cottage pie, bread pudding.

Saturday, 14 August, 1915

Lat. 70.55 S., Long. 49.30 W.

Temperature +4.

Mild but some wind and snow.

The death knell has sounded and the decree has gone forth and Judge, Satan, Sandy, Sooty & Roy have all been mercifully despatched by Wild with his revolver. This was partly to put them out of their own misery and partly owing to a shortage of seal meat. In other words the weakest dogs were killed in order to provide more food for the remainder. Needless to say their carcasses were not actually used as food for the others.

Everyone regretted poor old Judge's untimely end. He was the doyen of the pack & such a wise friendly old thing: but it was well that he went, for the post mortem revealed a liver riddled with the vile red worm.

Sooty too had one kidney occupied by this pest. Satan was mangy and generally out of condition being covered with kennel sores. Roy was infested with tape worms in the intestines but Sandy was found to be apparently sound, he was, however, in poor condition and never any real use as a sledging dog. Still it is sad to see little dogs who have worked so hard served us so well & stood so much having to be got rid of like this.

It is unfortunate that we are getting rather short of seal meat & unless we get some seals up soon we shall have to fall back on the few remaining Spratts biscuits and sledging dog-pemmican.

At present each dog gets 1 lb. seal meat & 1/2 lb. blubber every third day and on all other days 2 1/2 lbs. of a hoosh consisting of broken biscuit, scraps, dog-pemmican, blubber etc. They are not at all keen on the meatless days.

Breakfast - Seal steak, porridge.

Luncheon - Green pea soup.

Dinner - Salt beef, mashed fresh potatoes, mince pie.

Sunday, 15 August, 1915
Temperature -9.

Cold, damp, overcast windy & generally unpleasant, but I am gradually getting better in spite of it.

I was up for twelve hours yesterday and out for nearly two and am to get up for breakfast for the first time tomorrow and if all goes well shall return to duty on Friday next. That day is decided upon because it marks the end of the roster of daily messmen, each member has had to take my duty in turn for one day each whilst I have been laid up.

I shall be very glad to get back to work again for nothing is more wearying than prolonged inaction at such a time let alone the mental self-reproach which the knowledge of ones in-efficiency arouses within one.

Sir Ernest is so good about it that it certainly makes it much easier to bear.

With so much time on hand I find I have been thinking about things at home a great deal more than usual.

It might be supposed that one was, so to speak, dying to have news from home, news of the war etc.

This is not entirely the case. After a time one becomes so indifferent as to exactly when one will get news, it is enough to know that one will eventually get news.

I think one's desires seem to be centered on much more trivial things. One may long for a glass of beer, another for roast-beef &

so on. The glass-of-beer-longing is pretty well universal, even amongst the temporary teetotalers. Personally I would just as soon have a glass of home made lemonade or would even prefer a glass of new milk, though no doubt I think I would like the beer as well, but I especially long for an egg, an apple & a tomato.

Breakfast - Bacon, porridge.

Luncheon - Lusty's soup, raw onion.

Dinner - Boiled ham, petit pois, apple tart & cream.

Monday, 16 August, 1915

Temperature -10.

A beautiful bright day but decidedly cold.

As I take my walks abroad and contemplate the terrific convulsion of the ice that I see around me on every side it seems more & more of a wonder that this little ship lived through it. Imagine great blocks of ice as large as the concrete blocks used to make the breakwater at Dover heaped up by a mighty force one upon the other like lumps of sugar and one gets some idea of the configuration of our immediate surroundings.

The whole topography of our floe has so altered that it is almost impossible to tell where the old landmarks have gone to - the well known hummocks, old berg fragments, igloos, sledge tracks, pylons etc.

As a compensation for this wholesale effacement there are numerous interesting miniature ravines amongst the pressure ridges, but it is too lumpy to walk for long through the blocks. Close along side there are several huge upended blocks of solid

blue ice weighing from 30 to 50 tons. Everywhere the ice blocks are at least four feet thick often as much as five feet.

I have been much interested in watching "Jock" Wordie, our genial geologist, cut a large square hole through the ice for the sounding machine. First he cut out a square pit about a yard square and four feet deep, then he picked out a narrow trough all round the bottom edge. Suddenly this trench began to get slushy showing that he was within an inch or two of the water. At this sign he jumped out and using a long crow bar pierced a hole through the trench. The water spurted up like a fountain nearly to our feet. He then with an ice chisel rapidly cut through the trench all round, where up on the central block of ice floated up to the surface whence he removed it.

It took about three hours work in all.

Breakfast - Penguin steak, porridge.

Luncheon - Bean soup.

Dinner - Stewed seal, french beans, Rice pudding.

Tuesday, 17 August, 1915

Temperature -25.

Very fine but cold (to me).

This weather is very delightful. It fills the ship with sunshine & every one is happy. It is wonderful how the little differences that took place during the long dark night & developed into mild estrangements simply melt away under the congenial influence of sunshine.

It is a very good thing it is so for the immediate future promises to be even more trying than anything that has gone before for the simple reason that one feels somehow that the sunshine ought to melt all the ice and so set us free at once. Of course this is a most unreasonable expectation for we really know perfectly well that nothing of the sort ever happens before November or even December but the feeling exists & persists in spite of that & impatience ensues.

Darkness certainly reconciles one to immobility, indeed it is a good thing that the ice does not break up during the polar night, for it would be quite impossible to navigate through the leads in total darkness.

It is a most comforting outlook to have the sunlight increasing in duration daily & the sun rising higher & getting warmer every day, but perhaps it is just this very progress that makes us so impatient to get out of the ice.

The desire to return to civilization hardly enters into the question, (personally I am almost indifferent about that,) but it is the vital importance of reaching a civilized port sufficiently early to enable the ship to revictual and carry out the original program of the expedition next year.

I consider that we ought to reach a port not later than the end of December to render possible the trans-antarctic journey next summer.

Shall we do it? Who can say?

Breakfast - Cold tongue & beetroot, porridge.

Luncheon - Thick soup (poor).

Dinner - Roast penguin, beans & baked potatoes, currant pudding.

Wednesday, 18 August, 1915

Temperature -28.

Bag 2 Emperor penguins.

Very fine but cold & windy.

One wonders what Sir Ernest's plans for the future will be. Even he himself does not know for he cannot formulate any definite line of action until he finds how the "land lies" on reaching civilization.

The most he can as yet do it to outline a series of plans capable of being modified to suit various contingencies.

These modifying factors are presumably our date of making port, the state of the war and the available expedition funds. (Heavily crossed out) It may be of interest in the light of subsequent events to roughly forecast the more likely possibilities.

Firstly, I think it is a foregone conclusion that the shore-party will be reduced down to only six members i.e. the bare minimum necessary for the trans-continental journey. Secondly, I believe that they will be landed at a certain glacier which we passed in Lat.---- midway between Coats Land and Vahsel Bucht, unless, of course, there was exceptionally open sea down to Vahsel Bucht. After landing the party the ship would at once return to civilization & probably pay off. If we get out of the ice before the end of December this year, the ship would immediately revictual and return to the ice about the end of January, the surplus members returning home to England meanwhile. If, however, we do not get out before January it would probably be impossible to

get down to the glacier again during the same season & it would have to be postponed for nearly twelve months.

We secured two Emperors today.

Breakfast - Penguin steak, porridge.

Luncheon - Pemmican hoosh.

Dinner - Roast mutton (tinned), fresh potatoes, cherries & cream.

Thursday, 19 August, 1915

Temperature -22.

Bag 10 Emperor penguins.

Fine & cold. Still some wind, always from S. or S.W. In the event of our not reaching a port at which we can revictual before the end of December this year and the trans-continental journey having to be postponed in consequence, it is a little difficult to say, at the present juncture, just what Sir Ernest would do with us all & with the ship. Obviously he could not keep a large staff like this in idleness marking time for the best part of a year until the southern summer of 1916-1917, say from January to December 1916.

The salaries alone amount, I believe, to about 4000 pounds a year let alone feeding us and maintaining the ship in sea going condition. It is most probable that all except the selected six would be paid off entirely whilst the latter & the ship's officers would be given the option of taking ten months unpaid leave with a free return passage home & back if desired or else of being paid off altogether.

Each one would then be able to decide for himself what it suited him best to do according to his circumstances, those of the shore

party who elected to be paid off being replaced by surplus members who agreed to volunteer under the new conditions.

This seems a perfectly equitable arrangement as everyone would have their own choice and no one could possibly expect Sir Ernest to maintain so large a staff in comparative idleness for so long a period. He will have been hit quite hard enough by keeping us all here to so little purpose during this comparatively useless drift in the ice, which is all so much waste of time & money.

If funds permitted there is just the possibility that, instead of disbanding the reduced shore party and ship's officers for ten months, the ship might be employed in circum-Antarctic oceanographical work during the southern winter of 1916 say March to September next year.

Breakfast - Corned beef dry hash, porridge.

Luncheon - Thick soup (better than lately), nuts.

Dinner - Roast penguin, baked potatoes, cornflour pudding.

Friday, 20 August, 1915

Temperature -18.

A most lovely day. No wind & therefore cold quite imperceptible.

Should the ship's officers & members of the shoreparty proceed on ten months leave as indicated on the preceding page the ship would then be laid up for that period in some port, probably Buenos Aires or Port Stanley in the Falkland Islands under the charge of one of the ship's officers and one or two of the crew as a care & maintenance party.

It is very much to be hoped that none of these expedients will be found to be necessary for it will so very considerably postpone

the fulfillment of the objects of the expedition. Furthermore the glacier at which it is proposed to land increases the cross continental journey by some two hundred miles and this alone is a serious consideration and even gives rise to some argument as to whether it is possible to accomplish the journey at all, experienced ones too, who have some misgivings as to its ultimate accomplishment if the distance, already long enough, (1700 miles) is so materially increased.

It is not so much a matter of the necessary endurance to do so long a journey but rather whether it can be done in the time available, say November to March inclusive. The mere distance is well within the physical capacity of most of us, but sledging before November and after March is rendered impracticable by the darkness of the nights and the greatly increased cold in consequence.

These are stirring times for us. Maybe the sequel will be even more so.

I took advantage of the mild weather today to go for a two mile walk out to a remarkable ice pinnacle about 20 ft. high which I climbed. I am gradually getting stronger but am far from up to standard yet. Walking is an effort.

Breakfast - Tinned haddock, porridge.

Luncheon - Clear soup with carrots.

Dinner - Macaroni seal, sago pudding & jam.

Saturday, 21 August, 1915

Temperature -13.

A little overcast. Very mild. Gloves unnecessary.

I returned to duty yesterday. My strength has not yet quite returned but it is returning all right by degrees thank goodness & I am practically free from pain now, even at nights.

I am absurdly over-dressed, but must remain so until I put on my antarctic fat again. I have no less than five layers of clothing on when I go out and three pairs of socks. Lower half, thick combinations, thick woollen drawers, a pair of tweed knickerbockers, a pair of flannel trousers and a pair of Burberry windproof trousers: top half, combination top, waistcoat thick brown sweater, jacket and "basio" and sometimes a Burberry anorak or blouse.

The "basio" is a curious garment, a collarless sleeveless rather long jacket. They were sent to us as personal presents from Mr. Burberry who lives at Basingstoke, & who named them after his native town we suppose. They are all of different materials & colours, made up from oddments of the very best quality cloths. Each one is made of one kind of cloth only.

One of my first investigations on resuming my work was to see how my stores were depleted. The sight that met my gaze on entering the storeroom was so frightful that I can hardly find words to write about it. If there is a general disruption out on the floe there is an absolute volcanic eruption in my bunker. Cases thrown about in every direction & a general jumble up of every imaginable article on the floor. It is Louvain out-Louvain & it is a beastly shame, I never saw anything like it and the worst is that I know it was not all done when the ship was knocked about in the pressure; I believe a good deal was done ruthlessly when they got out the wood for the kennels but just who is responsible for it I cannot ascertain. Anyhow I am going to see Sir Ernest about it.

Meanwhile they keep smiling for whilst I was on the sick list they have had a glorious run of the dainties which I so meanly hoard.

Breakfast - Penguin steak, porridge.

Luncheon - Thick soup.

Dinner - Boiled salt beef, buns.

Sunday, 22 August, 1915

Temperature zero.

A lovely day. Quite warm in the sun.

Sir Ernest has caused a good deal of cinematograph work to be done during the last few days as the sunlight and clear air have been so propitious.

I have taken the opportunity to follow Hurley (our photographer) about and take some snapshots on my own account with my wretched little camera.

It is a matter of regret to me that I left England in such a hurry that I had not time to get my Kodak and a proper outfit of photographic gear.

Some of the items cinematographed promise to be a very considerable interest for purposes of entertainment; for instance the disembarkation and harnessing up of the dogs. In this evolution each dog has to be separately conducted down the gangway by hand. As soon as the dog is down on the ice his attendant runs off with him and he is at once harnessed up to his respective sledge. In this way all the forty two dogs are disembarked & harnessed up and the six teams are away in less than six minutes.

A good deal of film was also taken of the sledges under way at full speed passing through the pressure & over the snow covered hummocky floe. This too ought to be very interesting. The sunset today was extraordinarily rich in colour effect reminding us of those we had in the autumn (April-May).

The sun dropped below a perfectly clear horizon with a pale yellow green background streaked with deep purple clouds lined on their undersides with the most brilliant gold. The whole of the rest of the sky was a deep indigo except opposite the sun where it was rose pink, all the remaining clouds were also pink whilst the moon was a distinct apple green shining through a pink mist.

Breakfast - Liver & bacon (not quite sure whose liver), porridge.

Luncheon - Pemmican hoosh, raw onion.

Dinner - Stewed oxtongue, tinned new potatoes, black currant tart & cream.

Monday, 23 August, 1915

Temperature -5.

Overcast but bright & not very cold.

During the last five days, we have been fortunate enough to accrue no less than 14 Emperor penguins as many as ten on the 19th inst. alone. As we are running short of seal meat for the dogs these are again a real Godsend although they only average about 50 lbs. each as against 80 lbs. to 90 lbs. which is about their usual weight in summer.

Poor unsuspecting creatures! Probably mistaking the ship for a rock, they come waddling guilelessly up to us and we as guilefully

slaughter them to provide for our needs. Where do they come from, where are they going to, and what are they doing at all up on the ice fields in this temperature, when we cannot see a trace of open water within a horizon comprising an area of some three hundred square miles (for we can see about ten miles in every direction from the mast head, and elevated objects, such as bergs, at even greater distances)? All these penguins seem to be making a course roughly from N. to S. It does seem extraordinary that they should be out on the ice so far from any open water & therefore without any chance of getting any food, though on this latter score they do not seem to suffer much, for they appear to be able to fast with impunity for four or five weeks at a time, as is known to be the case with them during the breeding & moulting seasons. Those that we have been getting are probably ones that have failed to mate, for their laying season is in July and just now they should be bringing up their families.

They lay their eggs on the ice and covering them with a sort of pouch at the lower part of the breast, actually hatch them out balancing the single egg on the upper part of their horny feet.

Breakfast - Penguin steak, porridge.

Luncheon - Lusty's mulligatawny soup.

Dinner - Seal hash, haricot beans, rice pudding & jam.

Tuesday, 24 August, 1915

Lat. 70.12 S., Long. 50.15 W.

Temperature -8.

Overcast, some breeze from S.E.

As will be seen by the above Latitude we have had a check for the last few days. It is not likely to seriously affect our chances of an early release as yet but we can not afford to lose much on our

northerly drift and in any case we are not likely to improve our position by going to the Westward as that only brings us under the lee of the S.E. coast of Graham's Land where severe pressure might be expected & where Nordenskiöld's ship the "Antarctic" was crushed & lost in 1900-01.

Several new cracks have opened up around us & in some respects the situation is a little like it was a week before the big break up occurred.

We have again captured a couple of Emperors. Speculation as to their habits affords us a topic for much controversy.

Some think that they swim with their flippers only, others that they make a sinuous course in a vertical plane under water & derive a propulsive force by continually shifting their centre of gravity in this way, somewhat in the same manner that an albatross is supposed to maintain its apparently effortless glide. It would be very interesting too to know to what depth they are able to dive. From the firmness of their structure & a remarkable power of the contraction & expansion that they possess it is believed that they not do so for a whale plunges three times as deep when struck by the harpoon.

Again how do their bare feet resist frostbite? Certainly these are extremely horny but they contain blood vessels, why then does not the blood freeze or the blood capillaries contract as they do in human beings, especially when the penguins are standing hatching their eggs in temperatures of -80 as has been proved to be the case?

Breakfast - Curried seal, porridge.

Luncheon - Pemmican hoosh, walnuts.

Dinner - Roast penguin, peas, baked potatoes, suet pudding.

Wednesday, 25 August, 1915

Temperature - 29.

Splendid weather. No wind & almost warm in the sun in spite of the low temperature.

From time to time Sir Ernest has told us little incidents in his career, and although as I know it is pretty widely known it may be of interest if I give a short resume' of it.

He is the son of an Irish doctor - a gynecologist of some note - and the brother of nine sisters (some very charming as I happen to know!). His father practised at Sydenham and Sir Ernest went to Dulwich college.

By long saving, at the age of about 15, he accumulated a sufficient sum to enable him to carry out a long cherished intention to run away from school. This he actually did & fired by the stories of a seafaring acquaintance, he went to Liverpool, and after actually residing some time at the "Sailor's Home" there, he shipped as cabin boy, at one shilling a month, on board a famous sailing ship the Houghton Tower. Needless to say, he did not go to sea in her without his father having been duly informed about it by the captain of the ship.

His father went up to see that all was in order but not unwisely left his son to pursue his caprice.

If he thought that Sir Ernest would in a short while beseech him to extricate him from the results of his waywardness he was very much mistaken for, in spite of much preliminary unhappiness - the usual concomitant of a boy's first voyage at sea especially among the discomforts of life before the mast - Sir Ernest's indomitable

determination revealed itself even at that tender age & he just -
"saw it through".

The captain quick to recognize his ability and refinement soon gave him opportunities to better himself, & with a sound education at back of him it was not long before he passed the examination for mate.

Breakfast - Penguin steak, porridge.

Luncheon - Carrot soup.

Dinner - Roast seal, baked potatoes, stewed apricots & cream.

Thursday, 26 August, 1915

Temperature -22.

A beautiful calm, sunny day.

(Continued from previous entry)

Strange to say at the very moment of writing this 9 p.m. of above date Sir Ernest himself has just come into the room and in the course of conversation with Lt. Hudson has unconsciously filled for me a gap in this very narrative of his life - and a gap at this very juncture, where I discontinued my writing yesterday. It is a coincidence.

He has, then, just said that he was a master at 21 i.e. he held the certificate of captain in the merchant service at that age.

This is exceptionally young in any case but the more remarkable in his case when one considers his dislike for figures & the high standard of navigational mathematics exacted by the Board of Trade examiners.

From then onward he was first officer in various ships, notably one on the China route, to which he deliberately elected to go on account of the captain's evil reputation. As a matter of fact owing to the Captain's persistent inebriety Sir Ernest virtually ran the ship.

He left this service to take up transport work at Southampton during the South African War, on which work he wrote a book.

In 1900, by importunate application, he was selected for Capt. Scott's first Antarctic Expedition. He contracted scurvy & was invalided home.

Later he became secretary of the Scottish Geographical Society and contested Dundee in the Unionist interest.

On behalf of the Argentine Government he fitted out their Antarctic relief expedition that rescued Nordenskiöld in 1902.

He also got up a company, single-handed, to transport Russian soldiers back from the Russo Japanese war & carried it through successfully transporting 10,000 soldiers.

In 1907 he organised his famous expedition in spite of tremendous handicaps and financial disabilities.

Thenceforward his career is too well known to need recapitulation here, but naturally much of the above is not available to the public in "Who's Who" & so on.

Breakfast - Ox tongue & beetroot, porridge.

Luncheon - Green pea soup, lime juice.

Dinner - Stewed seal, cornflour pudding & jam.

Friday, 27 August, 1915

Temperature -22.

A perfect Swiss winter sports day; dry & calm, brilliant sunshine.

There was a good deal of pressure working last night in an open "lead" about a quarter of a mile ahead of the ship & later we heard it loudly. At 3:30 a.m. most of us were awakened by a loud report like an explosion against the ship's side and, a few minutes afterwards, we responded to the cry of "All hands on deck" by sleepily tumbling into our Burberry suits & running up on deck.

A large crack had made its appearance right across the floe running up to the bows of the ship and along her port side for about half her length but not sufficiently to liberate her entirely and so she still maintains her disagreeable list to port.

To get on board, the sledges etc. and the young dogs & pups who were loose out on the floe was the work of a few moments only and as nothing further materialised we were soon dismissed & permitted to continue our disturbed slumbers - fully dressed.

By breakfast time the water in the crack had frozen over with ice almost strong enough to bear our weight & no further movement appeared to have taken place. I think we are rather callous of these happenings now but there is no question that each one represents a potential peril.

The crack is curious in taking a course right through some of the heaviest pressure ridges so that although it is barely a foot wide its depth is in places several feet from the surface of the ice to the water, so it has the appearance of a miniature chasm.

In the course of a little constitutional today, I was passing by a newly frozen over lead when I heard a slight crack followed by a

noise like a steam engine &, on looking round to ascertain the source of the noise, saw that a seal had bumped open a hole in the ice with his head & was "blowing" hard, i.e. taking in a fresh supply of breath. This then after the sun is the first sign of spring.

Breakfast - Seal steak, porridge.

Luncheon - Pemmican hoosh.

Dinner - Stewed sheep's tongue, bread pudding.

Saturday, 28 August, 1915

Temperature -20.

Slightly overcast in forenoon, a brilliant afternoon. Very crisp & dry. One could dispense with mits whilst on the move outside.

We are at last in the "sixties" having crossed the 70th parallel of latitude going from South to North last night.

It is cheering enough to make each little advance step by step in this way but it is a long way to freedom yet and at the rate we have been going during the last fortnight we should not get out in time to carry on the work this season were it not that we confidently expect to find ourselves set free in an open "lead" which would enable us to steam northward through loose pack within the next month or two.

We are always referring to this hypothetical release as our "break out" and we are never tired of "making shots" at its probable date. These guesses are mere random conjectures and are founded on little if any deduction or precedent.

Sir Ernest, ever sanguine, thinks it will be Oct. 2nd. Dr. McIlroy plumbs for Nov. 3rd, and almost every intervening and some subsequent dates have their adherents. Pessimistic I will be

surprised if we reach a civilized port before the end of Jany, & I would not be much astonished if we failed to really "break out" enough to proceed under steam before the middle of February. I know fully what such late dates would mean to the expedition & to Sir Ernest, but I have read every available book on the Antarctic since we have been here, and it seems that the ice does not often break up before the middle of Jany in latitudes adjacent to the Antarctic circle in the Weddell Sea.

Of course we are likely to break out temporarily & freeze in again several times before we finally get free. To steam north, it is not only necessary that we should break out, but that the whole of the ice fields around us should break up into small floes & form what is known as loose pack.

Breakfast - Penguin steak, porridge.

Luncheon - Pemmican soup, barcelona nuts.

Dinner - Salt beef, carrots, Three-cornered jam puffs.

Sunday, 29 August, 1915

Temperature -12.

Very fine. N.E. wind. Another crack round the ship occurred today.

Other matters having occupied my space I have until now had to forego my intention of continuing my attempt at a character sketch of Sir Ernest. I know that in reading all the other books on polar exploration nothing interests me more than the character of the leaders, but naturally one cannot always form a very concise opinion from the narrative written by the leader himself. I hope therefore that this impression of Sir Ernest by an intimate acquaintance will be of some interest to those who read it.

One rather unsuspected quality in Sir Ernest is his extreme precaution, unless urgency demands, he never does anything without taking the most carefully planned precautions. This even find its expression in the care that he takes to wrap himself up warmly and in his habit of invariably changing his socks whenever he comes in. One is almost inclined sometimes to think that he muffles himself up too much until one reflects upon what he has actually accomplished in the way of withstanding the rigours of the Antarctic climate & what he is prepared to do again.

He often says of a thing, "It's time enough to do it when you've got to, until that time comes make yourself as comfortable as circumstances permit, when it does come do it with all you will and even then make yourself as comfortable as your circumstances will then permit; comfort is only a matter of comparison after all.", which is really wonderfully true and is surely the epigram on which he has formulated his whole life. Although there is no limit to his ambitions he is entirely unaffected & without conceit & quite unsusceptible to flattery. In fact he always gives one the impression of a man conscious of his own ability who feels that his achievements up to date are but stepping stones to something much greater. (Continued on next page)

Breakfast - Bacon, porridge.

Luncheon - Lusty's Bouillon.

Dinner - Tinned haricot mutton, new potatoes, stewed raspberries & cream.

Monday, 30 August, 1915

Lat. 69.56 S., Long. 50.0 W.

Temperature -18.

The beautiful weather continues, but N.E. wind.

That Sir Ernest is of a very generous disposition is best exemplified by his kindness in having me placed in his own bunk when I was laid up recently, but even in lesser things he is always most thoughtful.

When the ship was in danger of being crushed by ice pressure, in the middle of all the excitement & worry he even remembered that I was down below in bed and sent a hand down to open the door of the cabin & file it open for fear that if the ship did get crushed

I might get shut in & unable to extricate myself in a moment of danger.

It is not many leaders who would remember a sick subordinate in this way & at such a time, when their mind was fully occupied by the seriousness of the situation & the necessity of attending to more urgent matters.

But Sir Ernest's whole nature is very sympathetic. He at once puts himself into sympathy with the divergent temperaments. He is, of course, a very good judge of character and so accustomed to people showing him only the best side of their characters that first impressions acquaintanceship leave him quite unmoved. Although, naturally, he seldom says anything to that effect it is remarkable how quickly he sees through our little weak points. Just as he is no humbug himself so he will stand none from anyone else. He always seems a little suspicious that one has to report anything of a self-committal nature to him. I think that frankness is one of the qualities he most admires. His judgement in all things is very quick & I doubt if he ever errs; his eyesight even quicker.

I resumed watchkeeping tonight, taking the 1 a.m. to 3 a.m.

Breakfast - Penguin steaks, porridge.

Luncheon - Pemmican hoosh, raw onions.

Dinner - Hashed seal, rabbit, cornbeef, etc., Rice pudding.

Tuesday, 31 August, 1915

Temperature -15.

Almost monotonously fine & a northerly wind, worse luck.

It is only natural that, at times, in my own work I should sometimes have ideas at variance to Sir Ernest's but I must say that after a lapse of time I have generally come to realize that his view of the matter has been the best in the long run; I refer to such questions as to whether we should economise on a certain class of provisions, coffee or fancy biscuits for instance, in order to spread the supply over a longer period so as to retain sufficient for an occasional serving in the event of our getting stuck down here another year.

We used to have a good deal of discussion on these matters when the ship first became icebound and when Sir Ernest used to give definite orders to continue the normal issue of a certain commodity; I must admit that I often used to think that he would be sorry for it later on; but I must say that I now see that his was generally the better judgment. It is largely a matter of policy and regard for policy underlies the majority of his decisions & orders.

Had we then reduced the issue of certain articles, the stoppage would have been at once noticed and would as likely as not have engendered a lack of confidence in the whole commissariat department - a most undesirable thing at that time. Now, if we chose to suddenly stop the issue of anything, it would scarcely cause any comment for everyone is so cheerfully reassured and confident of our imminent release from the ice since the return of

the sun, and by our steady northward drift. (Continued on next page)

The ice is cracking all round the ship & several small leads have opened up within fifty yards of us.

Breakfast - Cold tinned roast mutton & beetroot, porridge.

Luncheon - Oxtail soup.

Dinner - Stewed seal, Currant pudding.

Wednesday, 1 September, 1915

Temperature -15.

Very fine. Northwest wind. A very fine parhelion was visible for over an hour today but these have been previously described.

Capable of such strenuous physical endurance as he certainly is, as exemplified by his wonderful journey furthest South on his last expedition, it is singular that Sir Ernest may be said to be anything but agile.

Not that agility & endurance are necessarily counterparts of each other, though I think they generally are. Sir Ernest is rather of the massive plodding type, subordinating his body to his will - a will which knows no bounds & brooks not the word "impossible".

It is pleasing to record that kindness to animals is strongly represented in his character. Nothing vexes him more than to see an unnecessarily severe chastisement inflicted upon a dog or to learn that a seal or penguin has been improperly killed. In fact on both these points he has given very stringent orders.

His principal recreations besides omnivorous reading are golf & bridge, the latter only of which he is able to indulge down here,

but he certainly plays enough to make up for the lack of the former.

Until the age of 31 he was a total abstainer and since he conceived the idea of this expedition he has again been a staunch teetotaler, but he is an inveterate smoker, smoking always Tabard cigarettes, a brand manufactured by a firm of which he is the originator & I believe, the virtual proprietor!

Polar exploration & cigarette manufacturing strike one at first as an odd combination, but I suppose that there is nothing so very incongruous about it after all, for polar explorers must have their cigarettes the same as anyone else & if they elect to manufacture them for themselves so much the more credit to them.

Lastly he has a very sweet tooth. Almost nightly the cook is commissioned to produce for him a jam tart, which he fortunately does very well. Three-cornered puffs are Sir Ernest's & the cook's specialty.

Breakfast - Seal's liver & bacon, porridge.

Luncheon - Pemmican hoosh, Lax.

Dinner - Seapie (corned beef & seal's liver), Black currants & cream, cream shells and plum cake.

Thursday, 2 September, 1915

Temperature -20.

Fine but cold. A terrific cannonading of pressure took place during the night. North wind.

As an instance of how little things here assume a form out of all proportion to their magnitude I have just found myself unwillingly drawn into a little misunderstanding with Hurley our capable

photographer. Since the dogs have been on board it has been necessary to supply them with drinking water. When on the floe they used to quench their thirst for themselves by eating snow. The drinking water is now drawn by the dogdrivers, of whom Hurley is one, from the ice melter in the wardroom and as I have to keep up the supply of ice for the latter it necessitated my bringing down a much increased quantity of ice. (I had as much as I could do previously.) I therefore petitioned Sir Ernest that the dog drivers should bring down daily an amount of ice equivalent roughly to the quantity of water they used. Sir Ernest acquiesced and gave verbal orders to that effect, whereupon Hurley turned on me and characterised me as a "---- of the first water". I suggested that he should try and control himself a little. This mild retort merely added fuel to the fire and as I observed that his resentment increased very noticeably during the last few days, I deemed it best to swallow my pride and seizing a quiet moment informed Hurley that (crossed out here) there was no room for individual quarrels & that I bore him no malice & so on. He seemed a little taken aback but after a little demur grasped the reasonableness of my mission & we are at peace once more.

I must admit it was some little effort on my part to do this, but I do believe that "peace at any price", as Marston told me when I first joined, is the only possible course on a polar expedition, and, as it takes two to make a quarrel, all's well that ends well. My action may imply weakness to those who cannot construe it otherwise; but I am satisfied of the fitness of it & what else matters? Fights between men living continually in each other's company have little to recommend them.

Breakfast - Curried seal, porridge.

Luncheon - Rice & pemmican soup.

Dinner - Stewed seal, sago pudding.

Friday, 3 September, 1915

Temperature zero.

Very mild, overcast. There is a crack of open water a yard wide all along the port side of the ship.

Hurley, our photographer, is an interesting character.

He is Australian - very Australian & was photographer on Sir Douglas Mawson's recent Australasian Antarctic expedition to Adelie Land. As a photographer he excels & I doubt if his work could be equalled even by Ponting, but it is not only as a photographer but as a general handy man that he has proved his efficiency.

Having started life in some engineering firm, he is an extraordinarily able mechanic, especially at all tin-smithing and brass work. Being very good natured in lending a helping hand, he is invaluable to us as a general repairer. The ingenious ice-melter and other clever devices that he has constructed for us are monuments to his manipulative skill.

He runs our little electric light plant admirably, having at one time been an electrician in the Sydney post office.

In addition to all this, he is one of the dog drivers as I have before stated.

He is certainly one of our hardest workers for he is almost always at work, & the more difficult the job the more he seems to revel in it. I have seen him drill a hole in a watch glass with the tang of a broken file fixed in an ordinary brace - a job requiring extraordinary skill & patience. In spite of all this he is not conceited nor does he give himself airs, though unfortunately he is rather too free with his tongue to be an ideal companion and a little

inclined to let his prejudices run riot, as I have previously indicated, but apart from this he is quite a good chap & of his intrinsic merit there cannot possibly be two opinions.

His interest in the expedition, on his own admission, is mainly a commercial one so it is sometimes a case of "one for you & two for me", but he never really lets this stand in the way of his zeal for the general efficiency of the expedition.

Occasionally he gets on my nerves rather banging doors and talking loudly to anyone about when he is on nightwatch. In fact, I don't reckon to get much sleep when he is on watch.

Breakfast - Salt fish, porridge.

Luncheon - Pearl barley, pemmican hoosh, cheddar cheese.

Dinner - Roast penguin, fried onion, baked potatoes, cornflour pudding & jam.

Saturday, 4 September, 1915

Temperature -11.

We all worked hard shifting stores from the after storeroom to the bunker: all done with indecent haste!

On Wednesday & Thursday night of 1st - 2nd Sept. a series of loud explosions told us that the ice immediately surrounding us was splitting up again. The ship creaked and groaned all over as if in pain. The pressure upon her must have been very great for one of the iron plates in the engine room floor was quite buckled up, the linoleum in our cubicles and elsewhere was all bulging up and door frames were distorted so much that the doors would not close. Curiously enough, although at intervals there has been a crack with open water several inches wide all along the port side

of the ship, she has not righted herself & is still heeled over at an uncomfortable angle. Proving at one & the same time that she is held in a solid block of ice & that as this runs under her keel; the ice must be at least 15 feet thick. This "list" makes the "backstairs" from the pantry to the galley extremely inconvenient. They were steep & awkward enough before, but now it is most difficult to negotiate them with the great blocks of ice which I have to bring in for melting several times daily. This morning I was trying to carry a "lazy man's load" down them - a large block of ice in one arm and a plate of curry and rice & a cup of coffee in the other. I had a slight slip so did the ice & the curry & the coffee. I arrived at the bottom first but the coffee, the curry & the ice and rice followed almost simultaneously.

My woebegone appearance in the wardroom was greeted with derisive delight & I got no sympathy at all; and it took no end of time to get really clean, besides which I had to go & clean up the mess in the passage!

We seem to be in the centre of a network of cracks. Positively hundreds of cracks and small leads run in every direction. This may augur well for our breaking out soon but, until we do, the constant danger of pressure in excess of the safety factor of the ship's hull gives rise to no little anxiety.

Breakfast - Seal, etc. collop, porridge.

Luncheon - Green pea soup.

Dinner - Kidney wallup, jam tart.

Sunday, 5 September, 1915

Temperature -18.

A magnificent warm day. I went for a long walk & saw a good deal of pressure working near the ship.

I wish I knew of something to take curry out of people's hair. (Hussey at once replied "Try a curry-comb.") I didn't notice it until today in fact I didn't really notice it at all - my next door neighbor at table first noticed a faint odour of curry & traced it to my head. It seems that in my descent yesterday I fairly got smothered with it & as the smell of it was all over my clothes I didn't notice a bit or two in my hair.

It shows rather what a primitive life we lead. As a matter of fact we do all wash daily, though every now & then one doesn't always manage to get it in before breakfast. Of course the facilities are rather meagre. Every drop of water has to be obtained by melting ice in the ice melter. It is due to Hurley's ingenuity that we are able to get as much water as we do, for the ice melter which he made is most efficient. It consists of an old oil drum within another. The ice goes into the inner one and the space between the two acts as part of the flue of our stove, so that the heat is retained and plays all round the inner vessel.

It is part of my duty to keep the ice replenished and as the water is used for personal ablution by fifteen of us, for washing up the plates etc. four times daily for watering the dogs and for making their hoosh there is a run on it all day long and I suppose I must bring down about two or three hundred weight of ice daily.

The crew hew the ice from hummocks on the floe & bring it inboard onto the deck. We treat it just as one does coal at home, keeping it in a big basket in the room, about eight feet from the fire, where it never seems to melt at all showing that the actual temperature of the room except close to the fire must be fairly low. (Continued on next page)

Breakfast - Bacon, porridge.

Luncheon - Pemmican hoosh.

Dinner - Tinned calf's head, tinned new potatoes, gooseberries & cream.

Monday, 6 September, 1915

Temperature -18.

Minimum -22.

Marston & I, Hussey & Wordie finished restowing the afterhold & made a fine clearance. Rather colder than usual.

(Continued from previous page)

The ice arrives on board in irregularly shaped blocks about one to two cubic feet each. They vary in weight very much according to whether the ice is "blue" ice (i.e. hard & solid) or "nevee" ice (i.e. ice formed by accumulation of snow). The blue ice is the most desired as bulk for bulk, it makes so much more water. In small lumps it is not really blue but out in the open in very large translucent slabs the light shining through it is a most beautiful sky blue.

It is a fortunate thing the ice formed on the surface of the sea of salt water gradually loses its salt, especially when raised up clear of the water by pressure.

I am afraid that by the time we use it it gets very dirty with so much handling by gloved hands and by lying about on the deck and by splintering on the floor.

Before using it we split it up into fairly small pieces with a steel skewer. When you know just how to do it, a smart job with the skewer will split a huge lump into fragments. Bits fly on to the floor, but if not too dirty are recovered and popped into the

melter. A good deal of the dirt sinks to the bottom whence it is occasionally cleaned out, some "bungs up" the tap & we drink the rest - a few dog's hairs, match ends & so on don't come amiss when one becomes accustomed to them and we really take little notice of such impurities now.

Of course the ice when it arrives is at the same temperature as the outside air; many degrees below freezing & this may account for its not melting at all in the basket. When one splits it, if one's hand happens to be at all moist the fresh surfaces, which are perfectly dry immediately freeze on to one's hand.

Breakfast - Penguin steak, porridge.

Luncheon - Macaroni cheese.

Dinner - Stewed seal, sago pudding.

Tuesday, 7 September, 1915

Temperature -5.

A perfect warm alpine winter sports day.

We had the trawl net down about 1/2 mile deep today. No catch; evidently it was not on the bottom.

Washing is an awful bore. I don't mean the personal ablution - that is bad enough - but the laundering of ones soiled lingerie. Everything here goes by proportion and so one's ideas as to the fitness of things, also their cleanliness, undergo considerable modification as one's residence here proceeds.

On the way down to these regions one tries to maintain to some extent the traditions of the boiled shirt of domestic convention. This soon gives way to the more rational attire of flannel shirt and brown jersey, but strenuous efforts are, at first, made to appear

with a shirt always respectably clean. As one gets further south, and facilities become fewer the flannel shirt is abandoned & one is clothed entirely in woollen underclothes & jersey.

At first one clings fondly to the weekly change fetish, but later even this is abandoned & one tries to tuck well up the jersey sleeve the soiled cuff of ones underclothing.

To wash out ones underclothing less frequents than once a fortnight is at first reckoned unthinkable, but as one's night watch comes round once in eighteen days one soon becomes reconciled to wearing the same things for that period, - "because I always have my bath and do my washing on my night watch" one says.

Then one day, or rather one night, something occurs during one's night watch which prevents one carrying out those good intentions and thereafter one abandons all hope of ever remaining respectable & barefacedly goes about with grubby sleeve edges that have been in wear a month - dirty but happy. Still clothes-washing always hangs like a millstone round ones neck. I have just done a batch I can afford to write about it, but it is quite a month, shall I say nearly two, since I last presided at the wash tub.

Breakfast - Curried seal, porridge.

Luncheon - Thick mixture soup, onions.

Dinner - Stewed seal, red currant tarts.

Wednesday, 8 September, 1915

Temperature -23 (min.)

Rather colder than usual.

We have had great upheavals of an internal nature, during the last few days, shifting cases about from place to place.

Sir Ernest, always foreseeing, is distributing the weights to the best advantage to prepare the ship for sea, so as to leave nothing to be done in this direction when she breaks out.

Except that it is carried out with what seems to me a most unnecessary rush preventing me from making a proper "stow", I don't mind, as it gives me the opportunity to muster cases & examine the condition of cases which have long been buried. In such limited holds as ours it is, of course, quite impossible to keep all cases simultaneously in sight. Originally we had over one thousand cases of provisions alone and still have four or five hundred.

The members who are told off to assist me generally commence the work rather disinterestedly until I produce a tin of raisins or some mixed peel and then they warm up wonderfully & the more mixed peel the more they work. We become great babies in this way down here: anything that is scarce or an article that is seldom served becomes at once the most desired commodity.

Firstly we shifted any amount of gear from the bunker down to the fore hold in order to render the coal in the former more readily get-atable for the engineers when we start steaming.

Having created considerable space in the bunker I immediately proceeded to fill it up again with cases from the after hold much to Sir Ernest's dismay - but possession is nine points of the law & once having got the cases there surreptitiously - Sir Ernest was out sledging at the time - there they will remain.

He knows I have, in a manner of speaking, "done him in the eye", but he doesn't mind because he knows that the moment he wants

to get at the coal he can shoot all these cases down on me in the fore hold!

Breakfast - Penguin steak, porridge.

Luncheon - Lusty's bouillon (no good).

Dinner - Roast penguin & peas, Tapioca pudding.

Thursday, 9 September, 1915

Temperature -20 at 1 a.m., rose to +7 at 9 p.m.

Fairly strong wind from N.W. worse luck!

We are not going north at all lately. This makes everyone a little depressed despite the brilliant weather. Sir Ernest, even, who has so much to bear and who usually bears it so well, becomes a little irritable at times through the same cause, & one can hardly blame him when one knows how much depends upon our breaking out early.

Meanwhile we are living very well, though we shall not be sorry to get some fresh seal meat. No seals have as yet come up onto the ice within our range of vision, & the one which I saw blowing in a pool the other day is the only one that has been reported up to date. Since being all I have appreciated seal meat rather less than I used to but I still find penguin very palatable. It is quite extraordinary how one's tastes differ from what they are at home. Nearly everyone eats much more fat here - fat in any form dripping suet or anything.

We have some powdered dry milk called True Milk; at first nearly everyone reckoned it rancid and quite a lot of it was unfortunately given to the dogs! Recently I began having it individually for my porridge at breakfast then my three next-door neighbours tried it and acclaimed its virtues and now no one will touch anything else.

They all declare that "it must have been mixed wrongly at first", but as a matter of fact it is mixed in precisely the same way for I mix it myself! So it is merely a change of taste or a prejudice overcome without knowing it. It may be that it contains some vital necessity that is absent from our other food. Similarly the consumption of all sorts of things such as jam, treacle, potted meats, cocoa, etc. varies enormously from time to time.

Another narrow crack on our starboard side occurred last night with a loud report. I was dreaming that I was in a L. & N.W. train & that it ran off the rails just as the noise of the crack woke me up.

Breakfast - Tinned corned beef, porridge.

Luncheon - Pea soup, Streimer's polar nut-food (sort of nougat).

Dinner - Seal, etc. pie, Suet pudding.

Friday, 10 September, 1915

Temperature +20.

A dull misty day heralded by a very marked rise in temperature. The sudden change is extraordinary.

Although it is still what at home one would probably call arctic weather it seems to us by contrast quite like summer & the slight wind that is blowing seems like a mild breeze in April in England.

Outside, gloves & ear coverings were almost universally discarded and although I have on but a vest and a jersey on I felt overclad. Such comparative warmth put new life into us and I have felt most unusually fit & energetic all day. In the ship we have kept scarcely any fire and although there is only a very small fire now, we find it necessary to keep the doors of the "Ritz" wide open to prevent it getting too stuffy!

On the other hand temperatures approaching freezing point have their drawbacks, for the interior of the ship begins to thaw, manifesting itself in the first place by a lurid stench from the freshly thawed bilgewater.

The bilge or drain water which always exists in every ship in the vicinity of the keel is very briny and therefore freezes & thaws at a temperature considerably below the freezing point of freshwater.

Then again the interior of my storerooms is all coated with a heavy rime of frozen condensation and this commences to drip. The cases are all covered with it too & they become very damp to handle. Also there is a good deal of ice in our cabin especially on the ship's side at the foot of my bunks and this the thawing of this makes the cabin, already damp enough, even damper. The worst condition is alternating rise & fall of temperature causing internal thaw & freezing.

Breakfast - Salmon kedgeree, porridge.

Luncheon - Tinned sheep's tongue, salmon kedgeree, lime juice.

Dinner - Hashed seal's liver, fresh potatoes, cherries & cream.

Saturday, 11 September, 1915

Temperature -15.

Dull & cold. Snowing.

A wooden ship is especially adapted for a polar climate, wood being a very good non-conductor of heat. Therefore the heat produced by fires within the ship is retained and the cold from outside does not reach the inside except by air passages, doors, hatches & so on.

There are, however, very many iron bolts penetrating the wooden ship's-sides & an exchange of heat takes place along these, their inner ends being covered with large caps of ice & their outer ends being conspicuously clear of snow or rime so that they stand out clearly like dots amidst the frost rime that usually covers the ship outside.

There are about twenty of these bolt-heads in our cabin; & when the temperature of the interior of the ship rises the ice on these bolts melts & runs down the walls of the cabin wetting everything; it is an awful nuisance. When the outside temperature is low the ice reforms due to condensation of the moisture in the air of the hold & so it goes on. A lot of it runs along the ceiling & drips down on my bunk; mine is the top bunk & when I am in bed, on my face. Sometimes my bedding is thoroughly wet & always it is damp.

Another source of the same trouble, but in an aggravated form, is a small ventilating shafts which runs into the ceiling of one cabin & into which the drain from the galley (kitchen) seems to leak, for it often delivers as much as a couple of pints daily of stinking blood stained fluid which we carefully catch in a suspended drip tin, but some of it manages to elude my traps & finds its way along the ceiling to eventually drip on my clothing etc.

These are amongst our few discomforts, but as long as we have nothing worse than this to put up with there is nothing much to worry about.

Breakfast - Salt steak, porridge.

Luncheon - Pemmican hoosh.

Dinner - Salt beef, fresh potatoes, jam puffs, cake.

Sunday, 12 September, 1915

Temperature -15.

Hazy, cold wind & snow.

Condensation, to which is due most of the troubles described on the previous pages, is quite an interesting study, if only because it does not present itself as a factor in every day life at home. Here, however, it has constantly to be reckoned with as a result of the attempt to live indoors in temperate heat in a polar climate.

The commonest example of it at home is the moisture that forms on the outside of a tumbler of iced water, which is, I believe, due to what is known as the "dew point" or point of saturation. Air has the property of absorbing and retaining as vapour a certain amount of moisture according to its temperature. Roughly speaking the warmer the air the more it will absorb. When it will absorb no more its point of saturation is said to have been reached. If the temperature of the saturated air is now lowered it immediately begins to precipitate some of its moisture in the form of rain, or condensation, or dew. The temperature at which this precipitation takes place is called the dew point and depends on the degree of saturation of the air.

If the temperature is below the freezing point, the dew will be deposited in the form of rime or hoarfrost. This is what happens down here to a large extent. Sometimes the moisture condenses in the air itself in the form of minute ice crystals which remain suspended in the air much as dust is seen in a ray of sunshine shining in through the window of a dusty room.

It is this condition that gives rise to the phenomena of the parhelion, corona & sun-pillar, all of which are frequently occurring now.

Breakfast - Bacon, Quaker Oats.

Luncheon - Lusty's mixed soups & turtle cup, onions.

Dinner - Boiled ham. Stewed red currants & cream.

Monday, 13 September, 1915

Temperature -25.

A beautiful bright clear day, cold enough in the shade but so warm in the sun that the ice & snow are thawing off the ship's side.

It seems anomalous at first sight to talk of moisture in the air at temperatures below freezing point, but I believe I am correct in saying that the atmosphere is to some extent capable of retaining moisture at very low temperatures and until the point of saturation is reached the aqueous vapour does not condense & freeze any more than the air itself does. Of course, the lower the temperature the lower is the point of saturation i.e. the less will be the amount of aqueous vapour that the air can hold.

At a sufficiently low temperature air itself condenses, becoming liquid air, as is well known, but this fortunately never occurs at any natural terrestrial temperatures.

Condensation at the prevailing temperatures down here manifests itself in so many different forms that it is difficult to say which are the most remarkable, but in nearly all cases it gives rise to considerable inconvenience & often much discomfort.

Earlier in this journal, I have described how the cold outside air mingling, through an open door with the warm internal air of our rooms causes clouds of vapour which deposits itself in the form of moisture on all surrounding objects.

When the doorway of one's cubicle happens to be adjacent to an outer door as ours is, the moisture becomes a permanent factor to contend with. One has to make little time gutters to carry the drops away from the edges of overhead beams, and eaves over the shelves & clothes pegs.

It is the same moisture that supplies the material which forms the snow-like rime that fills the partitions in the wood of my bunk.

Breakfast - Seal steak, porridge.

Luncheon - Lentil soup, jam & cream.

Dinner - Minced seal, etc., rice pudding.

Tuesday, 14 September, 1915

Temperature -15.

A fine bright cold day, but warm enough to work with bare hands for ten minutes at a time sheltered from the wind.

I have but to put my hand out of my bunk into a chink in the ship's side and at any time I can gather a large handful of snow; of ice I can chip off enough to make a pint of water in a very few minutes. This, however, is one of the conveniences one would rather be without.

Any object that has been used outside especially metal articles such as tools, immediately becomes coated with a thick layer of hoarfrost on being brought into a room.

Owing to the moisture in the air of the room condensing & freezing into rime on its cold surface. Even the blocks of ice for the ice melter take on a sort of bloom on being brought into the room, and ones clothing on coming in always takes up a certain amount of moisture & remains damp for a long time. In fact one

never can quite get rid of dampness in one's clothes which becomes a serious nuisance & is the cause of a good deal of rheumatism.

Doors which open to the outer air are generally covered with a thick layer of ice on their inner sides caused by the moisture from within condensing, freezing & accumulating on the cold surface of the door & the same is the case, often in a greater degree, with sky lights and port holes.

The glass of a port being comparatively thin & a fairly good conductor of heat is generally cold and condensation takes place upon it very readily, the interior heat of the compartment having apparently no effect upon it.

Occasionally the ice on a porthole attains a thickness of a couple of inches practically occluding the light if not attended to .

There is a porthole right over the stove in the galley, within a yard of the fire, although the temperature there is seldom less than 70 degrees and often 90 degrees this port is always covered with thick ice.

Breakfast - Pastry rissoles, porridge.

Luncheon - Tinned ox tongue & beetroot.

Dinner - Hashed mutton & mashed potatoes, suet pudding.

Wednesday, 15 September, 1915

Temperature -22.

The ship has drifted north considerably these last three days.

Bright but a very cold wind.

When one is out for a walk the moisture in one's breath not only forms a thick cloud of vapour which very much obscures any work one may be doing, but it also condenses freely on one's moustache & beard, if one has such adornments, in the form of large beads of ice. Should one get hot enough to perspire, as often happens, the outside of one's woolen helmet becomes covered in a coating of frost & the same may be said of one's jersey even.

Especially is this the case during a game of football, so much so that one has the appearance of having rolled in the snow. It seems to adhere to wool more than to other kinds of material. Of course on coming into a warm room this rime on the clothing melts at once making one's clothes very damp, and as we have no facilities for drying them one has to put up with it.

Similarly the dogs' coats are often coated with frost rime in the same ways and, as they sleep with their noses buried in their tails using the latter as a sort of respirator, the tails are often quite caked with ice.

Owing to the constant variations of temperature all metal articles such as tins etc. in one's cubicle are generally quite wet, but perhaps the most curious instance of the effects of condensation is observed in taking a camera outside. Unless one takes care to open the interior of the camera before taking it out the warm air enclosed inside it on becoming chilled deposits its moisture as dew on the inside of the lens rendering it useless.

On the other hand, when bringing a camera into the ship from the open the coldness of the material causes moisture to deposit all over the outside, lens and all in the form of frost, but the cold air imprisoned within the camera prevents any condensation taking place on the inner side of the lens.

Breakfast - Liver & bacon, porridge.

Luncheon - Pemmican & sage hoosh.

Dinner - Roast seal, baked potatoes, stewed black currants & cream.

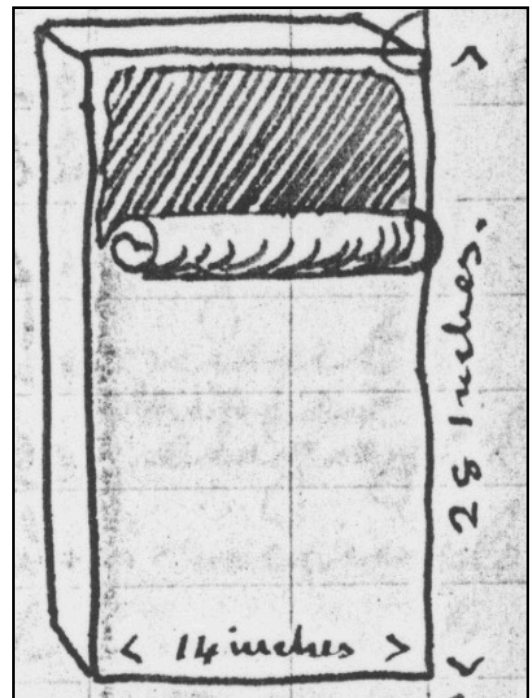
Thursday, 16 September, 1915

Temperature -31 minimum.

A beautiful day warm enough in the sun in spite of the low temperature. The planet Mercury is now visible.

Condensation also affects the provisions in a variety of ways, i.e. provisions which are brought from the cold storerooms into the warm galley or pantry.

We have some very large tins of ship's biscuits which we call "B.A." biscuits because they were purchased at Buenos Ayres when we were there. Each tin lasts from about a fortnight to three weeks. They are hermetically sealed and I open them very easily by making a couple of cuts down the side with a pair of tin shears & rolling the whole side down like a roller blind as the tin gets used up. I used to notice that these biscuits were often damp when freshly opened and it was some time before I divined the real cause. At first I thought it was merely the general dampness about, but later I proved by leaving the tin in a warm place for a day or so before opening that the explanation of the dampness was merely that the biscuits being ice cold on being opened condensed



Courtesy of Dartmouth College Library

the moisture of the air of the warm room throughout their substance!

On putting tinned meat etc. in front of the fire to thaw a little pool of water always forms in the slight hollow on the top of the tin. It may be noted that the air near a fire being warm has a high point of saturation & therefore contains relatively more than the air in other parts of a room.

It is surprising how cold things seem to get in my storerooms, one can get one's hand frostbitten in such unlikely things as saw dust & flour & even a large bale of cleaning rags was so cold the other day that I had to wear mits to unpack them; though they were quite dry, handling them for long with bare hands was quite impossible!

Breakfast - Minced callop. (The porridge got upset so we dispensed with it.)

Luncheon - Pemmican hoosh very thick, barcelona nuts.

Dinner - Stewed seal, tapioca pudding.

Friday, 17 September, 1915

Temperature -28 minimum.

Very bright morning, warm, light S.E. breeze. Clouded over in evening. N.E. wind.

Perhaps the most curious instance of condensation is the film of ice which sometimes forms inside the glass chimney of my hand lanterns sometimes when I am working amongst the provision cases. It seems that owing to the stillness of the air and the cold on the outside of the glass the aqueous vapour which is one of the products of combustion condenses & then freezes on the inside of the glass in spite of its proximity to the flame.

I have read many years ago of candles in the arctic regions burning down like hollow tubes of wax owing to the surrounding cold air keeping the exterior so cold that the flame at the wick failed to melt the external layer of wax, but I have not had an opportunity of observing the same thing down here though we often have temperatures in which it might occur. Possibly the references were to the very thick stearine candles used in former years in H.M. Ships.

Sir Ernest & Mr. Wild carried out a very interesting, if costly, experiment whilst I was ill; in fact, I am half inclined to think that they seized that occasion to obviate my protests, for they said nothing about it until it was all over.

Wishing to determine the effect of a petrol fire on the ice itself as a possible means of cutting the ship out of the floe, they set fire to about one hundred gallons of petrol in a hollow in the ice. It took place at night & the glare through a porthole attracted my attention & the cat was out of the bag therewith.

It was a fine blaze - the first time I have seen petrol burning in bulk - and there was a fine port of water on the ice, about an inch deep, that was all! It refroze in about ten minutes.

As a matter of fact the petrol was condemned in any case as the cans had been damaged in the pressure upheaval on August 1st & it would have been risky to have had possibly leaky cans on board again; but it seemed like vandalism to thus burn it all up in a flash to settle an argument.

Breakfast - Cod's roe, porridge.

Luncheon - Sheep's tongues, cocoa.

Dinner - Mixed stew, peas, greengages & cream.

Saturday, 18 September, 1915

Temperature zero & below.

Overcast, unpleasant cold, damp wind.

As a further incident of how narrow is the margin between peace & strife down here I may cite the following incident and as I was one of the principals in the duologue and the "laugh" is mostly against me, no harm will be done by detailing the episode.

Lately I have taken in hand the hairless pates of our skipper & another member, rubbing vaseline into them and massaging them for five to ten minutes nightly. It is too early to report results as yet. It is a case of "wait & see". Anyhow, last night I was prepared to "do" the skipper but as he was not ready I sat down & read for a while. Presently he said, "Now then "colonel" if you'll be so good: --" So up I got & put down my book & went across to him. At that moment someone came in with whom the skipper engaged himself in conversation for several minutes & then dived into nautical almanack for another period of several minutes. With that & my hands all vaseliney I got huffy, slammed the vaseline tin with a snap, wiped my hands on his spotlessly clean towel & went back and resumed my book. "Words" began to pass between us, need I say more, & the situation began to become a little strained, but fortunately before we reached the stage of an interchange of nomenclature we both saw the humour of the situation, be it said to our lasting credit, and although he would not thereafter permit me to rub his bald spot - nor I condescend to do it - we parted amicably & wished each other the customary cordial "good night".

I attribute these little contretemps, or antarctic amenities as I call them, to a sort of latent animosity engendered by the artificial

conditions of our life here and a certain lack of tolerance occasioned by being constantly with the same companions day in day out. I believe something of the sort occurs in any restricted community even in monasteries & so forth.

Breakfast - Tinned curried fowl, porridge.

Luncheon - Vermicelli cheese.

Dinner - Salt beef & french beans, jam tart.

Sunday, 19 September, 1915

Temperature zero, etc.

Foggy & generally uninviting.

There is a very long lead of open water running for miles east & west about half a mile away from the ship but except for this the whole aspect of the ice field presents one vast white unbroken surface. Our prospects of an early escape do not seem very promising just now, but no doubt there is a good time coming.

Elated by our rapid northerly drift last month our present stagnation becomes daily more irksome and there are not wanting indications of a despondent resignation in some of us to put the idea of a resumption of the task this season out of our minds.

Since the beginning of this month we have barely made thirty miles to the north. Today we have drifted two or three miles to the south again.

We seem to be gradually going westward all the time: from what cause it is hard to ascertain & whether it is likely to be of any advantage to us or not it is equally difficult to say. We are now in 51.2 W. Long.

I did an awful thing last night as nightwatchman - the worst thing one can do here - I let Sir Ernest's fire go out about 3 a.m.! not for want of coal but through an excess of it. It always is a horrid little fire and I suppose it just got blocked up, or else the wind changed & stopped the draught. My efforts to relay & relight it woke "the boss" who was no more complimentary about it than other less distinguished people when they are similarly disturbed - rather less so in fact. After three quarters of an hour of carbonaceous but fruitless effort Sir Ernest could stand it no longer, got up himself & lighted it literally in a twinkling dismissing me with no little acerbity and he has not failed to remind me about it today, in spite of the gift of two onions as a peace offering. Sir Ernest is particularly fond of them, I am indifferent about them so his gain was not my loss! (And being storekeeper it cost me (the culprit) nothing to curry favour with the stores.)

Breakfast - Bacon, porridge.

Luncheon - Sardines & onion.

Dinner - Tinned lamb & peas, fresh potatoes, Rhubarb tart & cream.

Monday, 20 September, 1915

Temperature +2.

Foggy & unpleasant. There appears to be much water sky (reflection on the clouds of open water) around the horizon especially to the west, the way our bows are still pointing but there is now no open water actually within sight.

I was in the crow's nest today to have a look round. From its elevation we look such a mere speck in a boundless frozen desert of ice. The unbroken snow-covered ice fields have such an impenetrable look about them that one cannot help but wonder how in the world we shall ever break out of our frozen prison;

and yet we are in a far more advantageous position to do so than we were six months ago.

We are well north of Weddell's furthest south, and he had only a sailing ship. We are north of Coat's land too which is believed to be always accessible every summer, but still we are some three hundred miles south of Filchner's position date for date and with our limited coal supply this is not a little discouraging.

We are all confident, however, that one day soon the ice will suddenly split up in all directions and we shall find ourselves in one of the great mile-wide fifty mile long leads which we sailed through in this very latitude last summer on our way down here. Mean-while we jog along, carrying out our daily routine and living on anticipation.

I for my part find I have no trouble in killing time. My difficulty is generally to find time for all I can find to do. Certainly I could if I wished do certain of my tasks quite as efficiently in less time if I chose, but one is so anxious to have one's time fully occupied down here that one feels that one cannot do anything, even the humblest job too thoroughly. Except, of course, the care & maintenance of fires at night!

Breakfast - Seal's kidney, porridge.

Luncheon - Lusty's soup (very good), barcelona nuts.

Dinner - Kidney & mutton stew, green peal, sago pudding.

Tuesday, 21 September, 1915

Temperature +7 to -5.

Overcast in morning but a beautiful afternoon of which I took occasion to go for a walk with Wordie, James & Hudson. To our great regret we have practically exhausted our supply of seal &

penguin meat. We have relied so much upon this frozen fresh meat for its antiscorbutic properties that now that it is finished & we are, so to speak, thrown on an exclusively tinned meat diet we are filled with a mild consternation.

Fortunately the seal season is at hand and we hope to be able to replenish our stock during next month at the latest, for the seals produce their young in October & the crab-eater seals breed in the pack itself. Dependent for their food on the tiny euphasia & amphipods - shrimplike creatures which abound in the Antarctic ocean during the summer - these seals do not come south until the supply of food is established.

During the last few days, Clark, our biologist, has found numbers of these little organisms in his drift nets, so all bodes well for the speedy reappearance of the seals. On the other hand they will not come up onto the ice until the last possible moment so long as the temperature remains low, preferring to remain in the water which is never lower than 28.

The seal which I saw a month ago in the water, smashing the thin ice with his head and "blowing" must have been an exceptionally early arrival - perhaps a pioneer who went back to his friends up north & reported, "no good, no food, too early" or something of the sort, as we have not seen him, or any of his kind since.

On looking it over, I find that we still have a fair supply of seal's organs, kidneys, livers, etc. so we must make them go as far as possible.

Breakfast - Herrings in tomato, porridge.

Luncheon - Pemmican & green pea soup, crystalized ginger.

Dinner - Mutton & potato hash, suet pudding.

Wednesday, 22 September, 1915

Temperature -10 to +7.

Same as yesterday, the temperature fluctuates considerably during the 24 hrs: low when clear, high when cloudy.

I am taking walks more regularly now. I was beginning to find that I was in need of exercise & am now much benefitted thereby. I am also able to get up & down to the crow's nest again which is always interesting. I have not been able to do this for over two months and I am therefore the more thankful that I have entirely recovered from sciatica. I have scarcely the slightest trace of it. I really never expected to get rid of it so completely down here as it must be admitted that the climate is not altogether suitable for it. I feel sure that provided I persist in wearing sufficient clothing I shall not have a recurrence of it.

The sun, however, is now so warm when it is shining that, unless there is a strong wind, one finds it more comfortable to go walking in just the ordinary garments that one wears daily indoors except of course a hat & gloves, but yesterday after a little while we became so warm that we dispensed with gloves & did not suffer thereby, though the temperature was at the time well below zero.

We are now thoroughly acclimatized to the cold and I think we should all feel very uncomfortable indeed if we were suddenly transported to a temperate climate & the tropics would probably make us seriously ill.

The daylight is rapidly increasing and tomorrow being the equinox the sun rises & sets at 6 a.m. & 6 p.m. respectively, and, as there are two hours of twilight at dawn & dusk we already have about

sixteen hours of light daily. By the first week in next month there will be continuous twilight all night.

The planet Mercury, in proximity to the star Spica, is an interesting sight in the evening sky.

Breakfast - Minced seal & corned beef, porridge.

Luncheon - Lusty's soup, barcelona nuts.

Dinner - Tinned roast mutton, raspberries & cream.

Thursday, 23 September, 1915

Temperature -10.

A beautiful warm day.

I went out sledging with Marston & took several photographs.

I went for a walk with Hudson in the afternoon over to a curious ice serac which we call "the obelisk". It gives one something to climb - not much to be sure - but anything is better than nothing & the monotony of the great ice plain makes one long for something scaleable besides the rigging. Although not more than thirty feet high it is as difficult to scale as many a Swiss glacier serac & in true mountaineering vein I even managed to find a means of ascending it on the reverse side.

In view of our impending release, Hudson, our navigator, is already beginning to set his house in order. Hudson is quite a character; one never quite knows whether he is on the brink of a mental breakdown or bubbling over with suppressed intellectuality. He is extraordinarily good hearted & unselfish but simply can't help making a noise. He will argue indefinitely in the most illogical manner & long after a discussion has ceased he will spontaneously allude to it just as if it had been going on all the time.

He is tall and proportionately strong, 28 years old. The son of an Essex clergyman he went to sea at an early age and is a "mate" in the merchant service but is at present studying hard for the rank of captain, or "master" as they call it, and "should do well" as the schoolmasters say in their reports.

For a good many years he has been in the Trinity Service and has done a good deal of time in the navy as lieutenant R.N.R. having left H.M.S. Queen Mary to come to this ship as navigating officer. Curiously enough the captain of the Queen Mary was Capt. W. Hall, the captain of my last ship, H.M.S. Natal.

The only time I have seen Hudson "put out" was when I surreptitiously annexed a pair of ink-stained white trousers of his and exchanged them with the cook for a pair of strong cloth ones; Hudson discovered them on the cook & the fat was in the fire.

Hudson goes by the nickname of Buddha on account of his dressing up once as that deity.

Breakfast - Cold tongue & beetroot, porridge.

Luncheon - Pemmican hoosh, jam & cream.

Dinner - Rabbit pie, sago pudding (a very poor dinner).

Friday, 24 September, 1915

Temperature -14 to zero.

Cold, windy & snowing, but four dog teams under Mr. Wild went out 7 miles to a distant berg. They shot a seal 3 miles out. This is the first seal of the season so we have not had to go long without our seal meat.

The first officer of this ship is Greenstreet, quite a youngster, too young in fact for an expedition of this sort, for although he is a born sailor and efficiency itself at his particular job yet he lacks the experience & training necessary to make him an ideal messmate in such close quarters as a polar ship affords.

Although he received a good educational training at Bedford Grammar School & in the training ship Worcester, it can not be denied that he lacks something in ----- so necessary for the ----- under our present conditions. On the other hand, some of his jokes & stories are decidedly humorous & after all one cannot exactly expect to keep up a drawing-room standard in a mixed assembly such as ours.

His chief fault is a common one amongst us from which I do not at all except myself ----- and his worst fault is an inordinate desire to appear prominently in every photograph & cinematograph film that is taken, as well be revealed to anyone who sees the wonderful films which Hurley has taken.

His strong points are his fondness for work, his desire & instinct for keeping the place clean & his readiness to assist anyone with their work if it happens to be in his own line. I ought not to be too hard on him, for many a time he has swept the room for me & looked after the fire; but certain people do have undesirable idiosyncrasies that do get on one's nerves down here & he is one who has some that get on mine some of ours. His father is one of the oldest & most respected captains in the New Zealand shipping company.

Breakfast - Fresh herrings, porridge.

Luncheon - Lusty's soup, "Cole's" cheddar cheese.

Dinner - Calf's head, black currants & cream.

Saturday, 25 September, 1915

Temperature zero to +15.

A wretched thick day, blowing half a blizzard. Wild's team went out to bring in the shot seal but could not find it.

The chief engineer of the ship is Rickinson who like his assistant Kerr he is on the small side as to stature.

They share a cubicle together & are, I should think, ideal comrades, having identical tastes. One is almost tempted to describe them as a neat little pair.

Rickinson is about 33 & possesses unusually fine wavy black hair; Kerr's hair is also wavy but not quite up to Rickinson's standard.

Like all engineers they divulge so little of their antecedents that it is difficult to say just where either of them come from or just how either of them became engineers, except that they have "done the shops" which is a necessary preliminary to the career of all self-respecting engineers. Both are thoroughly efficient & so unassuming that I would infinitely prefer them as permanent companions to many of my other present comrades.

Kerr is but 21 years of age, he is an excellent workman & both he and Rickinson have done several little mechanical jobs for me infinitely far better than I could ever have hoped to do them for myself.

Rickinson has had the rather unique experience of having been engineer in a ship fitted with internal combustion engines & Kerr has been in one of the large oil tank steamers. Rickinson never really had any desire to spend the winter down here and perhaps at first was affected more by the cold than any one else but is now

as much acclimatized to it as the rest of us and does not regret having come.

Sir Ernest has taken a great liking to him, & he has such nice quiet ways that I am not altogether surprised. Altogether they are two very nice little fellows, if I may be so patronizing as to say so.

Breakfast - Minced collop (the week's scraps resurrected), porridge.

Luncheon - Pea soup, walnuts.

Dinner - Salt beef, mince pie.

Sunday, 26 September, 1915

Temperature +15 to zero.

Blowing in strong squalls all night especially during my watch 3 a.m. to 5 a.m. clearing later to a very fine warm day.

We are fortunate in having two doctors - McIlroy & Macklin, co-equal colleagues. They seem to take cases indiscriminately but which ever one one happens to see first that one attends one until one is better or ----. During my recent indisposition it was Dr. McIlroy and I must say I feel genuinely indebted to him for his unfailing & skillful attention.

He is about 35 and has had a very varied career it seems. Having a "penchant" for travel he has never settled down in practice for long in any one place, having practiced in Japan the Malay states one or two other places and I think as ship's doctor on more than one East Indian passenger steamer.

He is an Irishman by birth though on account of his dark hair & complexion slightly semitic in appearance as he himself laughingly

asserts. He is unquestionably good looking, perhaps the handsomest amongst us (present company excepted).

Macklin is a Scotchman born & bred in the Scilly Isles where his father is one of the leading practitioners. Educated at Plymouth college and Edinburgh University he held a post in a hospital at Manchester before joining the expedition.

Though he gives no indication of it in his voice he yet has the main Scotch characteristics. Rather quick tempered he is at the same time a thorough sportsman in the best sense but he lacks McIlroy's bedside manner.

He is a first class Rugby football player in spite of the fact that he wears glasses.

He is one of our hardest workers, continually out amongst his dogs even in the most inclement weather. Both doctors have dog teams & have developed into very efficient drivers. It seems funny work for a doctor to be doing.

Breakfast - Bacon, porridge.

Luncheon - Lusty's gravy soup (poor soup), Lax (fine stuff).

Dinner - Roast seal & fried onions, Green plum tart & cream.

Monday, 27 September, 1915

On the 24th when Wild & his retinue of four dog teams went out to the ice-berg about seven miles ahead of us, due west, he was lucky enough to find & shoot on his way back a large female crab-eater seal which had come up out of a small "lead" to give birth to her young. As the weather was thick & the dogs were tired he was unable to bring in the quarry so left it where it fell and in order to lighten it for subsequent transportation carried out the

usual procedure in such cases - cutting it open to bleed it and removing the useless organs. It was no surprise to find within it a large living fetus & on separating the umbilical cord the poor little unborn seal also expired.

The next day he set out to retrieve the good meat, but on account of the evil weather, wind snow & drift he had to turn back. Yesterday, however, being very clear & fine he soon found another specimen which had come up in the same place apparently to keep a vigil over his dead mate.

It is somewhat heartrending to have to put an end to their domestic bliss in this way as they are such gentle creatures with not a few human attributes, but their capture is very important to us. We had come to the very last of the dog's meat and whilst the fresh supplies were actually on their way to the ship I had to issue, for the first time, provisions in the form of rice & BA biscuit out of our own stores in order to make up the day's meal for the dogs.

If it is sad to kill the seals it is satisfactory to know that the dogs have never once had to go on short commons and, with the one small exception mentioned, we have never once had to encroach on our own zealously guarded supplies to feed them.

Breakfast - Tinned pilchards, porridge.

Luncheon - Sheep's tongue, cocoa.

Dinner - Roast seal, cornflour pudding & jam.

Tuesday, 28 September, 1915

The dogs are not the only benefactors by the return of the seals for we are once more enjoying really fresh meat instead of frozen seal meat six months old. The cow seals are, of course, unfit to

eat in their present interesting condition, at least that is so when one has a substitute in the "bulls".

Had we no bulls available, no doubt, we should eat the "cows" & find them sufficiently palatable. The "bulls", it must be admitted, are inclined to be a little tough and rank or even slightly bitter, but the anti-scorbutic value of this meat overrides every other consideration. Perhaps we shall soon be eating seal veal.

The seals give birth to their young next month. The young seal has a fine coat of silky hair, not quite a true fur however, which is lucky for the poor seals or they would long since have been ruthlessly hunted and practically exterminated as was the antarctic fur seal or sea-bear some hundred years ago.

Of this species about 1,200,000 were killed between 1779 when Captain Cook first discovered them and 1823 when they were decimated to such a degree that the slaughter ceased to be profitable.

Now but a small colony remains.

It has taken refuge upon one of the smaller of the Falkland Islands where it is rigourously protected.

The facility with which antarctic seals can be obtained, by merely waiting for them to come up at their breeding grounds and their complete ignorance of man's designs upon them, has been the cause of the extermination of the sea-bear. The crab-eaters and Weddell Seals have so far escaped owing to their habit of breeding in isolated units and, to a large extent, in the pack ice itself, besides which, being short-haired, they are of little commercial value, except for their hides and blubber.

Breakfast - Tinned halibut, porridge.

Luncheon - Thick pemmican & pearl barley soup.

Dinner - Roast penguin, hock cakes.

Wednesday, 29 September, 1915

Temperature +4 to -8.

A very dull overcast day with a southerly wind, the first favourable wind that we have had for a month. The result is that we have drifted to the north during the day & as the ice is opening up all around us, Sir Ernest's prognostication that we shall break out on the 2nd October shows some probability of being fulfilled. The long crack which runs partly along the portside of the ship & extends away from the bow in a northwesterly direction has once again opened & is rapidly widening.

Signs of open water are not wanting for in addition to the two seals that we have obtained a snow petrel & an antarctic petrel have both been seen flying round in the vicinity of the ship. As these birds depend for the food upon open water, they are a pretty certain indication of it.

Clark, our biologist, has been preparing the little unborn seal for preservation in spirits. It is characteristic of our heterogeneous existence here that the gory looking object was lying for some hours on the dining table to thaw out whilst on the same table our tea was spread out and eaten!

After having thawed it sufficiently he removed the enveloping tissues & there appeared a most perfectly formed seal pup covered with beautiful soft silky hair. It is remarkable that the young of the hairless seals - Weddell seals & crab-eaters are both long-haired when born. This is probably as a protection against the cold which function is achieved by the layer of blubber under

the skin as they reach maturity when the fine fur gives place to short bristly hair.

This young seal weighed 51 lbs. & measured 4' 6" although its mother was barely 8 ft. long.

Breakfast - Curry, porridge.

Luncheon - Cold sheep's tongues, beetroot.

Dinner - Roast tinned mutton, raspberries & currants & cream.

Thursday, 30 September, 1915

Temperature -15.

In the early morning we had the good luck to secure no less than four seals and two Emperor Penguins.

This dull day has been one of the greatest anxiety. I was out for a walk with my faithful satellite Blackborow when about 2:30 p.m. looking back at the ship we observed the "recall" flag hoisted at the mizzen, - a sure sign that the ice around the ship was on the move. This we found to be the case on our hurried return.

The crack which had opened a little yesterday was now rapidly widening and it looked as if the blubber-melting igloo & several other useful parts of our "estate" would soon form the opposite bank of a large lake.

Everything possible was being bundled on board in the quickest possible time, sledges, boxes, ladders, blubber, seal meat & all the miscellaneous impedimenta that makes up the entourage of a polar ship beset.

Presently the opening movement ceased and the "banks" of the new twenty-foot wide canal commenced, as it were to slide in

opposite directions. As the stern & starboard side of the ship is firmly embedded in the ice forming one bank of the lead with her bows projecting at an angle of about 45 degrees towards the outer bank she was immediately in a position of considerable danger.

The exact circumstances will be readily gathered from the rough diagrams on the next page.

At the time I happened to be up in the crow's-nest. The sliding ice came up against the ship's side with a tremendous impact grinding & piling up with an accompaniment of groans & cracks which was not a little alarming. At the same time the ship vibrated from stern to stern & the mast was so violently shaken that I thought it best to come down, quickly!

Marston & Greenstreet who went down into the "Ritz" found the whole place in a state of convulsion & when I went down later the contents of my hundred and one little boxes of screws, nails, etc. were strewn all over the floor of our cabin.

By 3:30 p.m. the pressure had ceased but curious noises varying from a high musical note long sustained to a deep roar continued for some hours.

Breakfast - Salmon kedgeree, porridge.

Luncheon - Pemmican soup. Cole's cheddar cheese.

Dinner - Roast seal, fresh potatoes, stewed gooseberries & cream.

Friday, 1 October, 1915

Temperature -15 to zero.

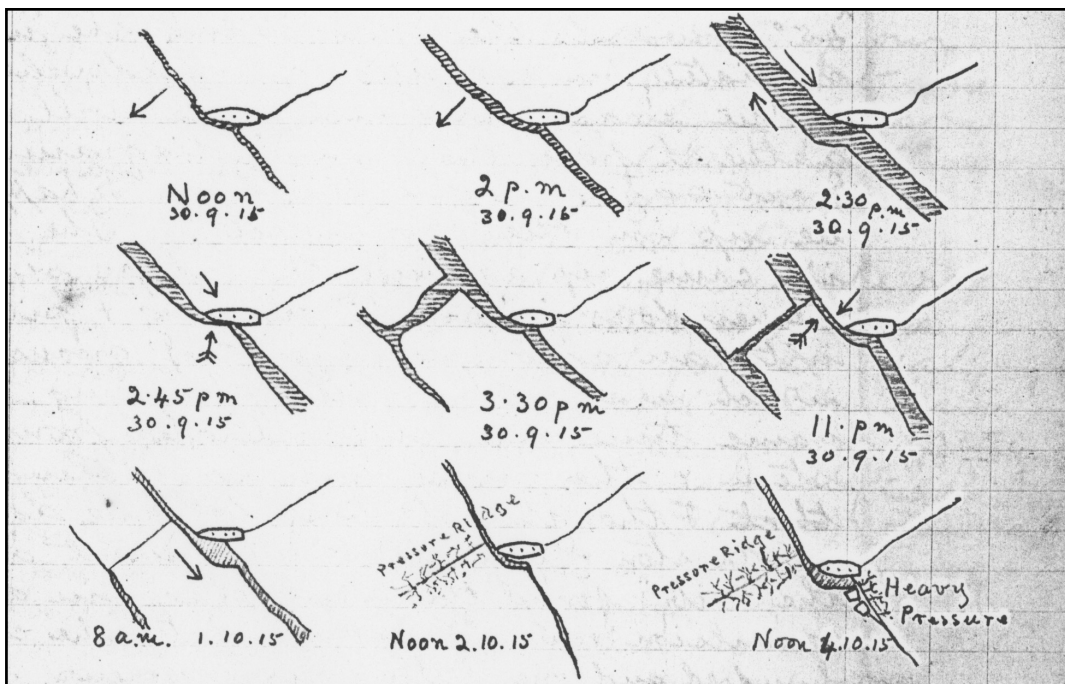
A very variable day. Light haze & no wind during my night watch at 2 a.m. Cold S.E. wind & -15 temperature at 8 a.m. Bring

sunshine but cold at 10 a.m. At 2 p.m. I went for a walk with Dr. Macklin & his puppies to see whether we could find any penguins, whilst we were out a thick haze came over, not that it mattered for one can always find one's way back now by picking up & following a sledge track, as these extend in every direction for several miles.

At 4 p.m. it was snowing, and at 5:30 there was a parhelion with extraordinarily bright mock suns and a beautiful coloured inverted "rainbow" almost in the zenith such as I have not before seen By 9 p.m. the thermometer had risen to zero & it felt quite warm.

The movements of the ice have ceased temporarily, but there are numerous open leads & pools around.

The following diagrams refer to yesterday's movements.



Courtesy of Dartmouth College Library

We secured two seals & one Emperor penguin again today. By a slip I see that I have written this day's meals down on the preceding page & yesterdays on this.

Breakfast - Seal steak, porridge.

Luncheon - Pea soup, figs.

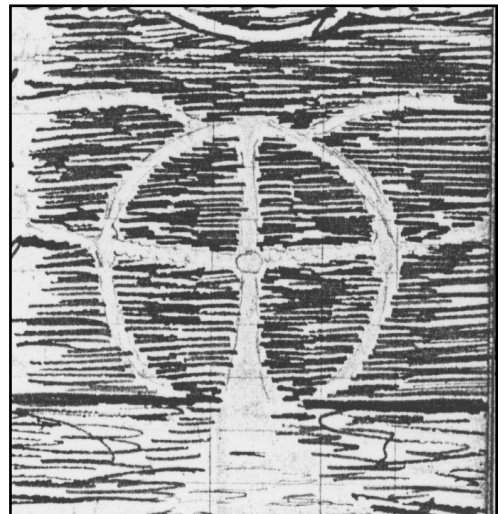
Dinner - Roast penguin & peas, suet pudding.

Saturday, 2 October, 1915

Very variable weather bright sunshine with intermittent snow showers & frequent remarkable solar phenomena. At one time the parhelion exhibited a complete cross with extensions beyond the circle enclosing the cross.

The mock suns, or sun dogs as we call them, were coloured and slightly above the arms of the cross so that the arms appeared to be a slight upward curving arc passing through the sun.

The conditions necessary to produce the most remarkable effects seem to be a thick veil of dark mist between the sun & the observer, but only so dense that the disc of the sun can be seen quite clearly through the veil. Most of these phenomena vary in intensity every minute & often last but a few minutes.



Courtesy of Dartmouth College Library

I was out sledging with Mr. Wild this morning - the first time I have ever been out with him. His dog team, of which my little friend "Soldier" is the leader, is so far superior to any other team in speed & general handiness that my ride was in every way reminiscent of a run on a bob-sleigh in

Switzerland, an impression that was enhanced by the fact that we were sitting or lying low on the platform of the sledge itself, the usual loads of petrol boxes having been removed in order to enable the sledges to be more easily hoisted inboard in case of emergency.

Seals are coming up by the dozen all around many of them out of reach on the further side of newly open "leads", but we were able today to secure three anyhow.

If they are at all near to the ship we pull them in by hand & it affords strenuous but profitable exercise. The dogs bring in the more distant ones.

Breakfast - Minced collop, porridge.

Luncheon - Pea & pemmican soup, barcelona nuts.

Dinner - Salt beef, carrots.

Sunday, 3 October, 1915

Temperature -1.

A very cold damp day.

Heavy pressure occurred 10 yards away from the ship last night.

During the time that the ice was clear of the ship's bows & forward part of the port side of the ship yesterday & before the open water had begun to freeze over, we were able to see beneath the keel by looking down into the water from the shady side of the ship, the strong sunlight on the opposite (starboard) side of the ship penetrating the ice & revealing ice from deep down in the water in masses of azure as blue as the grotto of Capri.

It was at once evident that the ship, which still retains her five degree list to port, is as firmly embedded in a cradle of ice, excepting the forward half of the port side, as any rock in a glacier. She must be fairly frozen onto a solid concretion of ice blocks which were submerged during the pressure of August 1st for we could see great ice promontories quite forty feet below the water under her keel.

It is a very beautiful sight, especially when the blue light from below shines through the little plates of ice crystals which begin to form on the surface almost as soon as the open water appears, but its contemplation is not rendered more pleasant by the thought that we cannot possibly expect to break out altogether until this cradle of ice splits up, and further, until it does, we are constantly liable to be subjected to severe pressure at any moment. We are at once more like the currant in the bun only now we are in the unenviable position of being embedded on its outer edge ready to be bitten off at any moment.

Since writing the above the ice has split round the rudder & by lowering an electric light into the water we are able to see that the rudder is not nearly so seriously damaged as we had expected. The crack was fortunately noticed at once, otherwise it would have been frozen over again before we could have inspected the rudder & propellor.

Breakfast - Penguin's liver & bacon, porridge.

Luncheon - Lusty's soup, sardines.

Dinner - Boiled ham, fresh potatoes, gooseberry tart & cream.

Monday, 4 October, 1915

Temperature -25 minimum.

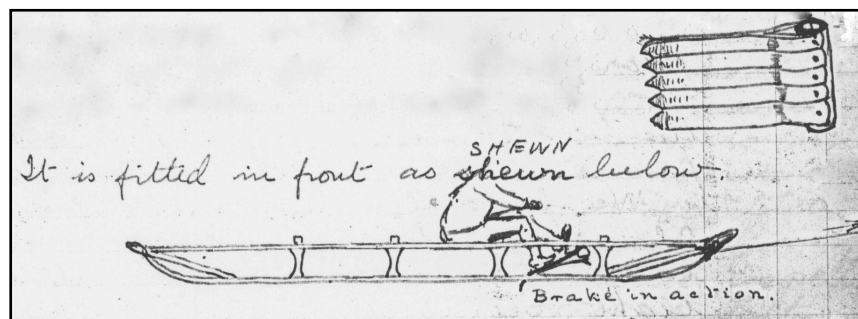
We obtained a crab-eater yesterday & two emperors today.

A magnificent clear sunny day with a big drop in temperature.

I went out for a couple of hours sledging with Dr. McIlroy. It was exceedingly exhilarating in the clear crisp air especially as the sledges are still free from boxes or other load. Dr. McIlroy and Wild have fitted brakes to their sledges. These are constructed from the identical flippers which I designed for steering the big aero sledge in Norway & which we now have here but are unable to use on the rough sea ice. They are merely a series of iron prongs like this:

built up to form a kind of spade with a serrated edge.

It is fitted in front as shown below.



Courtesy of Dartmouth College Library

It is simply pressed down by the foot to bring it into action and held up, when not required by a spring. It is fairly effective.

As we were returning an empty sledge drawn by a team of runaway dogs passed us. They were going too fast & too far away for us to stop them. They turned out to be Hurley's team & we soon saw him following up in rear on foot looking very crestfallen.

This occasionally happens & is generally due, as it was in this case, to both driver & passenger being shot off going over rough ground, but the drivers consider it a reproach.

We have started playing hockey again & had an excellent game after evening dinner today. We play on a fairly level floe, but of course the loose powdery snow very much affects the general tone of the game. We use a red ball & it often gets lost in the snow.

Breakfast - Seal steaks, porridge.

Luncheon - Pemmican & pearl barley soup, walnuts.

Dinner - Rabbit & seal hash, cornflour pudding.

Tuesday, 5 October, 1915

Temperature -24 minimum.

Very fine & warm.

I have been busy nearly all day repairing a leakage in the ice melter - a most bothering soldering job.

For the last ten days we have adopted an excellent daylight saving scheme having advanced the clock two hours.

This arrangement enables the occupants of the "stables" (the original upper deck saloon) to dispense with artificial light altogether for there is plenty of daylight under the new system until 10 p.m. by our advanced time.

The same applies to Sir Ernest's cabin which is also on the upper deck.

As for us dwellers down in the "Ritz" (originally the main hold) there are no ports there, for we are mainly below the water line & therefore we are dependent on artificial light all day long. We have the splendid light of the Blanchard high power, 300 candle power, but even this light seems very dull & gloomy when one comes in direct from the fresh air and brilliant antarctic sunshine.

Much more so is this the case when we have only a single candle alight down below, which we have to do for three hours in the mornings in order to economise paraffin. It does not, however, inconvenience any one very much for the dog drivers are generally out with the sledges at that time and each generally takes a passenger, whilst the few members who have clerical work to do go & do it in the "stables" & I am left alone in the dark to potter about unless I happen to go out for a run on ski or on a sledge. If dull I busy myself in my bunker (not in my bunk) and shift packing cases (added later: and what he finds to occupy him there goodness only knows and we care less so long as we find the table laid for luncheon when we come in from sledging. He generally emerges from the bunker smiling, black & hard-working-looking about a quarter on an hour before luncheon to lay the table. Occasionally he is late but he always "catches it" from Sir Ernest.)

We are unfortunately compelled to economise the paraffin as we are running rather short of it & must keep some in reserve.

Breakfast - Seal's liver, porridge.

Luncheon - Macaroni cheese.

Dinner - Seal meat pasty, suet pudding.

Wednesday, 6 October, 1915

Temperature -10.

Another brilliant warm day.

Dr. Macklin kindly took me out for a fine run today on his sledge. The surface was splendid and as the sledges was "light" we went at top speed whenever we were running on the hard worn track. In the drifts & amongst the hummocks it was a different matter & as much as the poor animals could do to pull the sledge at all sinking up to their bellies without getting any proper foothold even then.

In such places they almost seem to be swimming along & they extend their toes fan wise to use their feet to the best advantage; the heat of the little naked parts between their toes seems to melt the snow & form moisture which subsequently freezes into ice when they get on to the harder surface again.

They thus accumulate little ice pellets between their toes matted up with the hair under their feet. It must cause them considerable discomfort, for when they return from a run, these parts of their feet are often rather red as if slightly inflamed. The dogs are always very anxious to nibble the little bits of ice out of their feet the moment they are placed in their kennels. If one attempts to aid them by extracting the offending ice with the fingers or an implement they resent it & some even growl threateningly as if they knew much more about it than we did.

Unfortunately whilst we were out today the leader of Macklin's team misbehaved himself repeatedly by acts of disobedience & inattention to orders & eventually he had to have a rather severe hiding & later was disgraced. He then appeared to be very dejected almost as much so as a human being would be.

One seal was shot today.

Breakfast - Curried seal, porridge.

Luncheon - Lusty's mutton broth (excellent), meat pasty.

Dinner - Cottage pie, french beans, stewed cherries & cream.

Thursday, 7 October, 1915

Temperature, maximum +16.

A nasty cold morning changing to a beautiful evening.

Some very wide "leads" have been opening up around us during the last two or three days, one of them quite two hundred yards across, but owing to the continuation of the low temperature they soon freeze over, so that the ice on them "bears" after about 36 hours, but, as the opening movement continues for several days, there is always a narrow line of open water running along the middle making it impossible to cross them until either the opening movement ceases or else they begin to close again. When this latter happens there is usually a little miniature pressure ridge of young ice along the entry of the "lead".

The ice is never still for long.

One can generally tell by the condition of the frost flowers - those wonderful flower like crystals that invariably spring up from freshly formed sea ice - whether young ice will bear or not. If the ice looks black & the "flowers" are small & scarce it is unsafe, if white & the flowers are large & numerous it is usually safe. Snow covered ice is nearly always safe in these latitudes as the snowfall is usually so slight as a rule that it takes several days before enough has fallen to make a noticeable coating, during which time the ice will have had time to thicken up.

Occasionally one is deceived by a comparatively heavy snowfall during the night forming a covering on young black ice, to venture on which entails a certain ducking. The latter is not so serious as it at first sounds for there is generally time to scramble onto the

firm ice one has just left before one gets more than a leg wet. The only safe plan is to always carry a ski-pole.

Breakfast - Cold sheep's tongue, beetroot, horseradish sauce, porridge.

Luncheon - Pemmican hoosh, french plums.

Dinner - Seal Irish stews, bread pudding.

Friday, 8 October, 1915

Temperature maximum +19.

Cold morning, fine afternoon, then strong N. wind & sleet from 4 p.m.

Took the cook out for an exciting walk.

The shortness of paraffin is beginning to make itself felt & is accounted for by the fact that it was never really intended that the ship should winter here, in spite of the fact that it was stated in the press that she would.

One cannot help but congratulate oneself that it was so intimated for our friends & relations would all have suffered much unnecessary anxiety had the expected ship failed to put in an appearance at some civilized port about the appointed time - say April last.

The paraffin was more than ample for the shore party's needs & for the requirements of the of the ship during her intended stay down here, but our enforced location in the hold, for the sake of warmth, has made serious inroads into the supply. That the Blanchard lamps consume a fairly large quantity as compared with an ordinary wick lamp is evident by the fact that at times the air in the hold becomes so charge with carbonic acid gas that everyone

of us is suffering from more or less severe headache. On one occasion, I who am particularly susceptible to this form of poisoning, almost fainted in the same way as I actually did on the voyage from Buenos Ayres to South Georgia.

When the air becomes very vitiated in this manner we have to sit with both doors open & a draught anything below zero blowing through the room for half an hour or so.

I am afraid that paraffin is not the only thing that we are a little short of, though as long as we reach civilization before March 1916 no one but Sir Ernest, Mr. Wild & myself will be aware of it. We have, however, had to economise butter since September 1st by using dripping as a substitute at breakfast on weekdays.

We got another seal today.

Breakfast - Salt fish & anchovy sauce, porridge.

Luncheon - Lentil soup, Cole's cheddar cheese.

Dinner - Roast penguin, baked potatoes, pickled walnuts, gooseberries & cream.

Saturday, 9 October, 1915

Temperature maximum +21.

A north wind has brought an extraordinary rise in temperature. It feels as warm as spring at home!

The daylight saving scheme is a great boon. It means that we have warm sunshine after dinner at night enabling us to take walks or potter about out on the floe.

I am afraid I have a reputation as a collector of unconsidered trifles though I must say that I notice that everyone comes to me

for nails, wire, string, wood, etc., etc. Most of this sort of gear I find thrown away or lying about on the floe. Thriftlessness seems to be part of an Antarctic explorer's temperament.

It is very extraordinary, but it is so.

Poor Captain Worsley is sometimes nearly driven crazy by the way that members cut rope ends off the rigging if they want a line for anything and then after they have used it they just throw it away anywhere. Of course this is quite an ordinary characteristic of the average male biped at home but one would have thought that fellows would have appreciated more the necessity of overcoming it down here, but they don't!

It is not only useful articles that I collect for I never miss a chance of adding to my antarctic museum such things as penguin skins or seal skins that other people less lazy than myself have taken the trouble to clean up, but have later on neglected.

This evening on my ghoulish prow I found two nicely dressed pieces of seal's skin, three seal's heads which I sawed in half with a view to boiling out the jaws later on, and a fine big strong box containing a dead dog firmly frozen into a solid block of ice.

It took me about an hour to chip the dog out in small pieces & I now have one of the best hinged lid boxes in the antarctic.

Some pieces of whalebone & a piece of broken glass for use as a seal-skin scraper completed my "finds" for today!

A fine game of hockey today; it was so warm that there was no need for gloves.

Breakfast - Minced collop, porridge.

Luncheon - Heinz spaghetti a la Italienne.

Dinner - Salt beef, fresh potatoes, dried carrot, tapioca & jam.

Sunday, 10 October, 1915

Temperature +29 maximum.

The remarkable high temperature is maintained & there is a general thaw on board; every-thing is slushy.

The snow on the floe too is quite soft. We are out and about without hats or gloves & with thin boots again.

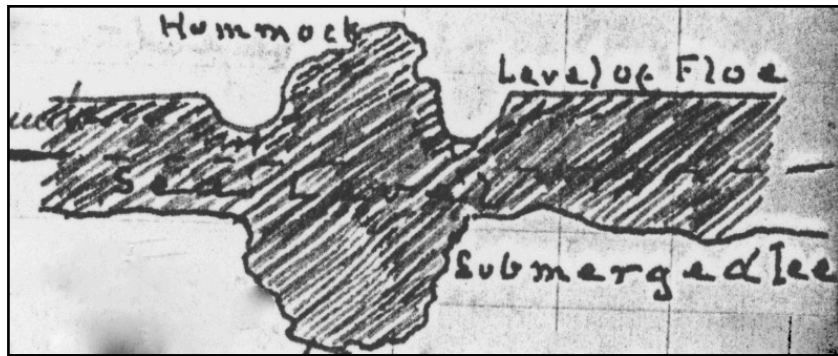
Animal life is returning all around us & even though we are drifting southwards it seems that our release is at hand, for there are now very large areas of open water visible in every direction.

In one large lead close to us I saw a big blue whale several times a few days ago. Several flying birds have been seen lately, antarctic petrels & the beautiful pure white snow petrel.

I was out sledging with Tom Crean today. He had only five dogs out and with a full load of sixteen gallons of petrol besides the two of us so the pace was anything but thrilling.

Whilst out I observe a peculiarity that I have not previously appreciated - that all the isolated hummocks are entirely surrounded by a natural fosse two to three feet deep according to the depth of the snow on the floe. A wind eddy is the probable explanation of this, no snow being deposited within several feet of the hummock, for it does not appear as if the fosse was scooped out afterwards.

Section through floe & hummock:



Courtesy of Dartmouth College Library

Tom Crean is a fine character one of the most reliable men on the expedition. As his name suggests he is an Irishman & a giant at that. He started as an ordinary sailor in the navy & was in Scott's expedition on H.M.S. Discovery & again in his last expedition when, by walking thirty miles alone to fetch help, & thereby save the life of Commander Evans dangerously ill with scurvy, he gained the Albert medal for conspicuous bravery. His staunch loyalty to the expedition is worth a lot.

I got into rather serious trouble today for crossing the frozen "lead" just ahead of the ship. It was quite safe but Sir Ernest considered that it was not so & he has more experience than I have, I suppose he is right as usual & I was wrong!

Breakfast - Bacon, porridge.

Luncheon - Pemmican soup, Lax (tinned smoked salmon slices).

Dinner - Boiled ham, parsnips, potatoes, Blackcurrant tart & cream.

Monday, 11 October, 1915

Temperature 29 maximum.

Overcast & everything on board dripping wet with thaw. Members are removing the melting ice & rime from their upper deck cabins with a view to reoccupying them shortly.

There are enormous stretches of open water all around us. Everything now points to an early release. Everyone is eagerly looking forward to it, for it cannot be gainsaid that we are anxious to see other places & other people again, for this desert of ice becomes monotonous in spite of the prevalence of brilliant weather so far. One longs to see some rocks even, let alone grass, trees & animals. Still we have nothing to grumble about as it is, for we have warmth & comfort and the very best of food, & moreover this exhilarating climate makes one feel always fit & well.

As to the sumptuous way in which we are fed the following incident may bear recording. On Saturday last I served out Heinz's Spaghetti in Tomato, a really high class luxury, for luncheon. It appears that one of the sailors in the fo'c'sle did not find it to his taste & his messmates complained to Sir Ernest that one of their number had had no luncheon. Sir Ernest promptly told him that he had better "make do" with the ample bread, jam, treacle, potted meat, etc. with which they are provided in the fo'c'sle. He added that he was brought up himself to eat what was given to him!

It is difficult to credit such a pusillanimous spirit pervading even amongst the men of the lower deck in the present circumstances, but they always have been "difficiles", and never have a thought beyond how much they can get to eat & how much money will be due to them on their return home. Thank goodness there are only seven of them. Individually they are good enough fellows but collectively they are beneath contempt.

Breakfast - Penguin steak, porridge.

Luncheon - Mutton broth (Lusty's).

Dinner - Seal & tinned stewed kidney, rice pudding & jam.

Tuesday, 12 October, 1915

Temperature 28 maximum.

We are to abandon the "Ritz" tomorrow & live in the daylight of the wardroom again whose present occupants are breaking up their erstwhile happy home.

It may seem to be rather hard on our gallant sailors, but they really have been rather troublesome at times. It seems part of the sailor's creed to have a perpetual grievance about something or other and they are all of them "sea-lawyers", forever trying to strain the "Board of Trade" regulations to the last ounce in support of their supposed "rights".

Board of Trade may be all very well on ocean cruises in temperate & tropical climates, but it is pure nonsense to expect legal regulations in the matter of food, to be closely adhered to in polar latitudes. In many ways it is a sheer impossibility to carry them out at all and people who cannot realize this & make the best of the excellent food that is available are undeserving of the honour of serving aboard an exploring ship & under so gracious a leader as ours.

Vincent is the senior man in the fo'c'sle. He was at first the bo'sun but on account of his lack of tact in dealing with the others he was disgraced & it seems a better arrangement all round.

He is an immensely strong fellow, was a sailor in the Navy & before joining this ship was employed in trawlers around Iceland.

Howe is a good all round sailor & a very cheery fellow. He has decided skill in wood carving & painting pictures.

Stevenson is an ex-Royal Marine from the Chatham division, has been an officers's servant & is sort of 3rd engineer & stoker in the ship.

McCarty is a witty Irishman with a splendid gift of repartee. McLeod is an elderly Scotchman, a quaint old character. He was on the "Discovery" expedition. Bakewell is a Canadian & one of the nicest & best educated of the "hands". His ambition is to own a small motor ship of his own. He is studying navigation. Holness is the youngest, a Yorkshire lad. He is perhaps the most loyal to the expedition.

Breakfast - Tinned Pilchards, porridge.

Luncheon - Cold sheep's tongues.

Dinner - Roast penguin, suet pudding.

Wednesday, 13 October, 1915

Temperature 23 maximum.

Clear & bright, a beautiful day & very warm. Our position is very unsatisfactory. We are no further north than we were nearly six weeks ago.

Besides the men mentioned previously Green, the cook, & Blackborow, my faithful friend in the pantry, are both accommodated in the fo'c'sle. I have described them earlier in this diary. They have very different temperaments but both are intensely loyal to the expedition & Sir Ernest has a very high opinion of Blackborow. He is one of those scrupulously clean and conscientious young fellows. For his age he is extraordinarily reliable and competent. His only enemy is his own hasty temper,

but he is immensely improved since he has been in this ship. Both he and Holness take a great interest in the dogs and all outdoor exercise & games.

The cook & Blackborow take their meals in the pantry.

The sailors have ridiculously little work to do. They bring in the ice for melting each morning & beyond occasionally clearing the snow off the deck, repairing sledges and clearing up generally they have little else to do except one hours watch each during the daytime. One of them, too, is told off each week to assist the cook & act as sweeper & steward to the fo'c'sle. They seem to spend all the rest of their time sitting round their fire arguing or lying in their bunks reading and the more enterprising sometimes try experiments in curing seal hides, not without some success.

This is our last day in the Ritz. Everyone has been exceedingly busy taking down their bunks & carting their lares & penates up to the cabins. The general packing up gives the impression of paying off. Everything is chaos. The stove has been moved up to the cabin alley-way. I alone am to remain down in my cubicle in the Ritz, or the hold as it really is. It is a curious place to live in all alone & may be cold without a fire.

Breakfast - Seal steaks, porridge.

Luncheon - Vegetable soup.

Dinner - Stewed seal, cornflour pudding.

Thursday, 14 October, 1915

Temperature +31 to +15.

A clear mild day. Awful slushy on deck.

Today we had all meals up in the old wardroom a bit of a muddle at first but things will soon straighten down.

The vagaries of the climate quite bewilder Hussey, our meteorologist, for just when he thinks it is going to do one thing the precise opposite often happens, but on the whole he takes his troubles very cheerfully; indeed I think he is the most genuinely cheerful amongst us and his general cheeriness does much to enliven the tone of our table talk & even to make others take their own little troubles more lightly.

He is a Londoner by birth & is continually being chaffed about being a cockney a part which he often acts to perfection. His wit and repartee are exceedingly bright and invariably in the best taste.

He is a B.Sc. (Bachelor of Science) of the London University & reckoned very good at his own job. Although no more than 23 years of age he has had previous experience, having been a member of the Welcome expedition to the Sudan under Mr. Welcome of the firm of Burroughs & Welcome.

He is a lean joist of unusual merit and it is very pleasant to have music of any kind down here; his repertoire is sufficient to prevent his tunes becoming too monotonous which cannot be said of my own. As a matter of fact, I have my old banjo with me but as the drum burst on the way out I make this the excuse for not playing; actually my execution is so inferior to Hussey's that the comparison would not enhance my reputation in any way! Hussey is one of our smallest members but he makes up in energy what he lacks in stature.

At about 7 p.m. tonight the floe suddenly split & widened out into a small lead, the ice slipped from under the ship & she righted

herself & floated on an even keel once more. The long awaited break out becomes an accomplished fact.

Breakfast - Curry, porridge.

Luncheon - Cold mutton, mint sauce.

Dinner - Roast penguin, pancakes.

Friday, 15 October, 1915

Temperature zero.

Very fine but cold.

During the night a sail was hoisted, we partly sailed & were partly pushed by the ice into a new position is about a quarter of a mile from our old position, but it is only a very temporary move for we again jammed in the ice & are waiting eagerly for a more general opening.

With all the seals & penguins Clark, our biologist, is once more in his element. He is a typical Scotchman - an Aberdonian - but he is a thorough good sort. He is a footballer of some merit and "runs" our games for us.

He is very hard working, forever skinning penguins, of which Sir Ernest is taking home a good number of specimens as presents, I believe, for supporters of the expedition.

Clark has become quite an expert taxidermist not that that is his principal duty for he is a marine biologist & an all round naturalist of some considerable attainments being a B.Sc., & before joining this expedition, which, by the way, he did at the eleventh hour, he was on the staff of the British Marine Biological Laboratory at Plymouth.

He has made an enormous collection of marine creatures & objects down here all of them neatly bottled up in little glass honey jars & he is forever commandeering every box he sees to pack his jars in. As an accumulator of oddments & riff raff he is second only to myself, but to obtain anything from him is generally like getting blood out of a stone, but then he is Scotch, and after all it is rather ungracious of me to say this for he has nearly always given me anything I have asked him for (after a fitting interval) & only the other day he gave me a whole tin of alum for dressing a penguin skin, & I daresay I am much worse in that myself. I made a good bargain with him some time ago, - a pair of leather mits for a dressed Emperor's skin. I got the skin! The next day new leather mits were served out. Clark got the "lump"! I had gotten the better of him for once.

Breakfast - Salt fish, porridge.

Luncheon - Cold ox tongue.

Dinner - Stewed tinned mutton, stewed gooseberries & cream.

Saturday, 16 October, 1915

Temperature +18.

The ice appearing to be fairly settled the dog sledges went out but were soon recalled owing to the lead opening. There has been a good deal of steady pressure.

The scientist most to be pitied on this expedition is Wordie the geologist, for his metier lacks the necessary materials at sea, & so far we have not seen so much as a pebble since leaving South Georgia Island except for the few "bottom samples" brought up by the patent sounding machine, a small stone or two found in an iceberg and the contents of the penguins stomachs.

From these unpromising materials he has derived a certain amount of interest especially from the latter, but it must all be a very great disappointment to him.

Penguins, it may be stated, carry about with them in their stomachs quite a lapidary of small stones, sometimes as much half a pint of them varying in size from a large pea to a small walnut.

They are doubtless required for digestive purposes in the same way that the domestic fowl carries a little fine grit in its "crop", possibly also they may be used in the breeding season for nest construction.

"Jock", as we always call Wordie is another true Scotchman from Glasgow. He has a most amiable temperament & a wonderful fund of very dry humour, & a happy knack of "pulling one's leg" in a quiet sort of way that leaves one more pleased than hurt. He too is a B.Sc. (of Cambridge) having been college mates with James, our physicist. In default of rocks to vent his spleen on "Jock" has made a great study of glaciology & I have no doubt that with his keen philosophical judgement he will produce a book of great merit upon this interesting & little known subject.

Taking him all round he is at once the most inoffensive & one of the most popular of our members. He has no use for cliques, which have unfortunately developed a little and are well known to be the bane of expeditionary life.

Breakfast - Minced collop, porridge.

Luncheon - Pemmican hoosh.

Dinner - Roast seal, Banbury cakes.

Sunday, 17 October, 1915

Temperature 22.
Overcast damp cold.

Having as I often do, written up several pages of this diary in advance owing to the recent lack of incident it so happens that some of the most eventful occurrences of our humdrum existence have taken place during the last few days.

On the 14th we may be said to have officially "broken out" today. The old crack from the rudder suddenly reopened & gradually widened during the night into a navigable lead. The strong West wind blowing forced us stern first along the lead for about two hundred yards to a place where the lead turned sharp at right angles. Into this place the stern slipped, fortunately without further damage to the already strained rudder, and in such a manner that the bows swing round and as the lead continued to open the ship's head cleared & pointed up in the new direction. The mizzen spanker was hoisted & we sailed along another two or three hundred yards until we jammed in a narrow part & thereafter were subjected to some pressure.

Pressure has been going on intermittently almost ever since the 14th inst., tilting the ship slightly first to one side then to the other until this afternoon it reached a climax by giving the ship such a tremendous nip that her stern was raised nine feet out of the water and the propellor was actually above the surface.

In order to relieve the pressure we were all out on the floe with picks & shovels digging a trench in the ice round the ship, but we got very wet owing to the trench becoming inundated & I doubt whether we did much good as the ship's side was pressed in five or six inches for about eighteen feet all along the outer wall of the port bunker. Contrary to our expectations she stood it; thank God.

Yesterday Sir Ernest decided to get up steam so we spent all the morning pumping sea water into the boiler by hand. No sooner was it full than a leak was discovered at the bottom & we had to pump it all out again. Meanwhile the water ran along the bilges & flooded my storeroom. I have been all day shifting the cases out of the water quite fifty of them. It was a disgusting job. The stinking bilge-water was eighteen inches deep at one end. I fell into it & got very wet & smelly.

Breakfast - Bacon, porridge.

Luncheon - Ox tongue.

Dinner - Tinned haricot mutton, red currant tart & cream.

Monday, 18 October, 1915

Temperature max. 27.

A mild misty damp day.

After the "pressure" of yesterday we thought that things had settled down a bit but it was not to be so.

We were having tea peacefully at 4 p.m. after having spent the greater part of the day pumping out & bailing out the foreward lower hold, when we heard & felt several light bumps, such as we have grown quite accustomed to, followed by one very loud one which aroused our curiosity sufficiently to cause us to casually saunter up on deck. There are always possibilities of the "pressure" resulting in some interesting spectacle for the mighty forces which can split asunder vast floes of ice many feet thick must always be somewhat awe inspiring when at work, but we were not prepared for what we saw today.

No sooner had we reached the deck than the ship was heaved up suddenly & violently & immediately rolled over slowly onto her side until she lay on her port side to all intents & purposes on her "beam ends". It looked at first as if she must turn turtle.

Everything was at once pandemonium.

Kennels, spars, sledges, etc. all sliding down the deck & the dogs howling with terror.

We feared at first that many of the dogs were injured if not killed but eventually we found that none were seriously hurt which was really marvellous for the kennels are in batches of about ten weighing with the spars etc. on top of them say half a ton & they were all jumbled up & sandwiched like carriages in a railway accident.

Our first task was to liberate the dogs, & no easy one on account of the weights of the kennels & the difficulty of working at all with the deck at an angle of fifty degrees & very slippery with thawed slush & blubber all over it.

At the time, I happened to be standing against an open space on the port side amidships i.e. the side to which the ship heeled over. Before I had time to consider what was the most useful thing I could do a kennel just beside me commenced to slide overboard.

Monday, 18 October, 1915 (Continued)

Temperature 29.

Mild & moist.

Any amount of work rectifying the derangements of yesterday & refilling the boiler. All the loose wood has been broken up, event

the Norwegian "pram" boat, & placed in the bunker for fuel, the blubber being taken out of the bunker where it had been stored since the beginning of the month and placed on deck. With the help of one the men, McCarty I bailed the rest of the water out of the fore hold & straightened things up a bit.

I had just time to release its occupant "Simian", one of the finest dogs, before the kennel shot out through the open space. Just as I thought it must fall overboard it jammed in some way hanging right over the side & later on it was rescued.

No sooner had I got hold of the dog than the heavy midship kennels with all the sledges & other gear on them came sliding down upon me & the carpenter, jamming us in between these & the kennels on the ship's side, & apparently crushing several dogs. Meanwhile the dogs in the ship's side kennels began to fight the midship dogs who had so precipitately descended upon them.

We managed to keep back the kennels sufficiently to prevent injury to ourselves and until Sir Ernest had gathered "hands" to pass a rope & tackle round them & relieve us of their weight.

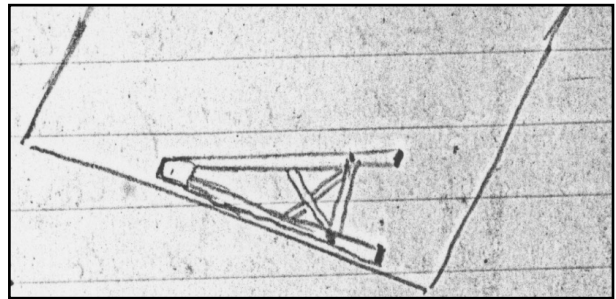
Thereafter there was no end of work to do recovering & securing all the sundry gear. All this was very difficult with the deck at such a steep angle of thirty degrees, but some of us got long battens & nailed them down to the deck fore & aft a yard apart & this provided a fair foot hold.

Mr. Wild & I had "braces & bits" and crawled into the kennels to drill holes for the securing ropes to pass through. The dogs couldn't make it out at all to see us crouching inside the kennels whilst they themselves had to sit outside.

Everyone was working at high pressure but just what each one was doing I cannot say as I was much too busy myself to look around. I think that most of the others were shifting planks & cases & generally clearing up.

Hussey went down and put out the fires at once; fortunately the cook had prepared the dinner & was keeping it hot & when the crash came had the presence of mind to sling the pot up, so one of the most important items of the day was saved.

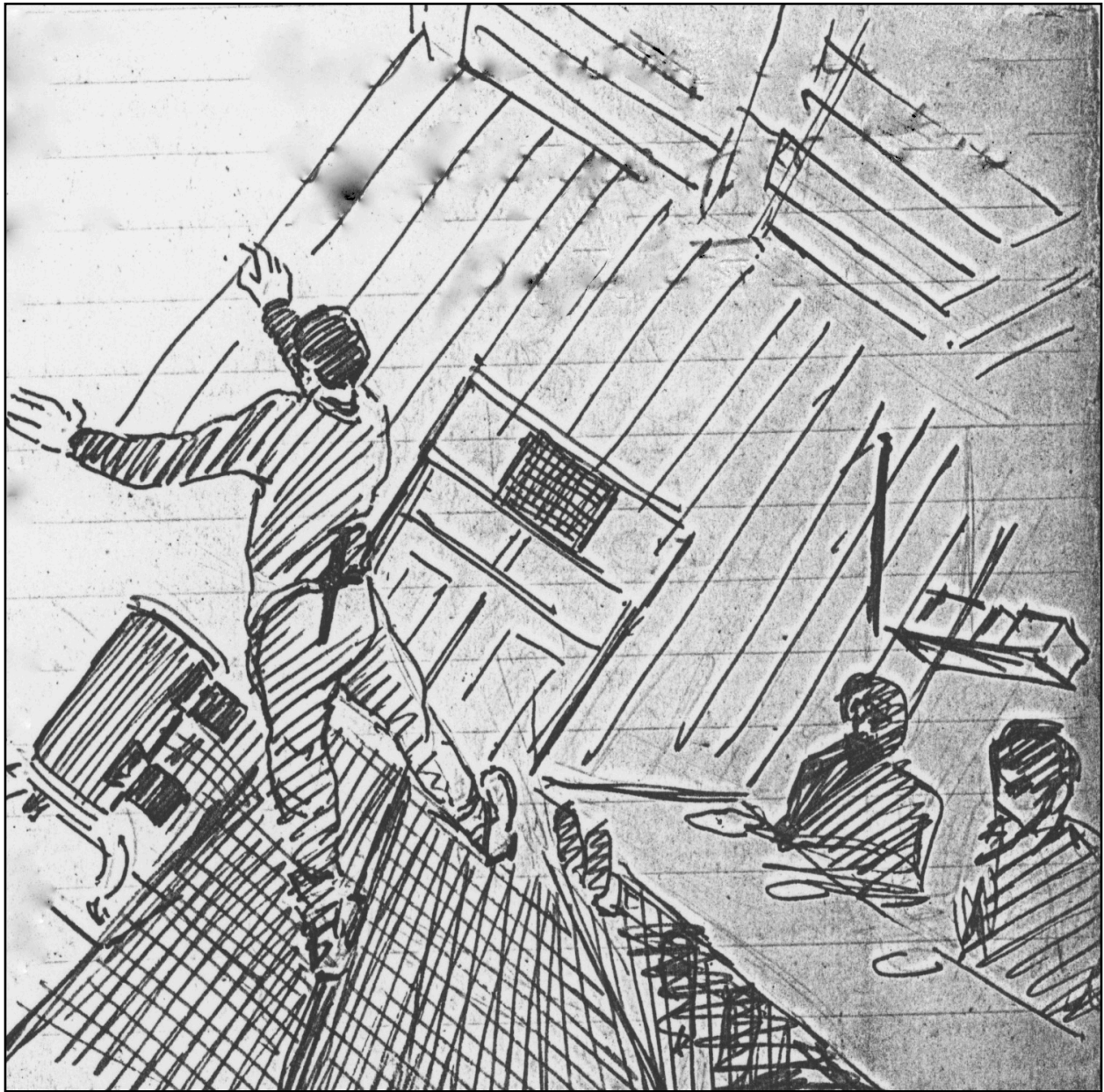
By about 7 p.m. we had secured most of the loose gear and fitted battens on the decks & in the wardroom and I proceeded to lay the table but owing to the extreme angle, instead of placing the table on the trestles as usual, I laid the trestles on their side in this manner and laid the table top on them in that position.



Courtesy of Dartmouth College Library

Some sat on the floor with their feet against the battens others on the edge of the table & so on but we all had a well earned meal.

The effect was extraordinary. One could not adjust ones ideas to suit the situation. Although the table was perfectly level it appeared to be tilted at a quite impossible angle & everyone was ready to take bets that articles would slip off, but they didn't. An ordinary candle placed upright upon it remained erect! As each member came into the room he walked along the edge of one of the battens balancing with his arms out exactly as if he were trying to walk a tight rope.



Courtesy of Dartmouth College Library

As for myself, the attempt to adjust my eye to the relative angles of the floor & walls to the vertical produced a mild nausea for a time although there was absolutely no movement whatever.

Later on I went down into the forehold to see if any more water had come in & I found it dry but the cases on the starboard side had shot forward & jammed in such a way they were suspended as

an arch overhead and to touch one would have been, as it were to remove the keystone & so be overwhelmed by a ton & a half of cases so I discretely & gently withdrew.

At 8 p.m. the whole floe suddenly split up into a long lead at right angles to the ship, & soon after to our intense relief she gently righted herself. This occasioned more work as we were all out at once shifting the small broken pieces of floe about in the lead so as to make room for the ship to turn with her stern up the lead in safety. This we accomplished by 10 p.m. after which we worked on the pumps to fill the boiler completing it at 1 a.m.

I must say that I don't think probably there was one of us who did not think, at the time that the ship rolled on her side that she was actually about to turn turtle, for fifty degrees seem so very much more than it really is.

Breakfast - Tinned pilchards, porridge.

Luncheon - Corned beef, horse radish sauce.

Dinner - Stewed seal; mashed potatoes, red currants & cream.

Tuesday, 19 October, 1915

The main entrance to the storeroom in this ship consists of a deck trap hatch in the most ridiculous position imaginable, exactly at the fork of the stairs leading down from the galley to the fo'c'sle and exactly outside the fo'c'sle door. It could hardly be in a darker or more inconvenient place. Even when we have plenty of daylight it is not easy to see whether it is open or not when coming in straight from the glare outside and descending these stairs.

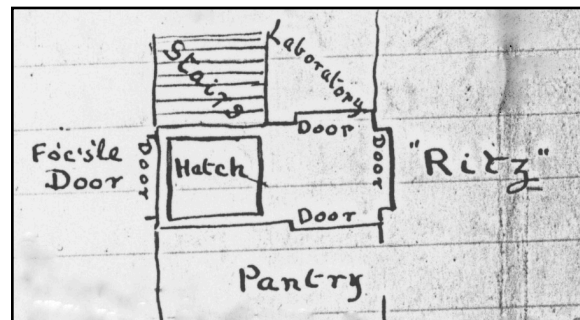
In consequence a number of people have had the misfortune to fall down it on to the stores below a drop of only about six feet & so far no one has been at all injured but it is a wonder that

someone has not knocked their teeth out against the opposite side of the hatch as the run down the stairs gives them a forward movement.

When I (the storekeeper) is working down below I, of course, keeps the hatch shut, but I am compelled to keep it open when actually passing provisions up, and although I am forever shouting out, "Mind the hatch" falls still occur from time to time.

"Mind the hatch" as he dashed out of the pantry and in spite of his own warning to himself falling down, a very curious case of momentary mental preoccupation. We have now rigged up a very simple safety arrangement to prevent the men in the fo'c'sle from opening their door whilst the hatch lid is open but it is not so easy to arrange for the same in the case of the stairs and the pantry.

The accompanying plan shows the general arrangement of the stairs, trap & passage. It will be seen that the hatch is in a diminutive passage into which four doors open and is exactly at the foot of a flight of stairs.



Courtesy of Dartmouth College Library

Wednesday, 20 October 1915

Temperature 15 below.

A very fine sunny day.

Last night as if in recompense for our many untoward events we were treated to a remarkable spectacle. A killer whale about 35 feet long came up in the tiny pool in which we are now lying & evidently in search of seals swam to & fro right along side. The

water was perfectly calm & very clear and we had a wonderful view of the great animal under the water as he turned leisurely from one end of the pool to the other, now disappearing for a minute under the ice floe then as suddenly coming into full view again and rising to the surface to blow & peep over the edge of the floe for any unwary seals.

He remained near us for about a quarter of an hour.

It is a wonderful sight to see a fish-shaped creature as big as a steam launch swimming about as clearly as if in an aquarium. One often sees their back fins appearing above the water but to get such a view as this must be very rare. He was a cruel looking shark-like beast quite capable of swallowing one of us at a single gulp.

We got up steam today and gave the engines a turn or two & are now waiting for the ice around us to open up a bit, but at present we are hemmed in all round & it would be quite futile & a waste of fuel to attempt to break through, besides the ice is all about six feet thick & it takes no end of ramming to split such thick ice little by little with so light & small a ship as this.

We are in need of seals again, having run out of fresh meat for ourselves; we still have a little left for the dogs but the recent high temperatures are likely to have rendered it a little unsound & it would be unwise to draw on it now for our own use.

Snow petrels are now frequent visitors.

Breakfast - Seal's liver & bacon, porridge.

Luncheon - Pea soup, walnuts.

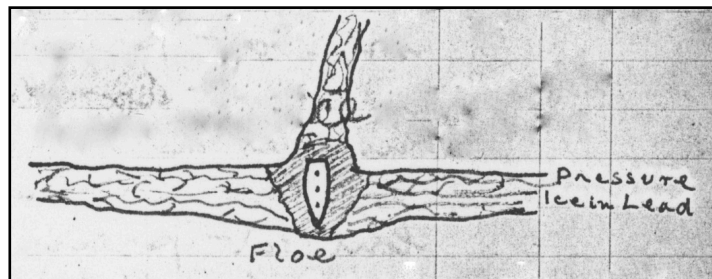
Dinner - Tinned roast mutton, suet pudding.

Thursday, 21 October 1915

Temperature +11 to -5.

A glorious sunny warm day with a considerable drop in temperature due to a Southerly wind which had started drifting us north again at last. We hope it may continue, for no one minds the drop in temperature. There are, however, many pros & cons. With a low temperature we generally have brilliant dry weather & unless there is a strong wind the cold is not very perceptible as long as one is on the move or in the sun. As low temperatures are usually the result of the winds from the south so it follows conversely that we are more likely to drift north during cold weather, but on the other hand any open water that may be formed by ice movements very soon freezes up if the temperature is anywhere near zero & this again impedes the northward drift of the ice. At the present moment we are in a position affected by exactly these very circumstances.

A couple of days ago we were surrounded by a small triangular lake of open water formed between the junction of three floes or by one lead opening out



Courtesy of Dartmouth College Library

at right rather angles from another one in this way & kept open by the high temperature, but now it is all frozen over again six inches thick strong enough for us to walk on, though it is constantly being broken up by pressure.

There is a great deal of "screwing" going on all round i.e. floes grinding against each other at the cracks as if trying to revolve in opposite directions.

The noise is very loud & as James very well describes it, it sounds like the London traffic does when one is sitting quietly in one of the parks.

The ship is being constantly shaken slightly, but we are now more or less indifferent to anything but severe upheavals.

Breakfast - Curried rabbit, porridge.

Luncheon - Lusty's bouillon, sardines.

Dinner - Calf's head, mashed potatoes, cornflour pudding & jam.

Friday, 22 October 1915

Temperature -14 to +11.

Splendid weather but we are getting frozen in again, to all appearances rather solidly.

One never can tell from one day to the next what the topography of the ice will be. It is forever on the move opening & closing. One day there may be long leads & large lakes of open water visible from the crows nest, the next every bit of open water may be frozen over, it may be but a very thin sheet of ice but the appearance is once more that of a limitless hummock strewn snow-covered desert just as it was in the winter.

Though the heat of the sun may be pleasant enough to our bodies when out of doors it is practically without any effect upon the ice & snow if the temperature remains low, which indeed has its exact parallel at the Swiss winter resorts.

Eventually, however, the sun's heat takes its share in the melting of the ice but by the indirect means of raising the temperature of the

water flowing in currents from the north sufficiently to melt the ice from underneath. Simultaneously the temperature of the air remains high enough to prevent the open water spaces from freezing over.

When ice is melted from underneath the process always seems to riddle the floes with holes crumpet-wise from the bottom as I have described it earlier in this journal. This melting does not take place much before the end of the next month & continues all through December, January & part of February.

Meanwhile we are waiting, waiting, waiting some patiently some impatiently but it is a long & wearisome wait even for the most complacent of us.

By no means the least patient of us is our leader who, by the calm & resolute dignity with which he bears his paralysing reverse is a pattern of self-restraint & cheerfulness to all of us.

Breakfast - Salt fish, porridge.

Luncheon- Mock turtle & pemmican hoosh, cheese.

Dinner - Hashed "remnants" few & far between, stewed plums & cream.

Saturday, 23 October 1915

Temperature +6 to +21.

A pleasant varying day.

Waiting, waiting, waiting, that is about all one can say each day if one were merely to write down each day's events chronologically.

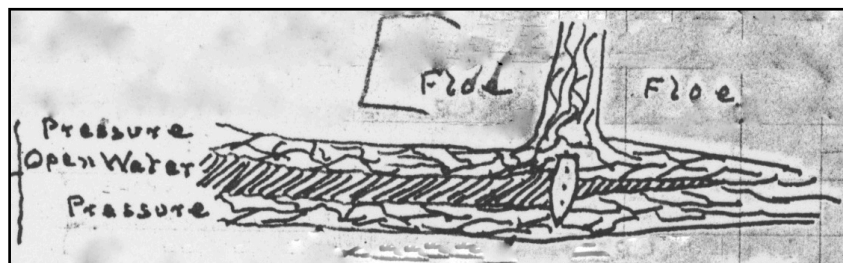
The routine & trivialities, the meandering cliques and passing animosities of the day are all unworthy of being placed on record

& yet each day has its little enlivening incidents that make life worth living & emancipate the soul from the rut that isolation & an artificial existence drive it into.

The companionship of the dogs is much to be grateful for, much more so than many of us realize, I believe, even though these wild creatures are rather inferior as the friend of man to the sagacious animals of our English homes.

I am afraid I get chaffed a good deal for being a namby pamby sentimentalist and, may be you reader will agree that I deserve it. As a plausible justification would be my only comment I refrain from making one & will leave the reader to form his own opinion. Sir Ernest knows my temperament intimately and at least does not disapprove of what I write.

Poor dogs, they feel the confinement on board of the last week as much as we do; it was, therefore, a welcome relief for them to get an hours run yesterday, but it was a short hour for the ice commenced to work and the recall was hoisted. There was no gangway rigged so that the dogs were shot out down a sort of improvised fire escape made out of a sail. They didn't seem to mind it a bit.



Courtesy of Dartmouth College Library

The ice is opening up a bit, thank goodness, late this evening & things look a little more hopeful. Moreover there is a very strong water sky to the North indicating open water not more than a hundred miles away.

The above sketch gives an idea of the opening up now proceeding. By reference to the previous sketch it will be seen that the pressure ridge itself is splitting up.

Breakfast - Minced collop (odds & ends collected during the week), porridge.

Luncheon - Mock turtle soup (very "mock"), walnuts.

Dinner - Salt beef, carrots, mashed potatoes, Banbury tarts.

Sunday, 24 October 1915

We had the good luck to secure two seals on 22nd inst. A male & female one year old animals probably & therefore excellent eating, especially the latter as she was not with pup.

I had written the above & had discontinued writing for the evening in order to work the gramophone for the general entertainment of the party, and had just put on the third tune - "The Wearing of the Green" - when a terrific crash shook the ship with a prolonged shiver like an earthquake & she listed over about 8 degrees to starboard.

We finished the tune and then went up on deck to see if anything unusual had occurred. By this time Sir Ernest had been out on the floe and one could judge by his grave look that something really was amiss, & it soon proved to be even more serious than any of us had anticipated for within five minutes we were all hard at work preparing to abandon the ship as she had had her sternpost almost wrenched out and water was pouring in through the crack.

There was little time to ask questions or to comment at all upon the damage for we were working like demons getting up all

possible provisions and clothing, navigation instruments, sledging gear, dog food & miscellaneous impedimenta with a view to quitting ship and sledging over the ice to Graham's Land.

It is surprising what an enormous amount of work can be got through in a given time when one realizes thoroughly that dear life depends on it.

Marston, James & I were working down in the after hold extracting cases close by where the water was coming in down there & we could plainly hear the ominous rush of running water below us, meanwhile the noise of the ship breaking up was deafening.

That Sir Ernest had decided to fill up the boiler some days ago was a piece of miraculous foresight though it was probably more with a view to steaming than to pumping out that he determined upon it.

Some of us who recently ventured amongst ourselves to criticise his decision on this point as being a little premature now feel well reproached for our hasty utterances.

It was, as I said, a mercy that we had the boilers full and the furnaces alight. They were, however, "banked" i.e. being kept as low as possible in order to economise coal, just enough fire being maintained to keep the water hot.

Orders were at once given to get up steam to drive the steam pump and the two engineers worked desperately, piling on seal's blubber & coal like fiends in hell.

Seal's blubber is a wonderful fuel especially for obtaining a sudden & fierce heat as the fat is entirely impregnated with a richly inflammable oil.

The water was rapidly rising all this time & soon reached the floor of the engine room and it became an anxious race as to whether they could raise steam before the water rose enough to put the fires out.

We won.

Still, the steam pump is only a small one and there was as yet no certainty that it could keep pace with the in-rush of the waters.

Within two hours the pump was at work but it was soon clear that it could not alone cope with the inundation, and if the ship was to be saved at all it became necessary to immediately get the large hand bilge pump working. This latter pump had been frozen up all the winter and had resisted all efforts to clear it, but needs must when the devil drives and drastic measures were at once resorted to.

Lt. Hudson and Greenstreet went down below and dug away the coal from around the suction pipe of the pump. This was no small job in the short time available, especially as much of it and the bottom of the pipe were well below the water.

Meanwhile I was busy preparing the blow lamps for thawing the pipe out, but as luck would have it neither of them would give a decent flame at first.

During the winter my poor blow lamps had been so used & misused for every other purpose than that for which they were originally intended viz my motor, that it is not to be wondered

that they were a little sluggish when required in an emergency. As everything was in a great muddle & my forehold, where I keep much of my gear was half full of water, it was some time before I could get together the tools to clear the burners & rectify the trouble. I was just able to hand them down in good time all the same; the whole suction pipe was pulled up through the deck and a long core of ice six inches thick and three or four feet long was extracted from the lower end of the pipe. Gallons of boiling water were then poured down and at last all was clear at about 2 a.m. and pumping commenced & continued all night.

Twice between 7 p.m. and midnight we were all out on the floe digging trenches along the port side of the ship, the first trench about ten feet from the ship, the second one as many yards away. The first one soon collapsed and enabled the ice to bend up and rise up along the ship's side, the second one partially collapsed & there was no doubt that this time that they eased the pressure very considerably.

We all dressed up in plenty of underclothing and in Burberry suits & everyone got ready on deck their special properties in case of abandoning ship.

I was writing the above words when I was cut short by the recommencement of heavy pressure which resulted in our finally abandoning the ship.

We spent an uneasy night but slept on board in our respective cabins. I alone in the hold. It was a little gruesome in the hold by myself with the noise of the water in the ship & pressure groaning outside but I was one of the very few who slept well.

Monday, 25 October 1915

After yesterday's alarms it was a great relief to have a quiet day free from pressure but owing to the leakage we were all at the pumps all day & all night by watches.

The carpenter turned to like a trojan & has worked continuously for 48 hrs building a coffer dam across the inside of the stern of the ship with a view to minimise the leakage & with so much success already that it has at any rate considerably reduced it. We shifted all stores from aft foreward so as to be able to get the stern out of the water as soon as the ice opens enough to float us again. What with alternate quarter hours on the pump and shifting gear all day it has been hard work, but the life of the ship & ourselves depends upon it and we all work with a will.

For some time past now we have been divided into two watches and have been working more or less as a ship's routine instead of as a shore party expedition as we were all the winter.

This breaking up of the floe is very undesirable just now with low temperature as it seems to result directly in heavy pressure and no real open water exists to any extent anywhere near us.

Let us hope, anyway, that the ice movement has subsided & that nothing untoward will occur for the future. Things have been a little too strenuous for us of late.

Meals even have been rather scrappy, the constant shifting of stores makes various items inaccessible in turn so that we have been unable to adhere to our strict order of rotation.

Tuesday, 26 October 1915

Pumping continues ceaselessly day & night and we are able to keep the water under.

Routine work is much deranged.

Until we can manage to dispense with the steam pump it means using up much of our valuable coal supply. I believe we have barely 34 tons left and are now using 3/4 tons daily for pumping only. The engineers are splendid. They tackle the matter with a vengeance and are burning a quantity of seal blubber to eke out our slender stock of coal.

No one who has not seen blubber nor seen it burn can quite appreciate what it is like or what a high value it has as a fuel. In appearance it is much like the fat on bacon if one can imagine the fat of a pig stripped off in one piece about two to three inches thick adhering to the skin.

As used by us it is cut off from the seal with the skin in one great sheet & then cut longitudinally into strips about six feet long by six inches wide which can, if required, be further cut up into small brick-like chunks for convenience in burning in the galley-range. Left in a temperature below freezing the strips soon harden up to about the consistency of the bacon of commerce or harder. The whole of the fat is richly impregnated with oil (seal oil) which forms one of the chief constituents of "train oil" and which burns fiercely. In the early part of last century seal oil was the principal ingredient of the oil used then for street illumination.

Further heavy pressure took place again this evening lifting first the bows then the stern several feet out of water. We were all out at once digging trenches which helped the ice to break up & pass under the ship. The movement lasted about three hours and closed the leakage at the stern to some extent. In view of having

to abandon the ship we lowered three boats onto the floe, sledges & stores, but slept quietly enough on board for the night of the 26th to 27th.