

Along the Continental Shelf.

"Dredgings were taken along the continental shelf off Adelie Land, and a course was then set to the west, where we investigated the packice, took soundings, serial temperatures, and carried out townetting at various depths and dredgings. It was a disappointment to find the ice conditions worse than on either of the previous cruises, but we were able to add much detail to the former work. Very striking ice formations were met, of which Hurley obtained splendid photograph and cinematograph records.

The Threshold of Mystery.

"Regarding the operations of the expedition, our plans, it will be remembered, were to investigate the remaining unknown portions of the Australian Quadrant of Antarctica, together with subsidiary work in the intervening regions, the whole to supply a deeply needed want in the knowledge of the regions to the south of Australia at the threshold of which we live, and of which almost nothing is known. Of course, I do not include the eastern extremity of the Australian Quadrant—the Ross Sea area—concerning which great detail has come to hand from the many expeditions that there have found a convenient landing place for the achievement of the south geographic pole. The interesting and far-reaching results accruing from those expeditions only served to heighten the value of data lacking from the great region to the west.

Australia's Heritage.

"The results of our two years' work supply information which fills this gap and completes a survey of the salient features of the Quadrant. Surely it is only right that neighbouring lands, in this case a natural heritage of Australians, should not remain a terra incognita, and with it be sealed up scientific facts of importance in the interpretation of problems in the homeland. By carrying the Union Jack, and in particular the Commonwealth flag, from the already explored areas in the east to the western extremity of the Quadrant we have clinched a claim upon its future. The new lands discovered and the areas traversed by sledging journeys attract attention, but it is the mass of carefully recorded data, accumulated by sea and land, that must eventually claim regard. These results will be appreciated better at a later date when they have been elaborated. We are looking forward to making preliminary statements relating to them before the British Association at its meeting in Australia in August."

Anxiety Over the Western Party.

"The party left by Capt. Davis as the base to carry on the scientific observations for another year, and make a search for the missing party, were glad when I decided to recall the ship by wireless. The Aurora was fitted with a receiving set, but had not the necessary apparatus for sending messages. It was a beautifully calm afternoon and evening, and we expected to be away early in the morning. As the ship came in sight again, however, the wind rose, and, of course, there was no knowing how long it would continue, and after all, the calm periods are few and far between, except at the height of summer. I had learnt from those remaining that great anxiety had been expressed by Capt. Davis as to the safety of the western party, in charge of Wild, should they not be relieved that year. In the absence of exact information as to the circumstances under which that party was wintering, possible difficulties in relieving them depending on the weather conditions in that locality, the special features of the pack ice thereabouts from the point of navigation, and finally the absence of an information as to the condition of the ship, her coal supply, health of crew, &c., I could do no other than leave the decision as to further delay at the main base to Capt. Davis, who was acquainted with all these details. Accordingly, I sent a wireless message to the ship to the effect that I hoped the position would allow of the Aurora remaining a day or two longer in the hope of the weather calming, leaving the actual decision to Capt. Davis himself. Although this was sent repeatedly it does not appear to have been picked up. As evening came on the barometer fell, and we saw no more of the vessel.

Bundled Out Neck and Crop.

"The year passed ever so slowly as compared with the preceding, and the weather proved even less suitable for sledging excursions. No undertakings at a distance from the hut were entered into in the late summer, partly on account of my condition, and partly because of a faint chance that the Aurora might return after relieving the western base, there having been some suggestion of this sort before the ship's departure. A wind velocity of 116 miles per hour was recorded for the average for one hour in July. Early in the following summer Madigan and Hodgeman accompanied me on a short sledging journey. It was on the return, when descending the ice slopes leading to the hut, at 11 o'clock in the evening of December 13, that we desecrated a thin trail of smoke on the north-west horizon, acquainting us with the approach of relief. Some days were spent in Commonwealth Bay previous to final departure, which event took place hurriedly in circumstances typical of the place, the Aurora being bundled out neck and crop by a violent hurricane. The air was filled with snow, obscuring surrounding objects, and it was due to the skill and experience of Capt. Davis that we got out with no further damage than the loss of the motor launch.

WHAT THE EXPEDITION ACCOMPLISHED

Important Victories for Science.

It was predicted when the Mawson Expedition left Australia for Adelie Land at the end of 1911 that valuable scientific work would be accomplished. The leader had shown himself when with the Shackleton Expedition to be a most capable member of the party, and these good opinions of him and of his undoubted ability were further strengthened by his accomplishments as a student and a scientist at the various universities with which he had been connected. During the two years or so which he spent in the antarctic he has achieved more important results than have been recorded in behalf of any previous undertaking in that part of the world. It will be some time before full details will be available for publication, but on Friday Dr. Mawson handed to the press a terse statement of the principal accomplishments of the party. They demonstrate that the opinions formed regarding the result of the visit to the polar country were well founded. Indeed, the undertaking has been more successful than even the most sanguine persons could have expected.

The Achievements.

The following particulars by the leader will be read with the greatest possible interest:—

1. The successful negotiation by ship of antarctic pack ice in a fresh sphere of action where conditions were practically unknown, resulting in discovery of new lands and islands.
2. The establishment of two antarctic wintering stations separated by an air line of 1,000 miles, both on lands never before sighted. At these stations scientific programmes have been conducted, in one case for a period of one year, in the other extending over two years.
3. Journeys made over sea ice and plateau in regions never before sledged over—at main base aggregating 2,400 miles, at western base 800 miles, which figures do not include depot journeys, supporting parties, or relay work. Land has been followed through 33 deg. of longitude, 27 of which were sledged over.
4. The establishment of party at Macquarie Island, subantarctic possession Commonwealth, spending two years mapping and investigating island, acting as wireless connecting link with antarctic main base, and communicating weather conditions daily to Commonwealth Meteorological Office for immediate use in preparing forecasts.
5. Oceanographic investigations, chiefly of nature of soundings and trawlings, prosecuted from ship in depths between Australia and Antarctica, and along antarctic continental shelf. Trawlings have been successfully conducted to depths of two miles. By soundings continental shelf has been indicated through 55 deg. longitude.

Homecoming and Wireless.

Explanation by Dr. Mawson.

There has been considerable discussion concerning why the expedition came direct to Adelaide from the antarctic instead of going to Hobart or Melbourne, and also how it was that the wireless apparatus at Adelie Land was not used to advise the Commonwealth of the departure of the remnant of the party. Dr. Mawson made an explanation on Friday in reply to questions which were put to him by a reporter.

Why Adelaide was Chosen.

"Will you kindly state, doctor, why the Aurora made Adelaide first with you?"—"Well, no doubt some people will think that I might have put in an appearance at Melbourne or Hobart. It was my intention from the first, however, to return to Adelaide, although in doing so the expense has been increased. There were several reasons for the decision. First, South Australia set the example to the other States by making a grant for the expedition. Then, I thought that the people here would be very interested to see the ship, especially as no polar vessel has been here previously. Hobart and Melbourne have been more fortunate in that respect. Another reason was that we had latterly been working continually to the westward, and were in a meridian, when we left the ice, about half way between Australia and South Africa. We could have made Perth first, but obviously Adelaide was the place for us to come to. I want the other States of the Commonwealth to thoroughly understand the position. The Aurora will be open to inspection by the people in a few days, but just at present we do not want her to be overrun by visitors, as we desire to get the collections of exhibits cleared away."

Continuous Day.

"Can you explain why no wireless messages were sent regarding your homecoming?"—"Well, it was midsummer down there when we left, which means that there was no darkness, but continuous day. Wireless messages, you know, will travel many miles further in darkness than in light. In the prevailing conditions, when we left it was impossible for us to get messages away any distance. Our only hope would have been to have erected the wireless plant on the ship and to have

waited until about the middle of February, when, with a certain amount of darkness which prevails at that time, we might have succeeded in getting a message through. If we had come by way of Macquarie Island it would have been different. We could then have sent from there. The plant which we had used at Adelie Land was too big and would have taken up too much room to erect on the Aurora. We did put up a small, temporary plant, but it had only a short range. With it we were able to send you messages when we got into the gulf. Mr. Sandall, who had previously been in charge of the wireless at Macquarie Island, and had just been relieved, was the operator of the small apparatus on the Aurora.

Wireless With Winds and Blizzards.

Lieut. Bickerton, a member of the main base party, was responsible more than anybody else for the successful working of the antarctic wireless. He did so in very difficult conditions—often wind and blizzards—to keep the masts and stays up. At times when he was thus engaged the wind was blowing at a velocity of 40 miles an hour. The last message sent from Antarctica was by way of Macquarie Island. That was about the middle of November, and owing to the daylight it was simply freaked through. There was no possibility between that time and our leaving to get a wireless through; the light was too strong. If we had erected the big plant on the boat it would have interfered too much with our scientific programme. It would have had to take the place of a big laboratory which we were using to arrange the material obtained in our dredging operations. I would very much have liked to have sent messages of our homecoming, but you will see from the circumstances that it was quite impossible."