Letter from Lieutenant R. Bage, R.A.G.A.,
Adelie Land.

Supplemented by F. L. STILLWELL, M.Sc.

[Through the courtesy of Dr. Bage, we reproduce a letter from Bob Bage. Readers will doubtless remember having the pleasure of reading a letter from him written in December, 1912, the mail from the South Pole and thereabouts being at present yearly.—Ed. "'Varsity Engineer."]

Australasian Antarctic Expedition, 1911.
Winter Quarters, Main Base,
Commonwealth Bay, Adelie Land.
Lat. 67° 00 S. Long. 142° 36' E.

By this time you will no doubt have heard, either by wireless or from the "Aurora," of the bad news of Dr. Mawson's failure to return from his eastern journey. He is now a fortnight overdue, and, of course, we are all extremely anxious about him. He is still all right in the matter of food, as he had dogs with him, and also, from what Madigan's eastern party saw, he could get seal and penguin along the coast. However, he left orders for the "Aurora" to leave here on February 1st, and Captain Davis cannot wait after that date if he is to pick up Wild's party (1300 miles W.) and get the ship out clear. The only thing to do, therefore, is to leave a party here. Captain Davis, who is in command in absence of Dr. Mawson, asked Madigan, Bickerton, Hodgeman, Hurley, Dr. McLean, and myself to stay on, while Jeffries, who came down in the ship, is staying as well for wireless. Madigan is left in charge, and I'm sure we'll be a very happy party, as all are top-hole chaps, and we know we can hit it together. Jeffries, too, seems quite O.K., judging from the little we have seen of him so far. As regards food, we have heaps and heaps of necessities and almost as many luxuries as last year, the ship having landed all they had of almost everything we suggested. As Bickerton says, it is a very different proposition from last year. One only has to cast an envious eye at anything, and it is immediately presented to you, even if it is necessary to rip it out of the ship itself. (Last year it was Bickerton who successfully stole and landed two extra bolts of canvas and the thwarts and seats of the motor-boat, since built into my transit hut, not to mention various odds and ends from the engine-room. He almost got a seven pound hammer.) Clothing and gear, too, are quite all right.

I am sending my "diary" home to you by Murphy, and am only sorry now that it is not a respectable one, but I never thought of
this, and really only wrote it to remind myself of a few of the incidents of the year. It stops on the eve of our departure for sledging, and I've had no time to write anything since our return. My little sledging diary I cannot send back, as I must keep it here with our sledging records.

I cannot possibly give you any full account of our sledge journey, but can only say that we got away on November 10th, 1912, saying "Good-bye" to Dr. Mawson, Merty and Ninnis at the five-mile cave, and caught up to our supporting party at the 11-mile cave. For 10 days following we had drift and high winds often up to 70 or 80 miles an hour (when we camped), and nearly all the time 40 to 60 (when we travelled). We only managed to get 67½ miles south when Murphy's party had to turn back (on November 21st). Built a good depot there, and plugged away with strong head winds and bad weather till December 21st, following our magnetic meridian, except when it dodged about too much, as it often did. Once we got a change of declination of 90° between two camps only five miles apart. Our course was about S. 30° E. on the whole, and we managed to make 300 miles by December 21st, when we calculated we should turn back in order to reach the hut by January 15th, in accordance with our orders. It was most disappointing not reaching the Pole, but we got a full set of dip obs., giving us 89° 43′ S., so the needle was "all but." This makes Dr. Mawson's 1908 trip about 22 miles nearer than ours, as his highest observed dip was 89° 48′, and he ran 13 miles farther on. We could not say how close we were to the Pole, as our gradient was most erratic, sometimes running 30 miles for an increase of a couple of minutes, and sometimes getting 10 minutes up in five or six miles. However, we are certain that 100 miles more would have seen us across the Polar area. We have full sets of observations, magnetic and otherwise, practically every 30 miles in, so should have good results. Also, our furthest position being in lat. 70° 36′ S., long. 148° 30′ E., or so, puts us only about 180 miles from Dr. Mawson's position, so we will get practically a complete vertical section now across this corner of the continent. Our return journey was much faster, as we had sail up most of the time, and the surface was greatly improved. Soft snow ramps, which had been knee deep on the way out, had hardened up, and gave us smooth tracks across the high sastrugi. This reduced the number of capsizes considerably. Our average mileage on actual travelling days during the return was something well over 20 miles per day, against about eight miles on way out. One day we did about 41 miles in 22 hours, including three halts of two hours each for meals. We picked up our 200-mile depot on December 27th, and had a top-hole Christmas dinner, which Hurley cooked while Webb was taking dip obs. and I was recording for him. We came in for each course, and the meal lasted from 2.15 p.m. to midnight. A wonderful meal. Marvellous the variety that can be concocted out of pemmican and biscuit, glaxo, cocoa, butter, and a few odd raisins. The Christmas pudding was a masterpiece,
likewise the ox “tale” soup. (As Hurley’s Christmas Carol puts it, “It was a ‘tale’ about the ox. But, Lor’, ’twas just as good a soup as many a turtle mock.”)

We finally got back to the hut on the evening of 11th January, the only excitement being very thick weather as we approached the coast. For the last 180 miles we hardly had a clear day. The sky was overcast, and we could not see sastrugi even under our feel, let alone mounds and break-winds which we had built at each halt on our way out. We spent some considerable time searching for our 67-mile depot, which was a 10ft. mound, with a black top and with a flag 14ft. high some distance away from it. We knew for certain that we were within a mile of latitude and two miles of longitude, but the weather never gave us a chance, so we left it and made a break for the coast on forced marches, making the 5-mile cave in 2½ days, rather to our own surprise. Came down to hut next day and found everything gradually getting ready for ship and all well.

Just after lunch on 13th Hannan strolled out of door (can walk out of verandah fairly easily now, as nearly all snow has thawed out from rocks, etc.), and gave a shout. We all rushed out, and there was the motor launch actually in the boat harbour. In a few seconds Captain Davis stepped off with a big fat mail bag, and in another few minutes we were inside reading our mail. The “Aurora” had slipped in at 1 a.m. and anchored right under the barrier, well out of sight from the hut. No one got much sleep that night. I for one was still a bit snow-blind, and had a job to read anything. A mail is a great thing, especially a whole year’s mail. It’s almost worth while waiting a year for the pleasure of reading it.

On 16th Madigan’s party turned up all well after 270 miles to east. They got calm weather about 60 miles east, and got down on to sea ice. Some of it old fast ice, and some last winter’s. As we have never had any sea ice here outside the boat harbour for more than a day or so, it looks as if the weather is much calmer along there. They had a very interesting trip, as they got a couple of big rock exposures—one cliff 1000ft. almost sheer up from the sea. The day after Madigan got back, Captain Davis asked Madigan and self to go off to the ship to discuss possible relief party to be left here, as two parties were then overdue.

Bickerton, however, turned up two days later with Whetter and Hodgeman. They left here about December 3rd. The ’bus had been working well (aero-motor sledge). It had made a couple of trips up to 5-mile with stores, and had towed 1000 lbs. up slope behind the hut (about 1 in 6 at steepest), and on up grade, between the two and three mile pegs, was timed at over 30 m.p.h. On the journey they had bad luck with it, as engine stopped with a jerk when they were about 10 miles on their journey. Possibly a connecting rod gone, due to low temperatures. It was very hard lines on poor old Bickerton, who had
put in a tremendous lot of work into the old jigger. They just had to leave it in accordance with their orders, and so on per foot. They did 160 miles westward, and saw nothing of any interest, but got good obs., etc.

About every other day a party has been up to the 5-mile cave and a few miles further out to have a look round for Dr. Mawson, and on 25th a party set out for three days. They got continuous high winds and drift, though we had no drift here, and only got 26 miles. Built several mounds with food, and directions at each, and returned to-day. Meanwhile Fletcher, the mate, whom we all like very well, has been ashore for several days, and re-stayed the south mast and put up the top gallant spar. The ship sailed eastwards this morning to search the coast a bit, and we have rigged an "umbrella" aerial on the single mast, which Jeffries thinks should be sufficient. He has been working several nights, but as it is broad daylight still at midnight, he does not expect to get anything unless he strikes a "freak" night. The ship will be back in a day or so, and will take off the other fellows as rapidly as possible and set off for Wild's base.

We have most of the food stowed in the store, a sail battened down over windward roof of hut. Hodgeman is battening up the sides of the store to make it more snow-proof, and we have a good break-wind of cases, etc., so should be pretty snug. There is still a good deal to do, but we have already done everything essential, except get in penguin and seal meat. As soon as the ship leaves, Madigan, Bickerton, and McLean are going out for a fortnight or three weeks' search, while Hurley, Hodgeman, and self are going up to the 5-mile to stay there for a fortnight. We will make little trips each day, and build mounds, etc., as there is considerable difficulty in making the hut ridge in thick weather. To get down here safely and easily, one must pass the 5-mile, or not more than half a mile on either side of it, as crevasses are bad to each side. Jeffries will be left here by himself, and will have a pretty miserable time, but we will probably come down in the middle of it and see if all is O.K. The cave is quite a snug place to live in now, as it is big enough for all our gear as well as ourselves. Of course, while we are away all observations will have to cease, as Jeffries by himself will have heaps to do with wireless and the feeding of the 20 odd dogs which came down in the ship. They are Amundsen's dogs, and a fine lot; not so big as our biggest, but apparently no weeds, and will make very even teams. Are not taking them on this first short trip, as not one of us has had any experience in driving dogs, and also, from what we can see of them, it's very doubtful if they would face our winds here without a bit of practice. They will get pretty used to it during the winter weather!! By the way, our yearly average is going to work out at something between 48 and 50 m.p.h. for every hour of every day for 365 days. I wonder if you or any of the public can in the least realise what it means. It took Captain Davis (who is a man who has had plenty of Antarctic experience) several days to even begin to realise it.
Madigan took the meteorological log on board and went through some of it with him, as he had visions of bringing the ship in here in March. The wind is all entered in m.p.h., and Captain Davis said he was more used to thinking of it in "Forces" 1 to 12 on "Beaufort's scale." He got down his copy to convert them, and was distinctly surprised to find that most of our decent blows are well over the top of the scale. Another thing that helped him to understand was the ship's cable parting twice in blows that we almost ignored. In fact, we have had nothing over 70 since the ship has been here. The ship has now lost three anchors and 1½ cables this time. That, added to the amount of iron she lost last year, might almost be expected to affect our magnetic meridian! Captain Davis will bring down the ship next year in ballast of cables and anchors, I expect!

I am taking over the magnetograph, which is not exactly a nice job in the winter. However, I should be able to do something with it, and an additional few months' records would be very valuable. Meteorology will be carried on, of course, but tide gauge will not be practicable with so few men and such weather. Also, I doubt if a great enough increase in accuracy would be obtained to warrant the big expenditure of time and discomfort, as the conditions are very much against decent tidal work. If the wireless makes good (which is still doubtful, as the mast may come down in any decent blow), I may possibly be able to get my time signal work, but I don't expect to, as the weather last year was absolutely impossible. I have not even been able to get my "wire intervals." I have never had a night since my hut was up that I could take the shutters off the slot without the wind disturbing the instrument or blowing it clean off. Its base is absolutely firm and independent of hut and floor, but the windage on the instrument itself makes observations impossible. For stretches of over two months we could not even set up a theodolite for ordinary routine time-shots, even in the best shelters available. As regards my transit work, I found that observatory bubble is too long to read at + 20° or thereabouts, but the University one is O.K. down to about — 10° at any rate. I rigged a level trier and got its division values over a range of temperatures, and also I had a microphone and receiver rigged so that I could pick up clock beats without disturbing clocks in main hut. We are well off for chronometers, as we have five fairly good ones. As regards occultations, I predicted a good many during winter, but it is impossible to see anything owing to vibration of the big telescope, even in our best lees. This year, of course, I am all practically ready to set up now, but as the first half of the winter has more drift and just as much wind as the second half, and as the bad weather sets in for good long before we get any darkness, it will need exceptional luck to do any good. It is exceedingly disappointing, but cannot be helped.
I expect a good many letters have missed here, as rumours have evidently been floating round Australia as to mails reaching us in winter, via Macquarie Island, and a lot of our letters have probably gone there. Addresses on some are quite weird. I got several "R.B., c/o Dr. Mawson, South Pole." One man got a letter "South Pole, via Australia." Johnny Hunter had one addressed "University, Sydney," and some wag wrote on it, "Try South Pole," and it arrived O.K.

It is very unlikely that I will go sledging next summer, as there is a fine party here in Madigan, Hurley, and Bickerton. The reason is that I am very liable to snow-blindness. For the 300 miles back on our journey I could not take an observation, and if Webb had not been an observer, we would have had to halt for a couple of days to rest my eyes to get any sun obs. As it was, it was all right, and was only an inconvenience.

Snow-blindness is rotten. One's eyes get considerable strain, even though goggles are worn continuously, and then along comes a day of heavy drift, and it is impossible to wear goggles, and one has to content oneself with closing down the funnel of a burberry helmet into a narrow horizontal slot. That night and next day or so you are properly snow-blind. However, my eyes are quite right again now. I found it was necessary to be very cautious in the use of zinc sulphate tabloids, and only used them when absolutely necessary.

I'm sure I've forgotten heaps and heaps of things, but this is all I can write now, so good-bye for another year, with remembrances to all friends and acquaintances. I'm so glad my letter home before was appreciated. I thought it an exceedingly bald statement of fact, and was quite pleased to find it read quite well in print. I wonder how much of it was "edited."

Good-bye again for the present.

(Signed) ROBERT BAGE.

The story in R. Bage's letter may be carried on as follows:--

When February 1st, 1913, arrived everyone and everything except the weather was ready for the departure of the ship to the relief of Wild. A blizzard was raging, and embarkation was impossible. Communication between the shore and the ship at Commonwealth Bay is only possible by the use of small boats, and is stopped during blizzards by the heavy sea developed. Day after day went by without the least sign of the expected calm. The ship was beating up and down the bay. The spray was driving over her, and, freezing it, covered the decks and rigging with tons of ice, which made the running gear extremely difficult to handle. Occasionally the ship would not steer and became unmanageable. Sometimes when heading into the wind under full steam she was driven back, and the ship's wake ran past her bows. During this "summer blow" the daily wind
average, as recorded by the anemometer, varied between 50 and 70 miles per hour, while for one hour only did it reach 80 miles. While waiting on shore the relief party's larder was stocked with a winter's supply of fresh meat by the slaughter of 300 penguins and a number of seals.

On February 8th the much-looked-for calm came. There was still no sign of Dr. Mawson and his party, and therefore all, except the relief party, boarded the Aurora, which got under way by noon. It was estimated that the voyage to Wild's base would occupy at least a fortnight in fair weather, and this meant that Wild's base could not possibly before February 22. We knew that the "Gauss," of the German expedition, under Drygalski, was frozen in on February 23, 1902, two hundred beyond Wild's base; also our ship was not provisioned for the winter. Captain Davis' anxiety may therefore be understood.

The Aurora was fitted with receiving wireless instruments, and on the evening of the 8th, the same day as we left, a message was received stating that Dr. Mawson had reached the hut alone, and that Dr. Mertz and Lieutenant Ninnis were dead. The ship immediately turned round and steamed back into the bay. The blizzard was blowing again, and the barometer was falling. On the evening of the 9th the captain realised that it was impossible to wait again for calm and reach Wild. The shore party were well stocked with food for the coming winter, whereas Wild's party were not. The captain therefore decided to leave at once and proceed to the second base.

Adverse weather was met for a couple of days. Fair weather followed, and a belt of pack ice was negotiated. Then with open water and a following gale a fine fast run was made under full steam and sail. Seas full of icebergs had to be passed, and sail was shortened and the engines slowed or stopped during the six hours of darkness that held in late February. When sufficient westing had been made, the ship pushed south through some 180 miles of loose pack ice and drift ice, reaching Wild's base on February 23. Here we found Mr. Wild and his men all well. With one day's work for all hands the ship was ready to leave that same evening—homeward bound. The last iceberg was seen in lat. 57°, and Hobart was reached on March 15.

The story of the disaster to Dr. Mawson's sledge party has been outlined by wireless. On December 4 or 14, while exploring the coast 300 miles east of the base, Lieutenant Ninnis with a loaded sledge and a team of dogs disappeared into a fathomless crevasse. There remained one sledge and one team of dogs. They set out for the hut, and, after supporting themselves largely on dog flesh, Dr. Mertz died on January 17 from causes, it is stated, arising from malnutrition. Dr. Mawson plugged on alone for another 20 days, and reached the hut on February 8th, a few hours after the ship left.

F. L. STILLWELL.