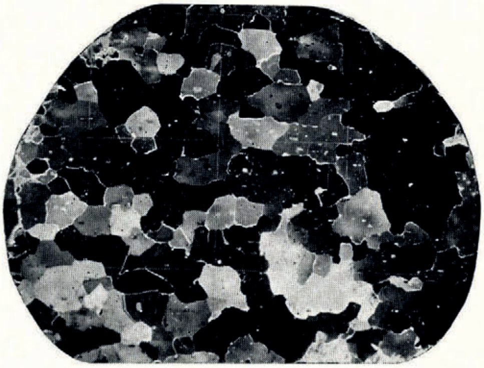

Fig. 2. One of the serial thin sections used in tracing crystals. Crossed polaroids. Grid spacing 20 mm. Section diameter about 70 mm.

its *c*-axis closely parallels that of another. Secondly, because crystals change size when traced through serial sections, it is not generally valid to weight a point in a fabric diagram in proportion to the area of the cell in the thin section; a small cell may be part of a large crystal. Thus the normal fabric diagram in which each cell is given equal weight regardless of size should approximately indicate the percentage of the volume in which glide planes are sub-parallel. This is strictly true only when the crystals are equant in three dimensions.

For these reasons, I submit that previously published fabric diagrams can be accepted at face value. Interpretation of the fabrics is greatly facilitated by knowledge of the texture, as Rigsby (1960, p. 605) realized.

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SIR, *A supraglacial extension of an ice-dammed lake, Tunsbergdalsbreen, Norway: comments on Dr P. J. Howarth's paper*

Liestøl (1956) and others (Leopold and others, 1964) have pointed out that the potential energy of water in a drainage system is largely converted into heat. In the case of Brimkjelen, the lake described by Howarth (1968), if we take the volume as 10^7 m^3, the drop from the lake to the snout as 300 m, and the distance as 4 km (Kick, 1966), then the full drainage of the lake could provide enough energy to melt a tunnel 4 km long and 24 m^2 in cross-section. The settling of an irregular ice mass on to an uneven floor would not be likely to cut off all drainage at once. Instead, flow, and thus melting, would be concentrated along a few paths. Even though not all of the available energy would be used for this purpose, melting should be sufficient to keep a tunnel open against slow ice movement. In the absence of very rapid ice movement the tunnel would thus remain open as long as the supply of water lasts, that is, until the lake is either empty or frozen solid. (Obviously this does not apply if drainage is initiated through crevasses well above lake-floor level.) It would therefore be interesting to see whether there is any correlation between the regimes of such lakes and the flow characteristics of the associated glaciers.

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Sir,

Unusual hailstones

On 20 May 1958 in Leningrad near the Finnish railway station, hail was falling. It lasted only three minutes, but the hailstones were very unusual. They were about 7 × 10 mm in size, and each hailstone was in the form of a hexagonal pyramid which consisted of six pyramids (one inside the other). Three pyramids were of transparent ice, the other three of milk-white ice (Fig. 1). Each milk-white pyramid consisted of sub-individuals (minute hillocks of growth) with air bubbles amongst them.

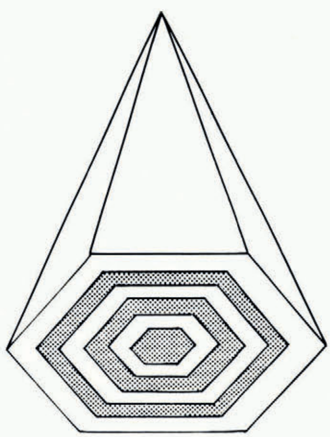

Fig. 1. Shape of hailstones observed in Leningrad, 20 May 1958. Each hailstone consisted of a series of pyramids alternately milk-white and transparent. Size 7 × 10 mm.

If an alum crystal is placed in a highly supersaturated solution of alum (about 1 kg l^{-1}), the crystal becomes covered by sub-individuals and becomes milk-white. If it is put into a slightly supersaturated solution (3 g l^{-1}), the sub-individuals disappear and a transparent layer is formed on the surface.

It is obvious that the pyramidal hailstones described above grew in a slightly and highly supersaturated water vapour environment. When they grew in the highly supersaturated water vapour, sub-individuals formed and the hailstones became milk-white; when they grew in the slightly supersaturated environment the sub-individuals disappeared and the hailstones became transparent at the surface.

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