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Recent moraines of a lobe of the Taylor Glacier, Victoria Land, Antarctica

Drs. Harrington and Speden have offered an interesting defence¹ of their theory² for the ages of the moraines near a lobe of the Taylor Glacier, concerning which we have suggested an alternative hypothesis.³ However, despite the existence of four moraines bordering each of two small neighbouring valley glaciers, and despite the fact that these moraines may correlate with the moraines in Beacon Valley as pictured in the original letter, the absolute ages of all the moraines remain unknown. Until they are known, we feel strongly that their use in the suggested correlation with 19th century moraines in Europe and New Zealand² is unwarranted.

Probably all interested in this discussion will agree that what is needed now is more field study in the area concerned. The work of Drs. Harrington and Speden and their colleagues on the patterned ground⁴ represents one important approach to the problem in question. In addition to the obvious possibility of more C¹⁴ dating, lichenometry might show age differences in certain areas. We would also like to suggest that the installation and measurement of a few ablation and movement stakes on this lobe of the Taylor Glacier might indicate whether or not the suggested rate of retreat⁵ is possible under present climatic conditions.

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SIR,

Terminology for Antarctic ice features

There is a growing need for a revision and extension of the definitions of ice features met with in Antarctica. The suggestion made below is just one of those which must inevitably arise as detailed work proceeds in Antarctic regions. It would be valuable if some sort of international agreement could be reached before publication of I.G.Y. and later work proceeds too far, and the recent S.C.A.R. move to adopt uniform cartographic symbols for ice features is welcomed. The "Illustrated ice glossary" (Armstrong and Roberts)¹ provides the basis for an agreement of this sort, but further work is required, as the example given below will illustrate.

There are, in Antarctic waters, three main types of islands. First is the ordinary rocky island, which in summer is bare or incompletely covered with ice. Secondly, there is the ice-capped island, whose rocky base rises above sea level and is visible around the edge, but which is covered by a layer of permanent ice, nourished by snowfall and by frozen sea spray. (Such islands are generally small.) Finally, there is the "Ice Island," which is generally dome-shaped and which displays no rock at all. In some cases its rocky base does not rise above sea-level, but nevertheless forms the anchorage for the permanent ice cap. In other cases the rocky base may rise above sea-level somewhere beneath the ice; but it is nowhere visible and, from the sea, all that can be seen are ice cliffs. These latter two could only be distinguished by seismic ice depth measurements. (Such islands are generally large.) Diagrams 1 to 4 (p. 1166) show these three types.

To permit uniformity of description of these features in the literature I would like to propose the following nomenclature:

Diagram (1) Island

Diagram (2) Island (descriptively it could be referred to as an ice-capped island)

Diagrams (3) and (4) Ice islands

Typical ice islands are Drygalski Island in the Davis Sea (near Mirny) and White Island near Amundsen Bay (Enderby Land).