

CORRESPONDENCE

The Editor,

Journal of Glaciology

SIR, *Drainage of an ice-marginal lake, Twins Glacier, Wyoming, U.S.A.*

A minor marginal lake formed next to a valley-side bedrock spur adjacent to Twins Glacier, Wind River Range, Wyoming, U.S.A., July 1978. Twins Glacier lies in a north-facing cirque in Upper Titcomb Basin (Mahaney, 1978) at 3 350 m. Surrounded by Winifred Peak (3 894 m) and Twin Peaks (4 019 m), Twins Glacier has a representative sequence of Neoglacial moraines built up in front of it. None of the Neoglacial moraines are capable of impounding melt water and forming lakes. This ice-marginal lake formed near the glacier terminus as a result of melt water blockage by a slide of ice and snow (Fig. 1) from a south-facing bedrock spur. The lake drained on 21 July.

An alternative hypothesis put forward by Seppälä (1973) for the origin of small ice-marginal lakes by wind eddying at the base of steep valley sides is not applicable in this case. Here a large slide of ice and snow dammed melt water and formed a temporary lake c.1.5 m deep with a surface of c.500 m². Drainage of this lake appears to have been a slow process judging by the micro-strandlines shown in Figure 1 and Figure 2 (close-up) associated with the margins of the water body. Melt water flowing into the lake



Fig. 1. Outlet channel in Upper Titcomb Basin, Wyoming, oriented from south-west (foreground) to the north-east (background).

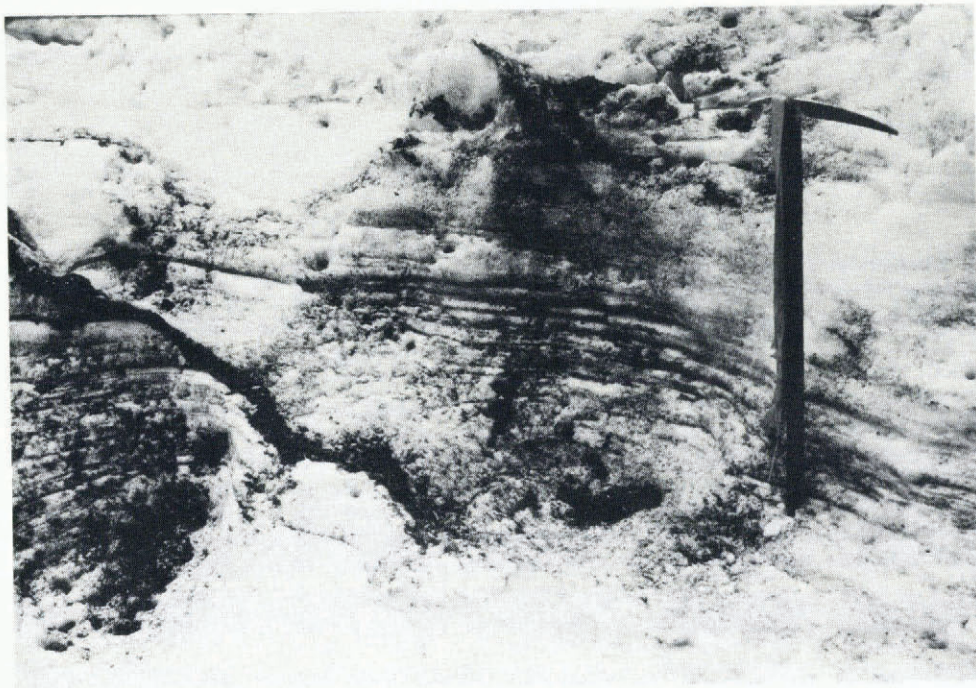


Fig. 2. Micro-strandlines in firn pack, Upper Titcomb Basin, Wyoming.

undoubtedly helped to melt part of the snow and firn pack leaving a smooth, nicely contoured ellipsoidal basin. The lake drained to the north between the slide mass and the bedrock spur.

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REFERENCES

- Mahaney, W. C. 1978. Late Quaternary stratigraphy and soils in the Wind River Mountains, western Wyoming. (*In* Mahaney, W. C., ed. *Quaternary soils*. Norwich, Geo Abstracts Ltd., p. 223–64.)
- Seppälä, M. 1973. On the formation of small marginal lakes on the Juneau Icefield, south-eastern Alaska, U.S.A. *Journal of Glaciology*, Vol. 12, No. 65, p. 267–73.