

drawings of this hollow in the belt will be almost as important, therefore, as delineations of the ellipse itself.

Additional records of this character will serve to exhibit the precise epochs when decided changes occurred in the rate of motion of the spot or its surroundings. The mean rotation period, as mentioned above, seems very well assured from the materials already collected; but it is most desirable to gain more exact information as to the variations, so that the length of the cycle suggested by the observations may be definitely found.

102 City Road, Bristol,
November 25.

W. F. DENNING.

Galvanometers and Magnetic Dip.

WHILE the variation of magnetic dip in Europe (from about 71° in Aberdeen to 58° in Rome) probably gives little, if any, trouble to users of compasses and portable horizontal galvanometers with pivoted needles, the dip of about 58° to the south at the Cape is sufficient to disturb seriously such instruments.

I have seen several galvanometers which were useless until readjusted; these, having been sent out by makers of high reputation, were thought to have received damage on the voyage. I learn that it is a matter of routine in the Post Office to correct all new instruments for dip.

Small pocket compasses are not appreciably affected, because the centre of gravity of the needle is generally well below the point of support, and prismatic compasses escape, probably, on account of the weight of the card.

Instrument makers could easily arrange a small magnetic field in their testing rooms, with a dip to the south of about 60° , in which to adjust instruments intended for the Cape or Australia.

A. P. TROTTER.

Cape Town, November 9.

Atropa Belladonna and Birds.

FOR eight years I have had a large plant of *Atropa* growing here in my garden amongst currants and gooseberries; close by it is a mountain-ash, and at a short distance a large cherry-tree.

Birds, including the blackbird, build in the garden; but although the cherries, currants, gooseberries and raspberries are annually stripped, the *Belladonna* berries are never touched. The birds are encouraged, and the fruit can be spared.

The *Belladonna* berries are conspicuous objects from July to November; there are hundreds on my plant every year, long after other fruits have vanished—black, lustrous, luscious-looking—but no bird ever touches them.

W. G. S.

Dunstable.

THE ADVANCEMENT OF SCIENCE IN THE ANTARCTIC.

THE President of the Royal Geographical Society has issued an urgent appeal to the Fellows for funds to carry out a National Scientific Expedition to the Antarctic regions on a scale worthy of the traditions of the British nation. He states that a joint committee of the Royal Society and of the Royal Geographical Society has been formed for the purpose of obtaining funds for this purpose, but that "the responsibility of maintaining the credit of the nation in this respect devolves upon the Royal Geographical Society more than on any other body." The Council has accordingly set aside 5000*l.* out of the funds of the Society as a nucleus, to which Mr. Harnsworth, one of the Fellows, has generously added a like sum, and we understand that smaller contributions are rapidly coming in. The cost of a completely equipped expedition will be great, too great we fear for a single Society, even so large and so rapidly growing as the Geographical, to provide, for it is estimated at 100,000*l.* Yet from the point of view of the scientific results sure to be obtained, and the number of the scientific public, the sum is by no means unduly large. Doubtless there will be other Fellows of the Society who can afford and who will not shrink from sharing the position of pre-eminent generosity now occupied by one of their number; but the majority of those interested in the scientific aspects of geography

are not wealthy, and they will require assistance from other friends of science. While the vastness of the blank space on the map within the Antarctic circle is sufficient to account for the almost personal feeling of responsibility which Sir Clements Markham and his colleagues acknowledge, there are great gaps in all the natural sciences which only Antarctic research can fill. The physicist, as Prof. Rücker has recently stated, is in the anomalous position of having a theory of terrestrial magnetism far in advance of the facts on which it is based. The meteorologist has two views of atmospheric circulation to consider which can only be reconciled or resolved by observations in the far south. There are geological questions of an interesting kind awaiting solution, including the immensely interesting problem of the former attachment of the southern continents to the land that lies under the south-polar ice-cap. In chemistry uncertainties exist as to the interactions between sea-water and atmospheric gases on the one hand, and marine deposits on the other, which can be studied more fully in the Antarctic than elsewhere. Biology, apart from the certain accumulation of many new species of marine organisms, which might prove a burdensome boon, will find some fascinating problems of environment. The question of the bipolar occurrence of identical species is not as yet overburdened with data for its discussion; but greater interest centres in the life conditions of the vast icy continent—certainly 4,000,000 square miles in area—and absolutely isolated from all the rest of the land of the globe. The climate of most of this land cannot be more rigorous than that of parts of the north polar regions where land-mammals exist; and the biologist, with the exceptional fauna of Australia in view, may reasonably desire to know if there is animal life on Antarctica, and if so what forms it assumes in the unique environment of isolation and low temperature. Even the astronomer may look forward to some return for his contributions to an Antarctic expedition, for where on the land-surface of the globe is there so fine and large a field for the reception and preservation of meteorites? The anthropologist alone can afford, it would appear, to receive the appeal impassively.

All the great scientific societies have long ago expressed their opinion that the time is ripe for a renewal of Antarctic research. The whole newspaper press of the country has applauded the proposal to give effect to this opinion: almost the whole, we ought to say, for a cynically selfish opposition has been offered by one or two of the less influential papers representing the "little Englanders" in science. We hope that all scientific men who have given their approval to the proposed expedition—and who has not?—will ratify that approval, and assist in enabling this country to co-operate with Germany in 1900, and make the last year of the greatest century of scientific advance the world has known the most memorable of all in a field of science whence a great harvest of new facts, but no material return, is to be expected.

Promises and subscriptions are invited to be sent to the credit of the National Antarctic Expedition, to Messrs. Cocks, Biddulph, and Co., Charing Cross, S.W., or to the Royal Geographical Society, 1 Savile Row, W.

THE IMPERIAL UNIVERSITY OF LONDON.

IT is a matter little creditable to English culture that it has required some twenty years of agitation to bring a University for the most important city of the world into the region of practical politics. Within the last fortnight, however, we are glad to know that the machinery of the new Commission has been put in motion, and that inquiries are being made and questions being inquired into of the highest order of importance.