

a similar sum has been generously promised already by each of the following:—Messrs. Barr Smith (Adelaide), R. Murchison (Melbourne), Hugh Dixson, H. R. Denison, and S. Hordern (Sydney). So far, however, no general appeal has been made. We feel sure that there are many others who will take an interest in the scheme for scientific, practical, or purely patriotic reasons, and who both can and will subscribe. We also believe that many manufacturing firms in Australasia, following English tradition, will gladly contribute gifts of stores; and all such will be welcome. Friends who desire to help in any way are asked to intimate their wish through the press or to communicate with one of us; and they are asked to do so as soon as possible, as there is no time for delay if the expedition is to sail this year. We appeal with confidence to Australasians to support this national expedition for the exploration of that part of the Antarctic continent which belongs geographically to Australasia. On behalf of the Australian Antarctic committee.—We are, &c.

ORME MASSON

(University of Melbourne).

T. W. EDGEWORTH DAVID

(University of Sydney).

GEO. C. HENDERSON

(University of Adelaide).

A NATIONAL ENTERPRISE.

Professor Henderson, when interviewed at the Adelaide University on Friday with respect to the expedition and the appeal to be made for funds, dealt with the objects of the great undertaking. "I would like to emphasise two points that seem to be of special importance," he said. "One is that the Association for the Advancement of Science in Sydney last January committed itself so thoroughly to the expedition that it voted one-third of the funds in hand, namely, £1,000, for Dr. Mawson's assistance. At the council meeting there were present about 50 members, and after the matter had been explained by Professor Masson, the president of the association, there was not a dissentient to the motion for voting the £1,000 to the fund. That is to say, we have the entire approval of the men who, of all persons in the Commonwealth, by reason of their research and study, are best able to judge of the merits of the undertaking. Those present at the council meeting included experts in geology, meteorology, physics, zoology, and physiology, and they all gave their approval to the project, which thus obtained the seal of the association. The subjects mentioned will be of special interest scientifically in the expedition which Dr. Mawson is about to undertake. The other point is that the expedition presents an opportunity for an expression of the rising national feeling which is so marked a characteristic in the Commonwealth to-day. Hitherto Australia has been content to help; now she wishes to have control over an expedition which it is hoped will render valuable service, scientifically and practically, to the whole world. It must not be forgotten, too, that an expedition of this kind will have a great indirect influence on the people of our time. It is an example of spirited endeavor on the part of a number of men, and the influence of that endeavor must undoubtedly react upon the national life. It appears to me, then, that this undertaking might do for Australia in this way what many expeditions from England in times gone by for the discovery of the north-west passage have done for the British people. In those heroic undertakings Britishers learnt to endure extraordinary hardships and overcome great difficulties. Thus they became accustomed to a kind of heroic endeavor which has meant a great deal in the building up of the British Empire, and this Australian expedition seems to present similar opportunity for the display of fortitude and development of human resources."

THE MAWSON EXPEDITION.

The urgent appeal which we print elsewhere from representatives of the Australian Universities for pecuniary aid to the Mawson Antarctic Expedition will, we trust, not fall upon deaf ears. Just now we are hearing a good deal about South Polar exploration, for there are quite a number of expeditions in the field or projected, and it will be surprising if when they have done their work the southern ice has any very important mysteries left to be unravelled. For explorers now labor under vastly more favorable conditions than when just 70 years ago Sir James Ross found his passage blocked by a huge wall of ice from 150 ft. to 200 ft. high, 1,000 ft. thick, and not less than 450 miles long, and, after doing battle for some days with the tumbling icebergs in front of this barrier, was forced in despair to retire. Steam, electricity, and all the appliances which science has now at its command for the concentration and preservation of food, have come to the aid of the Antarctic navigator, and though his task still involves a good deal of peril and discomfort—for the conditions he has to encounter are much more unfavorable than obtain in the Arctic regions, where ocean currents mitigate the awful rigor of the climate—progress is at least practicable. Not only has the South Magnetic Pole—the point of magnetic attraction at which the needle of the compass assumes a vertical position—been located, as it was over 10 years ago by Borchgrevink, and even visited, as it was, by Professor David, of Shackleton's party, but the South Pole itself has come within an ace of being "conquered." That is to say, the same party left only 113 miles to be covered before the sufferings and losses they had incurred in their pioneering work obliged them to turn back.

It is no part of Dr. Mawson's scheme to complete the undertaking of Sir Ernest Shackleton. The quest of the South Pole he leaves to Captain Robert Scott and his rival, Captain Amundsen, between whom apparently the distinction of being the first to reach the southern extremity of the earth's axis is just now the object of a life-and-death struggle. Captain Amundsen's ship, the *Fram*, has returned to Buenos Ayres after depositing the explorer and his party at a point farther south than had been penetrated by any previous vessel. There is no denying the dramatic interest attaching to the exploit in which the two veterans are engaged in "thrilling regions of thick-ribbed ice," but neither can it be doubted that science will have more to gain from Dr. Mawson's expedition if it is successful in its objects than it can from the most brilliant effort to force a way by a sudden dash to the South Pole. Valuable indeed will be the results anticipated from the investigation of the topographical, meteorological, and other conditions of what is called the "Australian quadrant" of the great Antarctic Continent. As the nearest civilized neighbor to that region of possibilities we owe it not merely to science, but to ourselves, that we should contribute to the improvement of our far too meagre knowledge of it. As pointed out in the letter we publish elsewhere, this particular tract has so far been left untouched by explorers, and it is appropriate for many reasons that it should fall to an exclusively Australian expedition to inherit the task which it was incumbent on Sir Ernest Shackleton to leave to others, and which he himself is desirous that Dr. Mawson should undertake—the solution of some of the many scientific problems presented by this little-known region. For one thing, its thorough study is required before correct deductions may be formed with regard to the phenomena of ocean circulation, which may be supposed to mould, or at least powerfully to influence, the weather of our Southern Hemisphere.

We know roughly that at the surface of the Southern Ocean great masses of warm water pour down from the tropics to the pole, and that below and through them the Antarctic returns oceanic volumes of intense cold. What may not a complete study of the ocean currents in these latitudes reveal which would make plain matters of paramount importance in the meteorology of our section of the globe? Such a study, too, could not fail to benefit the navigation of these seas, where ocean currents are so perplexing. It is generally agreed that practical meteorology is at present a stagnant science; or rather, that it is in a transition stage, hanging between the tentative fingering of recorded figures and the vitalised application of a demonstrated theory. No complete system of meteorological observation is possible until barometric records have been obtained within the Antarctic circle. When this is done the beneficial results will become apparent everywhere, and the prediction of our weather from day to day may be expected to approach a little nearer to precision than it can claim now to do. Rightly, therefore, is the greatest stress laid on this branch of Dr. Mawson's work. Another very practical problem is that of magnetism, which, like the question of ocean circulation, bears on the safety of ships. Compass deviations, considerable in extent and obscure in origin, are among the difficulties of shipmasters. What with confusing sets of currents and compass errors, the cause of many an ocean tragedy may be found in elements quite beyond the shipmaster's computation. These are the more immediate objects of scientific research in the Antarctic belt, but others of great value in the circle of positive knowledge remain. An expedition, though purely scientific in origin and scope, could not fail to throw light on several matters of direct commercial utility. Whale-fishing has ceased in Australasian waters, because the whales have been driven to the southward, and doubtless in the seas that wash the shores of Victoria Land a rich harvest will be reaped in whales and seals also, as for many decades was the case on the South American side of Antarctica. In the letter we publish to-day there will be found also a seductive reference to possible auriferous discoveries to be exploited with less effort and perhaps greater advantage than those of Klondyke. The idea that an Australian expedition is engaged in a great work of which the whole world is bound to take notice, the consciousness that it is undertaking what has been largely done in the Arctic circle, the knowledge that it is helping to reveal to mankind the secrets hidden by the southern ice, the feeling that the race transplanted to these lands retains the old ambition to leave no part of our planet undiscovered and unknown—these considerations should inspire in patriotic minds a keen interest in the fortunes of an expedition which aims at no dramatic coup, but will be content with such praise as comes from an attempt to extend the bounds of knowledge.

Reg. April 24/11

MAWSON EXPEDITION.

COMMONWEALTH GOVERNMENT'S ATTITUDE.

MELBOURNE, April 23.

On Saturday the Acting Prime Minister (Mr. Hughes) said he knew of no definite promise by the Commonwealth Government of "substantial contribution" towards the cost of the Mawson Antarctic Expedition. The project certainly had the sympathy of Ministers, but as a large sum had been asked for—practically half the estimated total cost of £40,000—they could only refer the matter to Parliament for its decision. Mr. Hughes added that a deputation, comprising the Lord Mayor of Melbourne (Cr. Davey), the Commonwealth Meteorologist (Mr. Hunt), and Professor Masson had arranged to wait on him on Tuesday week to advance further arguments for Commonwealth assistance. The proposed purchase by the Government of the *Pourquoi Pas*, Dr. Charcot's exploring vessel, for £8,000, for this and future expeditions had not, Mr. Hughes said in answer to a further question, been brought under the notice of the Government.