

The Daily Herald.

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WHY COMMUNICATIONS CEASED.

WIRELESS CRIPPLED BY CON- TINUOUS DAYLIGHT.

In explanation of the fact that there was no news from the Antarctic base for so many weeks prior to the departure of the expedition from civilisation, Dr. Mawson said:—"Wireless messages will travel better by night than by day, and the fact that from November until the time of our departure there was continuous daylight at the Antarctic base prevented the use of the wireless apparatus there for the sending of messages by the only possible route, by way of the sub-Antarctic base, Macquarie Island. It was impossible in the conditions existing during the Antarctic summer to send messages over such a distance. When we left the wireless apparatus at the Antarctic base was dismantled, but it was impossible to erect it on the ship, because it would have been necessary to do away with the important deck laboratory devoted to the study of life dredged from the sea. A small wireless installation on the ship was in charge of Mr. Sandell, who was previously at Macquarie Island station, and for the successful working of the Antarctic wireless station, Mr. Bickerton, a member of the main base party was responsible more than anybody else. He worked under very difficult conditions. It was no small matter to attend to the aerial in a blizzard and to keep the masts up in a wind of 40 miles an hour. The last message from the Antarctic base was sent in November, but after that daylight was too strong."

In reference to the reason why Adelaide was made the first port of call, Dr. Mawson said he all along determined to come first to South Australia. "Moreover," he added, "towards the last we were working in a westerly direction, and when we left the ice we were on a meridian halfway between Africa and Australia. We could have made Perth if we had wanted to do so, but Adelaide was obviously our first port."

Dr. Mawson announced that in the course of a few days the Aurora would be open for public inspection. At present the members of the party are busy transferring the collections from the ship.

CONGRATULATIONS FROM METHO- DIST CONFERENCE.

Before any business was done at the representative session of the Methodist Conference on Friday morning, the President (the Rev. G. Hall) suggested that a congratulatory message should be sent to Dr. Mawson and his party on their safe return from the Antarctic. The suggestion was adopted with enthusiasm.

THE ANTARCTIC EXPEDITION

DR. MAWSON DETAILS SCIENTIFIC RESULTS

SUMMARY OF SPLENDID ACCOMPLISHMENTS

SLEIGHING IN NEW REGIONS.

Doctor Mawson yesterday morning communicated to the press what he described as a terse statement of work accomplished by the expedition. It reads as follows:—

First.—The successful negotiation by the ship of Antarctic packice, in a fresh sphere of action, where conditions were practically unknown, resulting in the discovery of new lands and islands.

Second.—The establishment of lands never before sighted of two Antarctic wintering stations, separated by an airline of one thousand miles. At these stations scientific programmes have been conducted, in one case for a period of one year, and in the other extending over two years.

Third.—Journeys made over seaice and plateau in regions never before sledged over, at main base aggregating two thousand four hundred miles, at western base 800 miles. These figures do not include depot journeys, supporting parties, or relay work. Land has been followed through 33 degrees of longitude, 27 of which have been sledged over.

Fourth.—The establishment of a party at Macquarie Island, the sub-Antarctic possession of the Commonwealth; spending two years in mapping and investigating the island; acting as a wireless connecting link with the Antarctic main base and communicating weather conditions daily to the Commonwealth meteorological office for immediate use in preparing forecasts.

Fifth.—Oceanographic investigations, chiefly of the nature of soundings and trawlings, prosecuted from the ship in depths between Australia and Antarctica and along the Antarctic continental shelf. Trawlings have been successfully conducted to a depth of two miles. By soundings, the continental shelf has been indicated through the 55 degrees of longitude.

WORKING THE WIRELESS

A NIGHT JOB ONLY

ANTARCTIC DAY PREVENTS OPERATIONS.

The absence of wireless news from the main base of the Australian exploratory party in Antarctica during the last few months was explained by Dr. Dawson yesterday. "You cannot send wireless messages in daylight," he remarked. "They will only travel in the night. Mid-summer in the Antarctic regions means continuous daylight, and consequently we were unable to communicate with Macquarie Island during that period. It is possible to send messages a short distance during the day, but the range is increased at night. As the crow flies it was about 1000 miles from our main base to the island. We did not touch at the Macquarie station on the homeward journey, as our operations along the western Antarctic coast took the Aurora towards Africa. Consequently we were unable to send messages to Australia through the island. Our only hope would have been to have erected the wireless apparatus, dismantled when we left the base, on board the vessel, but there was insufficient room. We did put up a small temporary plant, but it was only effective at a short range, and we were unable to send messages until we got right into the gulf. We were anxious to send news that all was well, but to have established the large plant on board the Aurora would have interfered with our scientific programme. It would have taken up the space of one of the deck laboratories, which were so essential in working up the various specimens and animals brought from the bottom of the sea. As I have said, it was not because we did not want to send messages, but because the plant would have curtailed our work.

"Mr. Sandell, who was in charge of operations on Macquarie Island, and was relieved when the Government staff took control, was the wireless operator on board ship. For the successful working of the Antarctic wireless plant Mr. Bickerton was responsible more than anybody else. Down there the work was performed under very difficult conditions. It was extremely hard to attend to the aeriels, and keep the masts up in wind blowing at 40 miles an hour, and very trying times were experienced.

"We got a message through about the middle of November last, but it was quite a 'freak.' The daylight by that time was getting too strong. It is not until about the middle of February that favorable conditions for wireless operations began to come round again."

Regarding the direct objective of his return voyage, Dr. Mawson remarked that he was determined to come to Adelaide first. "Some people," he observed, "thought we might be returning to Melbourne or Hobart, but I had long made up my mind to give Adelaide the first opportunity of seeing the Aurora. A vessel of this kind has not been seen here, and then in respect to the expedition South Australia was the first State to make a grant and set the thing going. I wished to come back here first, although as all preparations have been made at Hobart the course was a more expensive one. Perhaps this was the best port we could have put into, because we were working west towards Africa. When we left the ice we were on a meridian near the Antarctic circle, halfway between Africa and Australia."