the inlet of the condensation water was placed is not stated in the report, but from the size of the vessel it could not be very deep, and the best results could scarcely be expected from it, and for the same reason it would be of no use save in fine weather, owing to the rolling of the vessel constantly changing the level from which the water was drawn. Still, under calm conditions, it might have been deep enough to touch in some cases Prof. Barnes's rising temperature.

Prof. Barnes's results are so consistent and definite that they carry conviction, and one can scarcely imagine that the observations taken when sailing towards, and from, an iceberg in many different directions, which enabled him to draw the isotherms all round the berg as given in his report and reproduced in your issue of December 12, 1912, could be the result of chance, and not of something which had a real physical existence. It is possible that the conditions there represented may be rare, as they seem to indicate that the berg and the water had travelled together for a long time. It seems probable that in many cases the distribution of the isotherms will not be so regular owing to the berg and the water moving at different rates and in different directions. One conclusion we may, however, come to from the *Scotia's* observations which is that the explanation of the rising temperature on approaching icebergs is not due to radiation as supposed, as the registering thermometer on the *Scotia*, though not as sensitive as that used by Prof. Barnes, was yet easily capable of detecting changes such as those indicated by Prof. Barnes's thermograms. It is to be hoped that the subject will be further investigated after the war is ended.

JOHN AITKEN.

Ardenlea, Falkirk, January 4.

The Longevity of Seeds.

IN the note in NATURE of January 7 (p. 515) upon Mr. Shull's paper in the *Plant World*, referring to the longevity of seeds, it is stated that this "is a subject on which specific information is always desirable." The following, therefore, may at least contribute suggestion.

In 1862, my father, at a cost of 4000*l.*, caused Dowalton Loch, the largest sheet of water in Wigtownshire, to be drained. The operation attracted considerable attention at the time, owing to the subsequent exploration of a number of "crannogs," or lake dwellings of the fascine type which were laid bare. The bottom of the lake, about 200 acres in extent, was for the most part covered with deep mud and peat; but across the centre of it lay a ridge of broken rock, now a dense jungle of dog willow (*Salix caprea*), whereof the seeds were no doubt wind blown.

Six years ago I was clambering among these rocks, and, coming upon an open space in the thicket, found to my surprise that the ground, to the extent of nearly an acre, was thickly covered among the stones with a carpet of *Pyrola minor*. Nowhere, except in Norway, have I seen this pretty plant in such profusion.

Now, although I have given fairly close scrutiny to the phanerogamous flora of this country, I have not found *P. minor* within its bounds, though for forty years I have known of a colony of it in the neighbouring county of Kirkcudbright, about five and twenty miles in a straight line from Dowalton Loch. *P. rotundifolia* also grows on the banks of the Cree about twenty miles distant.

No doubt *P. minor* once abounded in Wigtownshire, but it has disappeared under the plough, though it may linger still in the remote moorland. Dowalton Loch lies in the heart of an arable, closely cultivated district. Whence, then, did the minute seeds come which have produced this surprising crop? Have they lain dormant under the waters of the loch since the days of the lake-dwellers, or—a more moderate guess—since the days when the primeval forest bordering the lake was cleared away and the land broken up for tillage?

I shall be happy to receive a visit from anyone who may desire to verify for himself the topography of the district in connection with this isolated mass of Pyrola.

HERBERT MAXWELL.

Monreith, January 11.

S. T. Coleridge and the Immortality of the Protozoa.

THAT Weismann's aphorism regarding the "immortality" of the Protozoa had been uttered by others before him is not unknown; and Mr. Clifford Dobell in a recent paper ascribes to Ehrenberg the first expression of the idea. Ehrenberg's book was published in 1838; but Coleridge had said the same thing many years before in his "Biographia Literaria," published in 1817 and written a couple of years earlier. In a footnote to chap. iv. (on Wordsworth's "Lyrical Ballads") he says: "There is a sort of minim immortal among the *animalcula infusoria*, which has not naturally either birth or death, absolute beginning or absolute end: for at a certain period a small point appears on its back, which deepens and lengthens till the creature divides into two, and the same process re-commences in each of the halves now become integral." No statement of the case could well be plainer or more precise than this. I wonder whether Coleridge was indeed the first to make it; or whether some one of the eighteenth-century naturalists had already drawn the inference—not, after all, a very profound one—that a creature which multiplies by simple fission "has not naturally either birth or death," and may be called "immortal."

D'ARCY W. THOMPSON.

The Cause of Streaks upon Lath-and-Plaster Walls.

FOR some time past I have been observing the streaks which occur upon lath-and-plaster walls. I have made a survey of the literature and find no adequate treatment of the phenomenon. For that reason I take the liberty of submitting to you the results of my observations in the hope that you may find them worthy of publication. The results of my observations are as follows:—

(1) The striations are accumulations of dust upon the surface of the plaster. They may be wiped off with a cloth.

(2) The phenomenon occurs only on warmer surfaces of walls which are exposed on the other side to out-of-doors or to colder rooms.

(3) The steeper the temperature gradient through the wall, the more pronounced is the phenomenon.

(4) The light streaks, the spaces comparatively free from dust, occur over laths and joists, the dark streaks over the spaces between them.

Poynting and Thomson ("Text-book of Physics: Heat," p. 152) suggest "that the phenomenon is a probable illustration of 'radiometer action.'" The areas of plaster backed up by wood are probably warmer than those areas not so protected. From the supposedly warmer area an approaching dust particle is repelled by a more vigorous molecular bombardment than it encounters upon approaching the supposedly colder area.

I was led to inquire whether this explanation is a complete one upon observing what appears to be a related phenomenon. In a room rather free from dust but quite damp, the areas of plaster which ordinarily would be streaked with dust were quite clean, but were much discoloured by water. This observation