

CORRESPONDENCE

The Editor,
The Journal of Glaciology

SIR, *The Antarctic Ice Sheet*

In the review by Mr. G. de Q. Robin of *The Antarctic To-day* in the *Journal of Glaciology*, Vol. 2, No. 14, 1953, p. 299, I have noticed that 600 metres is attributed to me as my view of the probable maximum thickness of the Antarctic ice sheet. This, however, is an error, as has been admitted subsequently by Mr. Robin in correspondence with me. Actually, while quoting such authorities as David, Priestley and others, for perhaps the conservative estimate of 1800 to 2000 feet of average thickness, I cited other evidence (p. 31), such as that of the Norwegian-British-Swedish Antarctic Expedition, 1949-52, which goes to show that the greatest thickness of ice is at least 7400 feet, and the inference from my argument on p. 52 is that we must expect a maximum thickness of at least that of the larger figure. James Croll's calculations of 1879, while valid for an ice sheet with regular surface, and resting upon a flat rock floor, cannot be considered to hold for much of the interior of the continent where great mountain ranges exist, either emerged to nearly 15,000 feet above sea-level, or submerged, as sounding technique has already shown. It may well be, however, that with further exploration (particularly geophysical) a good deal of the unknown interior of east Antarctica may prove to be depressed, perhaps even basined, as has recently been proved to be the case in Greenland, and if so, it is possible that a considerable proportion of Croll's figure will be realized.

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SIR, *Unusual Glacier Advances*

I have been particularly interested in Professor A. Desio's paper on "An exceptional glacier advance in the Karakoram—Ladakh Region" (Vol. 2, No. 16, October, 1954, p. 383-86), since his explanation of the phenomenon is the same as that which I communicated to Professor von Klebelsberg, Editor of the *Zeitschrift für Gletscherkunde und Glaziologie* more than a year ago with respect to the 1952-53 advance of the Glaciar P. Moreno in Patagonia. Only later I found out that both of us had a predecessor; Mr. P. Groeber gave the same explanation for the famous catastrophe of the Glaciar del Plomo in Mendoza Province in his book: *La alta Cordillera entre las latitudes 34° y 29° 30'*, Buenos Aires, 1951, p. 348/9.

Well, I think it does not matter very much who has been the first to develop the idea; in my opinion it is of more importance that now three observers independently have come to the same conclusion referring to far distant glaciers. I think the fact is now well established that glacier advances during the retreat of the surrounding ice streams may be caused by the process described by Professor Desio.

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