

Institute. Mr. Hamilton, a son of the Director of the London Museum, will be chief naturalist, with the Macquarie Island party. Dr. Whetter will act as medical officer at one of the antarctic bases. Mr. Sawyer, who for some time has been in charge of the Australasian Wireless Telegraph Station at the Hotel Australia, Sydney, will be one of the wireless officers at Macquarie Island. He is a native of New Zealand.

—Tasmania and Europe.—

"Mr. Harrison has been connected for some time with the Museum at Hobart, and is well known as an enthusiast in marine dredging. He is an expert artist. Mr. Sandell, who for some time resided in New South Wales, and who has a private wireless station in Sydney, will assist Mr. Sawyer at Macquarie Island. Mr. Bickerton is a member of the Geographical Society of London, and as an expert motor engineer, will be in charge of the aeroplane sledge. Mr. Wild, who is well known in connection with Capt. Scott's and Sir Ernest Shackleton's expeditions, will be in charge of one of the antarctic bases. Lieut. Ninnis, of the Royal Fusiliers, who has made a special study of surveying, will accompany the party as sledge. Dr. Mertz is a Swiss by birth, and is an expert in ice matters. He held the ski jump championship recently established in Switzerland."

WHEN THE PARTY LEFT.

On their way to Hobart to join the Aurora, Dr. Mawson and several members of his party were given a splendid send-off at the Adelaide Town Hall on November 18, 1911. His Excellency Sir Day Bosanquet said that Dr. Mawson had already given evidence to the world of his high qualities of leadership, such as self-sacrifice, devotion to duty, determination, endurance, and hardihood, which had caused him to be singled out as commander of the expedition. South Australia was proud of him, the University of Adelaide felt the honour it derived from association with his exploits in the past, and they were all assembled there to express the confidence they felt in his successful leadership. Speaking for himself, he (Sir Day) was very proud to be there to assist in giving the leader and the South Australian members of his crew—Messrs. A. L. Kennedy, C. T. Madigan, M. H. Moyes, A. J. Hodgeman, and P. Correll—a hearty farewell and send-off, at the same time wishing them the best of good luck, the utmost success in the aim and objects of the expedition, and in their work as pioneers, and on its conclusion a safe and happy return to South Australia. That was the second time he had had the honour to assist in sending forth a similar expedition, as in 1907 he was Commander-in-Chief at Portsmouth from which Sir Ernest Shackleton's expedition sailed for the antarctic after having been inspected by King Edward and Queen Alexandra. Sir Ernest Shackleton had lately shown his sincere friendship for Dr. Mawson and his continued sympathy with antarctic exploration by raising in London the sum of £3,000 towards the expenses of the expedition. The scientific problems hidden under antarctic snow and ice were of such tremendous importance to the wellbeing of the human race as completely to justify, not only the highest efforts of each member of Dr. Mawson's party, but also the large expenditure which had necessarily been incurred. In responding to the good wishes tendered, Dr. Mawson said:—"Most of the speakers have referred to myself, and I appear to be the chief spirit in the expedition. To some extent that is so. Everything depends upon the personnel of the expedition. But I am only one of the 32 of the land party. I can do nothing more in some respects towards the success of the expedition after having chosen the staff. It is an obligation on my part to choose the men who will do the work, for direction is useless in such circumstances. I have done my best to choose men of character. The most important point to look for in members of an expedition like this is character. . . . A reference has been made to risks. Of course they are inseparable from undertakings of this kind. Every man must go forward with the certain knowledge that he is facing the risks of life and limb. We shall meet dangers as they come."

—Funds for the Expedition.—

The undertaking was subsidized by the South Australian Government by £5,000, by the other States to the extent of £17,000, and by the British Government to the extent of £2,000. Then Sir Ernest Shackleton raised £8,000 in London. In thanking the South Australian Government for its donation, Dr. Mawson said the success they might have would be due more to the State Government than to any other body. He hoped the Federal Government would be the importance of keeping the Aurora for future work.

THE EXPEDITION'S PROGRAMME.

Setting out from Hobart at the beginning of December, 1911, the Aurora first put in at Macquarie Island, where a party was left with a wireless apparatus of sufficient power to communicate, on one hand with Hobart, and on the other with South Victoria Land, the nearest portion of the antarctic continent. From Macquarie Island the vessel passed on to a point on the coast nearest to the magnetic pole, which was only about 250 miles inland. Here the main party, under command of Dr. Mawson, landed. The Aurora next passed around the coast, leaving one party at Clarie Land, and another at Knox Land. It was hoped that these parties would be able to maintain wireless communication with each other, and with Dr. Mawson, Australia would, by that means, be the pioneer in the scientific use of wireless telegraphy for the work of exploration. It was intended that from Knox Land the explorers, passing westward, would probably make an attempt to penetrate southward near to the coast—if coast it can be called—on which Capt. Nares touched in 1874. The 1,500 miles of ice land between the points at which the first and third parties were to land, and an extension on either side of Cape Adare and Gaussberg, seemed marked out as a natural possession of Australia. Portions of it are nearer to Hobart than that city is, for instance, to Albany or Cairns. This nearness was realized by D'Urville, the French captain, who, many years ago, made a dash from Hobart in a sailing ship, and coasted along, conferring the names Sabrina Land, Clarie Land, and Adelle Land on different parts. He then returned to Hobart, after an absence of only seven weeks. Dr. Mawson, however, at the time of his departure, did not expect to return until April, 1913, and by that time hoped to have charted the coast definitely, to have found harbours suitable for sealers or whalers, to have searched for indications of minerals, and to have done valuable meteorological work, especially in predicting the appearance in Australia of those antarctic depressions which so often trouble us. It was expected that with wireless communication the exact time would be available for the observers, and that in many respects the scientific results would surpass in accuracy anything previously obtained. During the winter oceanographic surveys on the lines followed by the Prince of Monaco were to be made. Trawling to a depth of 500 to 2,000 fathoms was to be attempted, and it was thought that in this almost unexplored ocean every haul of the net would bring up species new to science. "Few vessels," said Dr. Mawson, "have ever come within sight of this coast, and practically none since the days of Wilkes and D'Urville. We desire to raise the Union Jack and take possession of this land for the British Empire."

MAWSON LEFT BEHIND.

Mr. Eitel, referring to the trip by the Aurora from Hobart at the end of 1912 to retrieve the parties of the expedition, who had spent a year on the antarctic continent, stated that they found that the 40-mile long ice barrier, which had been charted 60 miles westward of Adelle Land, had disappeared. The ship had less than 30 hours' sailing before reaching the main base, which was sighted early on the morning of Monday, January 13. Through telescopes they noticed that only one wireless mast was erect. The other was shattered and lying on the rocks. That furnished the reason for the sudden stoppage of wireless news from Adelle Land. Although the camp was clearly discerned, there was no sign of life visible. In the afternoon officers of the ship proceeded by motor boat to the shore. On reaching the landing place they waved their arms like windmills, and screamed, "Ship! Ship!" The narrative then goes on:—"The occupants of the camp poured out like ants, and dashed 50 yards to meet us. Nine unkempt, wild-looking men, wonderfully attired, gasped our hands, cheered, yelled, and danced in excitement and joy. Some were scarcely recognisable, owing to their hair and whiskers being bleached by the snow during sledging journeys. Bage, with a shade over a temporarily snow-blinded eye, looked weird. It needed not them to tell us that they had passed through a strenuous and anxious time. The hardship they had undergone was indelibly fixed on their faces, although each man was robust and in the pink of condition. The boys had become men. This applied specially to the 19-year-old Correll, of Adelaide, the baby of the expedition. The motor boat having been made fast, we entered the camp, where the mailbag was opened. Some of the men received a hundred letters. The winter quarters were most comfortable, and consisted of a living room, 24 ft. square, a smaller workroom, and two enclosed verandahs—one used as a hangar for the motor sledge.

—Antarctic Diet.—

"What a reception we got! We had brought on shore cases of pineapple, oranges, and fresh mutton. Those commodities were exactly what the beleaguered garrison were craving for, although they had not been faring badly. In turn we were regaled on raspberry sponge, made partly with penguin eggs, and black tea made from melted snow, which was nectar compared with the stewed ship's tea. Later we enjoyed a custard made with powdered milk and penguin eggs, flavoured with vanilla essence. This was ambrosia. Then, fancy! Tinned strawberries and custard, in a dreary desolate waste. After the ship's fare this was indeed luxury. The culinary successes achieved provided evidence of the adaptability of the Australian. This, of course, was a special feast day. When dinner time came an appetizing aroma filled the camp. "What is it?" we asked. Then was brought forth a big dish of penguin breast, baked with bacon. It surpassed Christmas turkey. The shore party attacked the mutton, and we feasted on penguin. Silence reigned for a time. Dr. Maclean exclaimed, "Mutton is splendid for a change, but give me penguin breast every time."

—Work Accomplished.—

Referring to the work of the expedition, Mr. Eitel stated that beyond a doubt the most interesting scientific results would consist of meteorological data gathered in the winter quarters. It was no exaggeration to say that Commonwealth Bay proved absolutely the windiest corner of the world. The average wind velocity during the 10 months the expedition was there was estimated at 52 miles per hour, and a maximum of 202 was actually registered. Some gales lasted several months with only a few hours interval, and when they took the form of a blizzard it was impossible to see a yard ahead. On one occasion Correll was lost for two hours negotiating a journey of 10 yards from the camp to the meteorological screen. Hodgeman was similarly lost for two hours and a half when returning from the magnetic hut but less than 200 yards distant. It was necessary for travellers to crawl on hands and knees. It was certain that no other antarctic party had been in such an ideal location for securing meteorological data. Those figures eclipsed the records of any other part of the world. Much other striking scientific work had been achieved.

—Magnetic Pole Not Reached.—

"A party, consisting of Bage, Webb, and Hurley, returned three days before the Aurora arrived. Their objective was to reach the magnetic pole from the north, so as to complete observations taken by Mawson during the Shackleton expedition. They had arrived within 50 miles of the pole before insufficiency of food compelled them to retreat. Bage merely gave a cryptic idea of the trials from severe weather and hunger pangs that had been endured. Hurley, however, let drop a few words anent missing depots and tightening waistbelts, which furnished an impression of what a vale of tribulation they had travelled. Subsequently it was learned that but for Hurley's resolute action in abandoning a search for a lost depot and proceeding foodless to the next, the whole party would have met disaster.

—Geographical Discoveries.—

"Madigan, Dr. MacLean, and Correll were detailed to survey eastward from the main base. They made some interesting geographical discoveries, mostly on the return journey on sea ice. They reported that for 300 miles eastward there was no possible place for a ship to land a party, as the icebergs were unscalable. Food supplies were augmented by seals and penguins. The little band made their Christmas dinner off a solitary emperor penguin. Most of the country traversed was terribly crevassed. Once they failed to locate a depot and spent two days foodless in a sleeping bag till the weather moderated, but otherwise they suffered little except in regard to cracked lips. Leader Madigan highly praised young Correll, whose face is

tanned by wind exposure and gives the appearance of an Esquimaux. Another sledging team, comprising Stillwell, Hodgeman, and Close, traversed 17 miles of the coastline and provided a detailed coast map.

—Motor Sledging.—

"After the serious accident in Adelaide with the aeroplane built by Vickers, Maxim, the work accomplished by it in the spring indicated that it was admirably adapted for a smooth surface, but was unsuitable for the conditions at the main base. A party consisting of Bickerton, Dr. Whetter, and Hodgeman were instructed to proceed southward with the motor sledge as far as possible, and to return along the west coast. The motor, towing two ordinary sledges, flew up a 17 deg.