

even at moderate depths in a glacier would be slight compared with that occurring at points where the rock bed is open to direct observation. But even if it occurred on a relatively small scale, it would help to account for the wide distribution of *roches moutonnées* and related forms on the floors of valleys which have been subjected to glaciation, and would imply that the mechanism envisaged by Dr. Carol might form a most important group of processes by which glaciers erode the valleys which they occupy.

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CORRESPONDENCE

The Editors,
The Journal of Glaciology

SIRS,

Glacier Crevasses

The point has been raised that my remarks in the discussion on the Extrusion Flow paper (*Journ. Glaciology*, Vol. 1, No. 1, 1947, p. 19), particularly my Figure 4, suggest that transverse crevasses may be formed without the need for a step in the glacier bed. I gather that the general view is that the presence of transverse crevasses indicates a step in the rock floor. This is a point of fundamental importance and it must be settled.

My own opinion is that transverse crevasses are not necessarily associated with steps in the bed, but that a step of any magnitude arising from differences between adjacent strata would produce significant crevasse systems. I regard the crevasse as indicating a zone of tension in the ice arising from the motion of the glacier contained within its more rigid rock boundaries, and I do not believe it is necessary to have steps in the bed to produce zones of tension.

If only we could find it possible to explore a glacier thoroughly throughout its length and depth, as we do as engineers when investigating landslips, by trenches and borings extending to the limits of movement, I believe many points of the above nature could be settled. Until some large investigation of this nature is undertaken our knowledge will always be severely restricted.

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GLACIERIZATION AND GLACIATION

THE drawings on the following pages were made by Dr. R. Streiff-Becker (Zürich) for one of the Editors in order to illustrate an article to be published elsewhere. They show the relationship between a glaciated area and the living glaciers which moulded it. A district covered by living glaciers is conveniently described as "glacierized." Wright and Priestley used this term in their *Glaciology* (p. 134), for land "inundated by ice" (German *Vereist*). It should prove valuable in antithesis to "glaciated."