

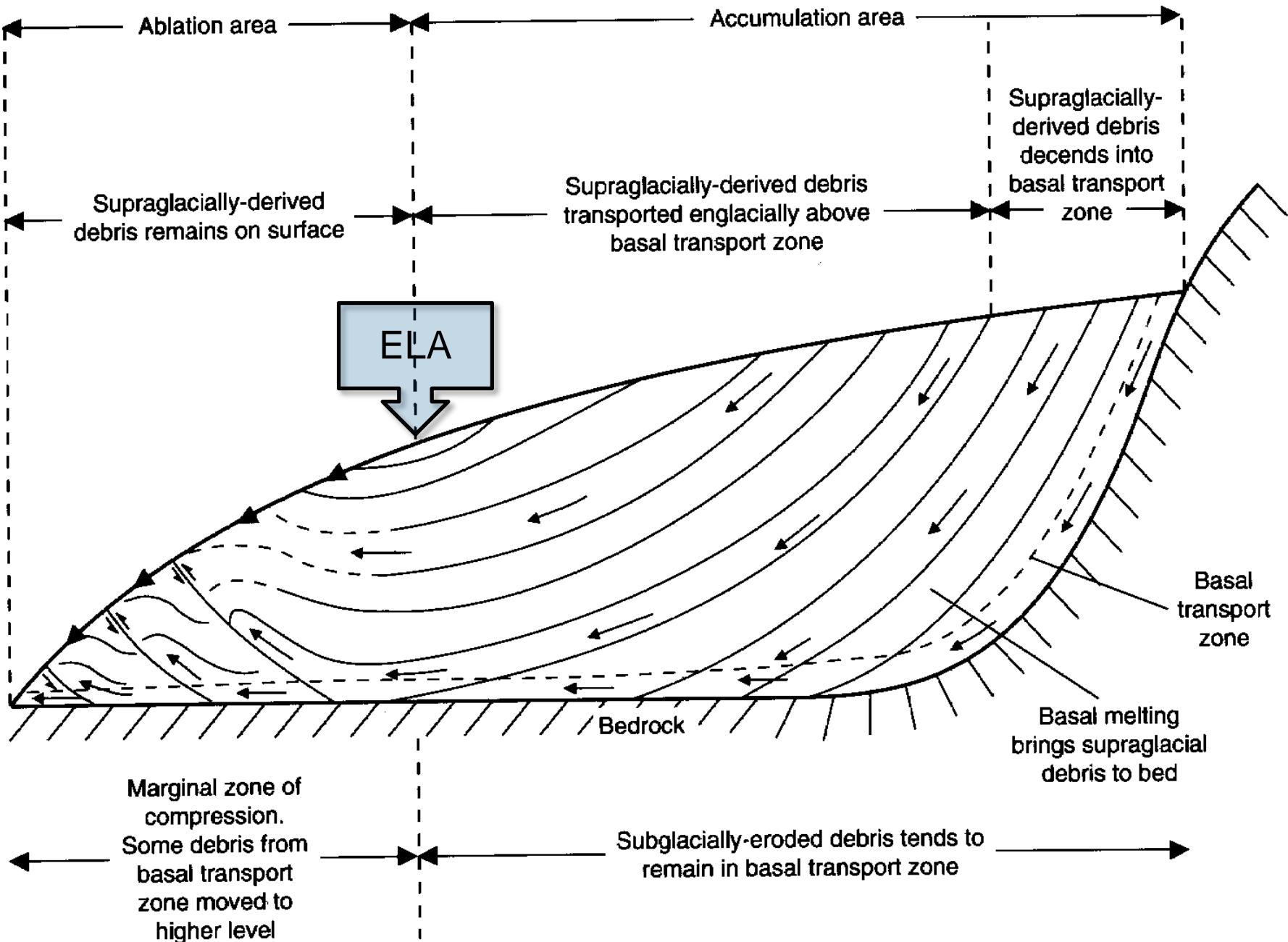
A wide-angle photograph of a glacier in a mountainous region. The upper portion of the image shows a massive glacier flowing down a steep slope, its surface marked by deep blue meltwater channels and patches of white snow. To the right, a dark, rocky mountain face rises, showing signs of glacial erosion. The foreground consists of a rocky, scree-covered slope with sparse green vegetation. The sky is overcast with grey clouds.

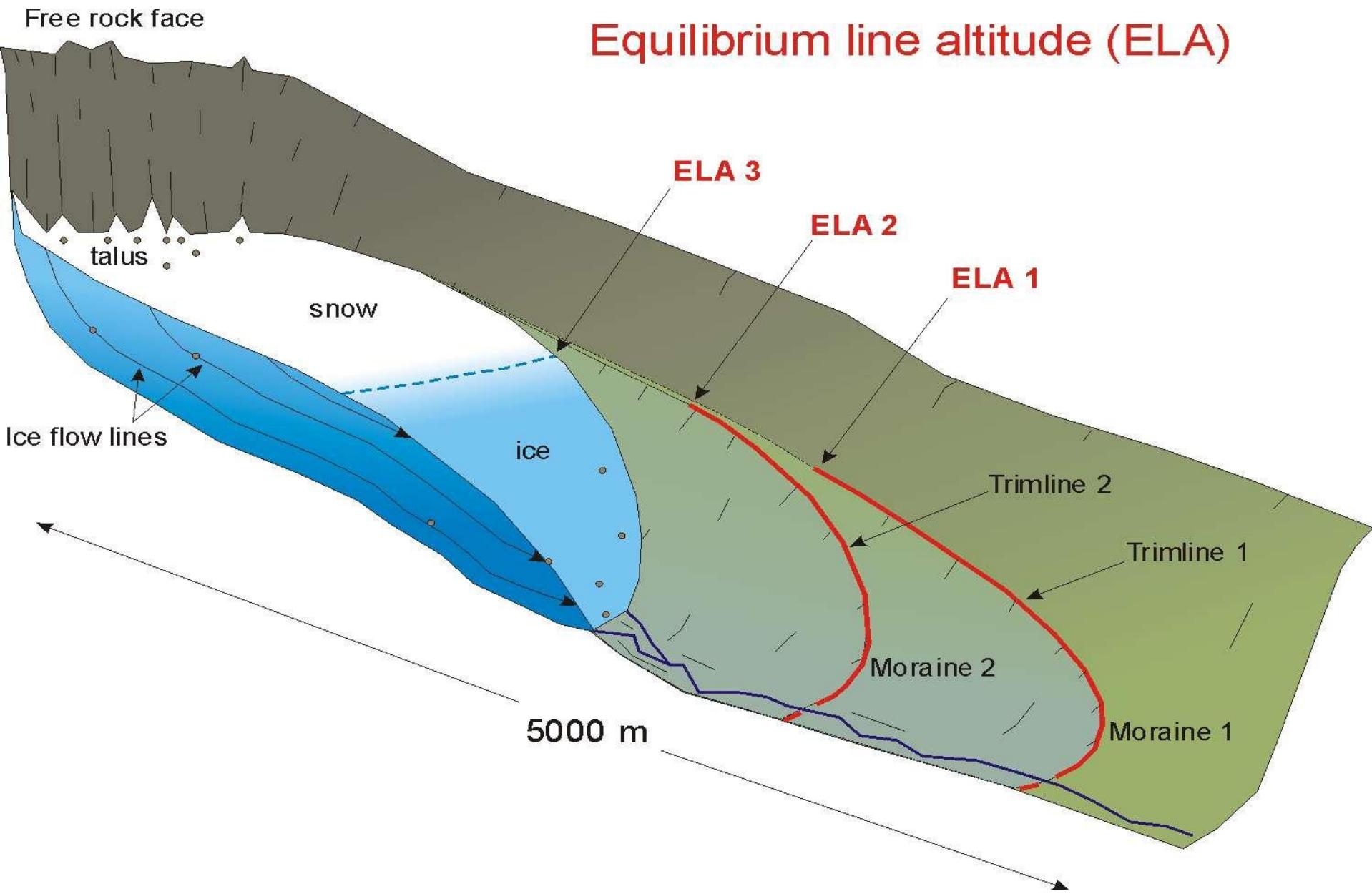
# Glacial deposition 2: Ice-marginal processes and landforms















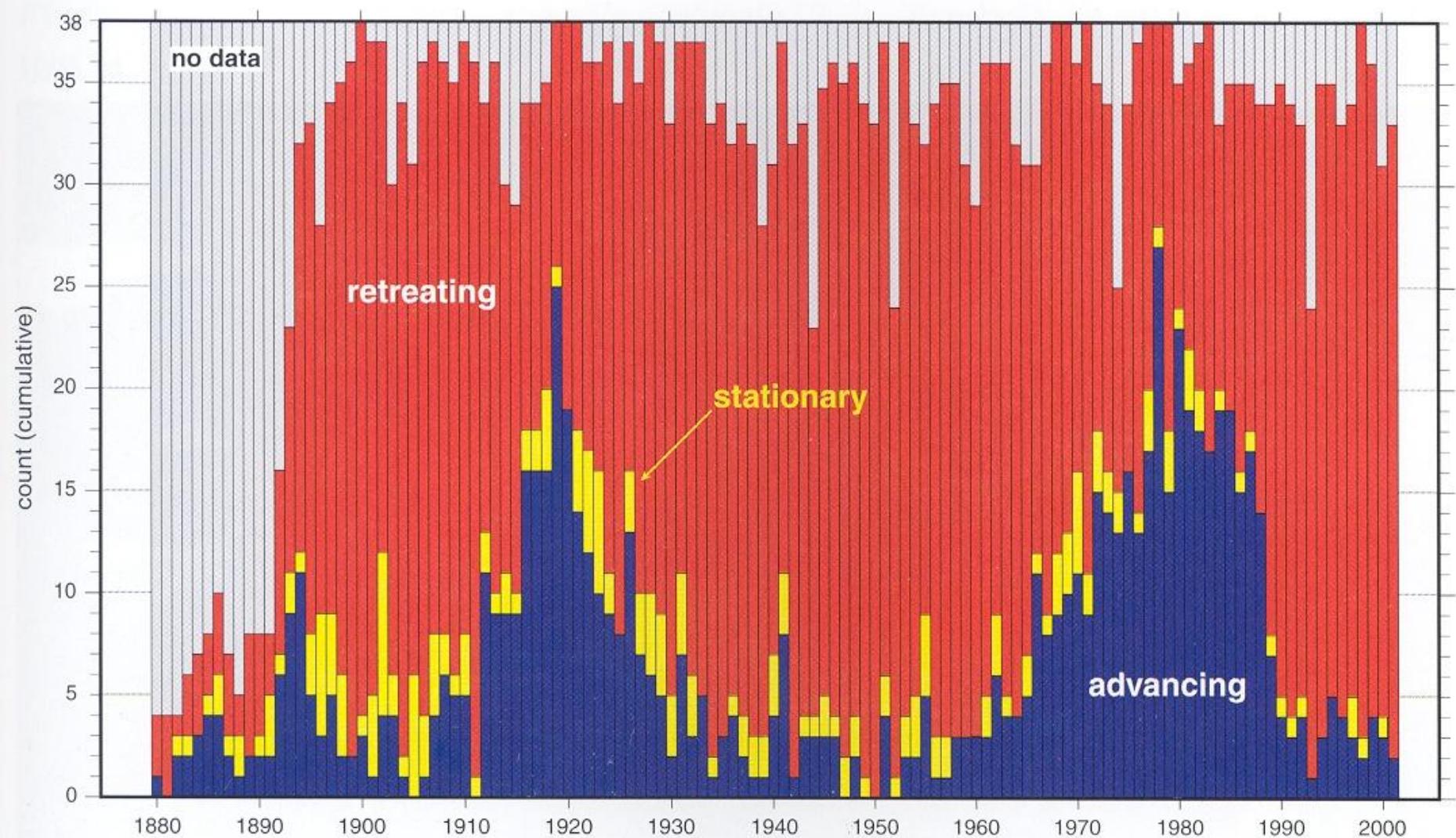


Figure 2.1a: Yearly classification of glacier length behaviour (advancing, stationary and retreating) of 38 selected glaciers (cf. Table 2.1).



Hornkees and Berlinerhütte, Austria, 1922



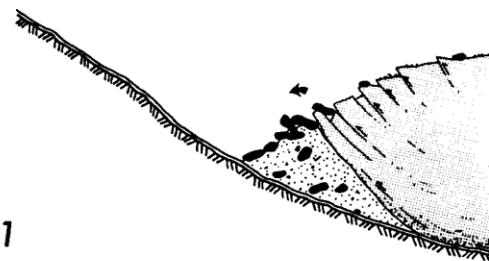
Guslarferner, Tirol, Austria, 1976

# Non-surging glaciers

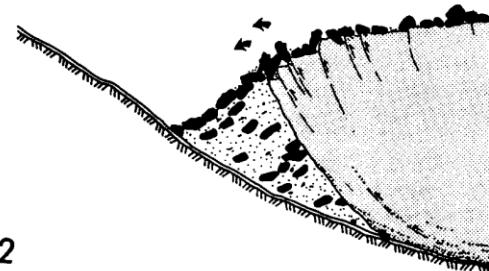




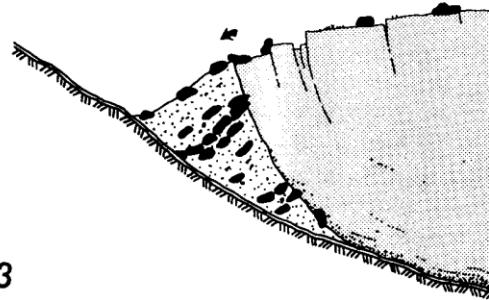




1



2



3

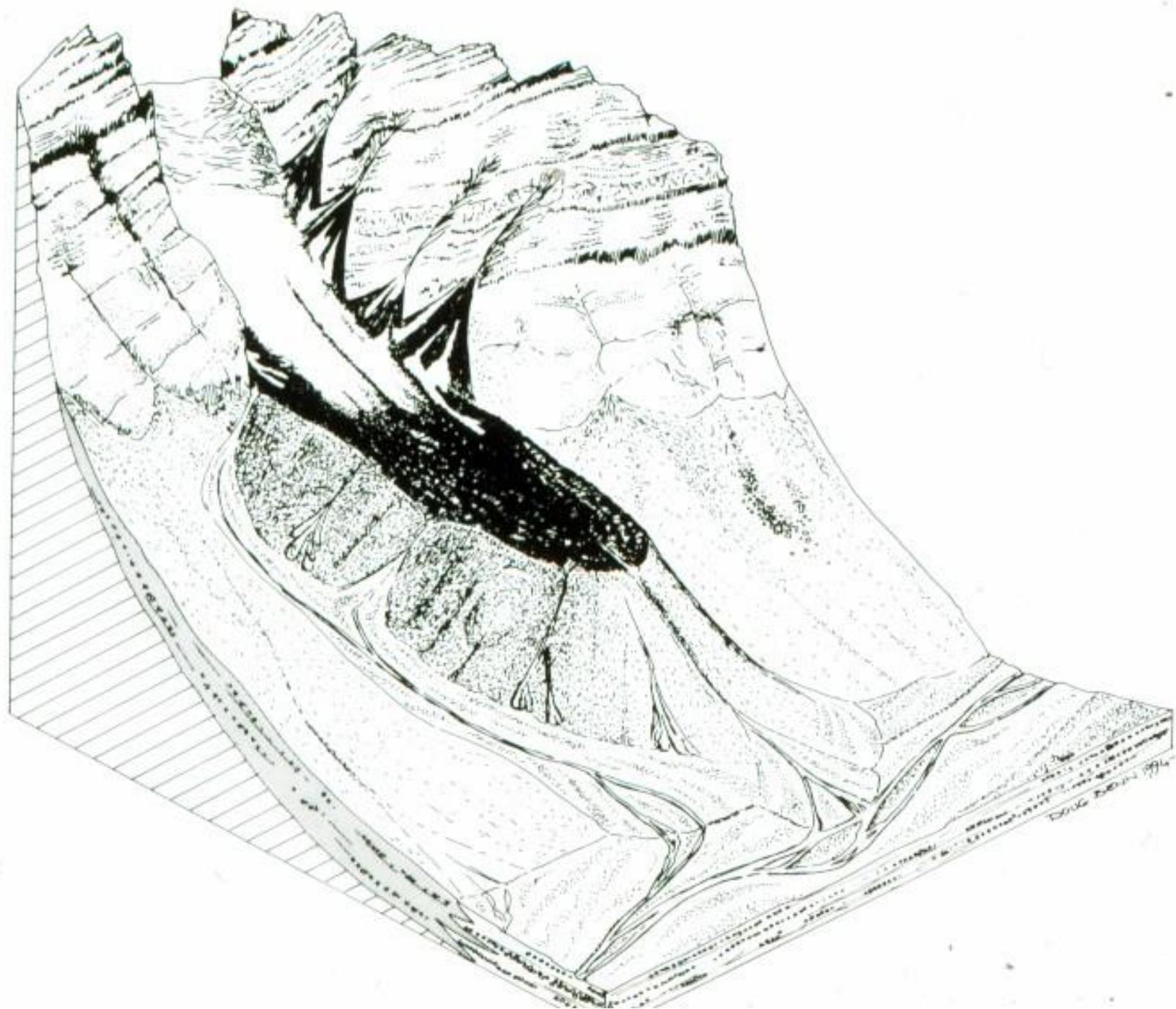


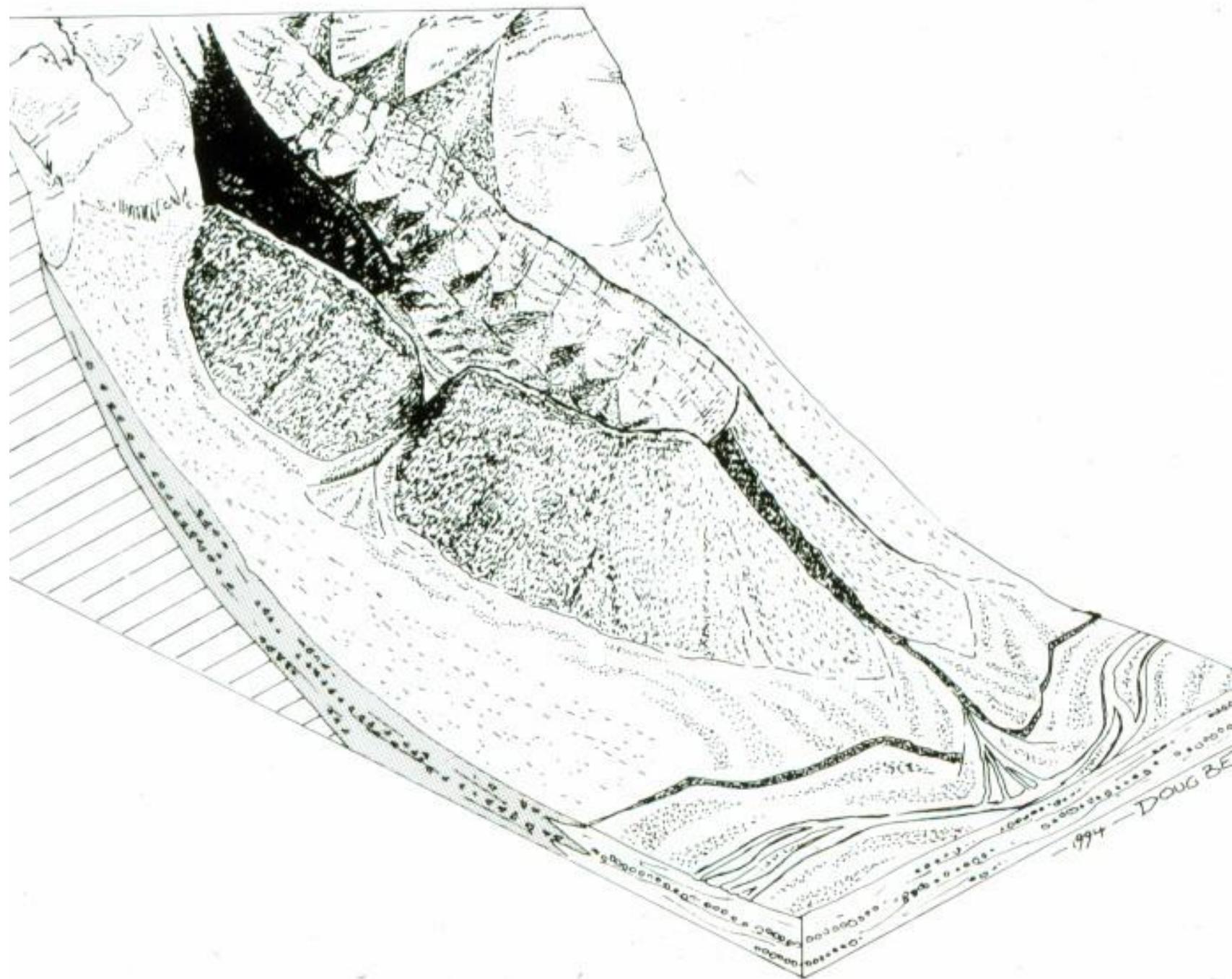
4



5









# Surging glaciers





Scott-Turnerbreen, Svalbard, 2000

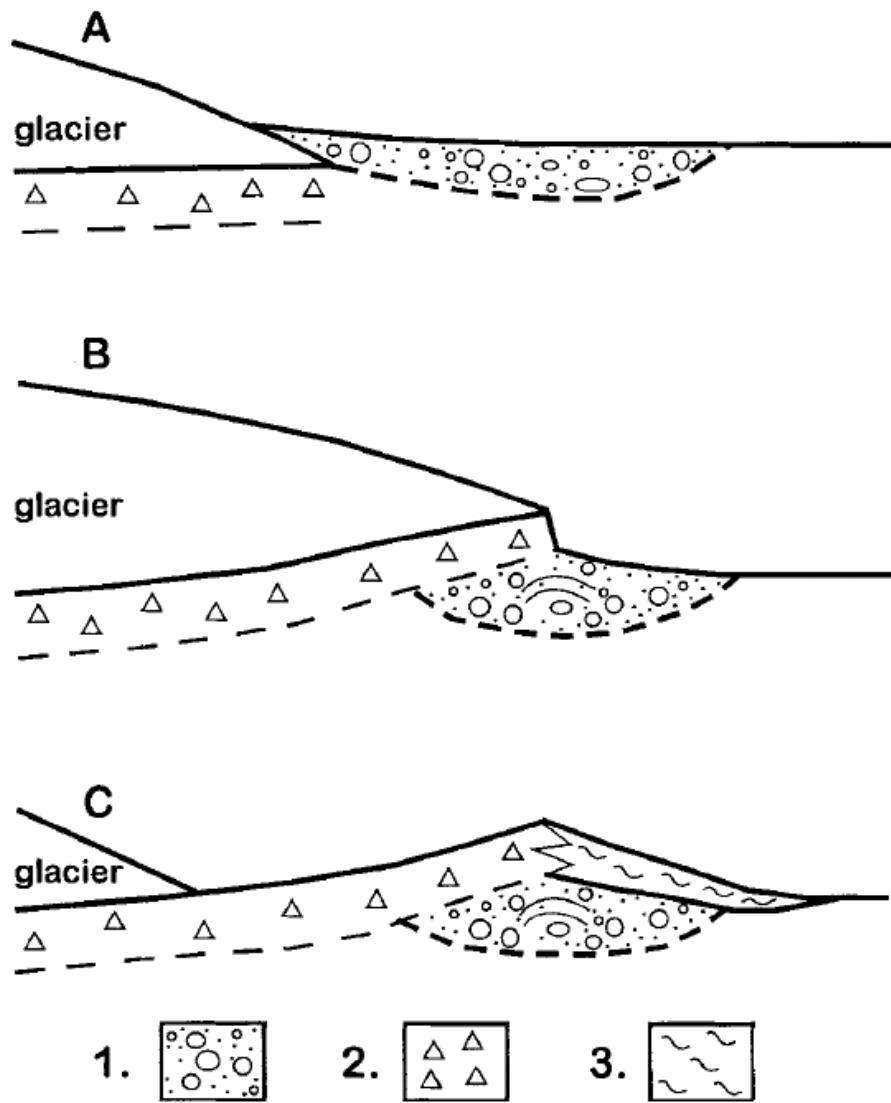


**At the terminus**









*Fig. 5.* Schematic diagram illustrating a conceptual sedimentologic model for the formation of the moraines observed on Irma Hill, north-central Wisconsin. The sequence of formation is discussed in the text; Unit 1 is sorted ice-marginal sediment; Unit 2 is basal debris-rich ice or frozen subglacial till; Unit 3 is debris-flow sediment. Figure adapted from Ham (1994).

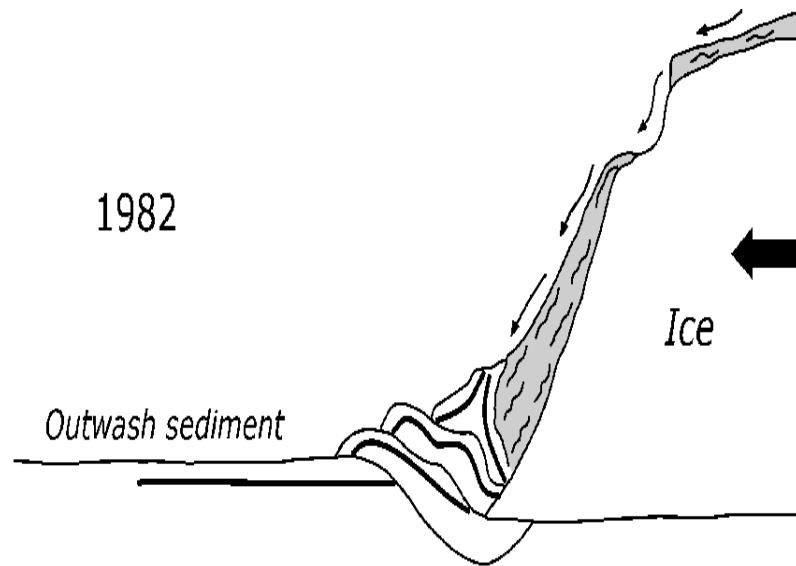


# Deformation beyond the ice margin





A

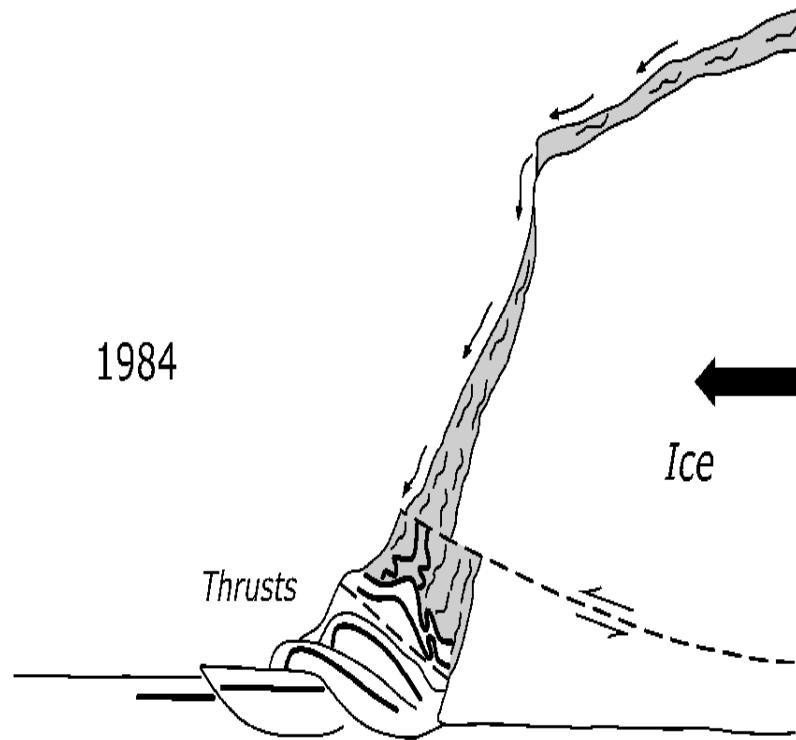


1982

*Ice*

*Outwash sediment*

B



1984

*Ice*

*Thrusts*

# Push moraines



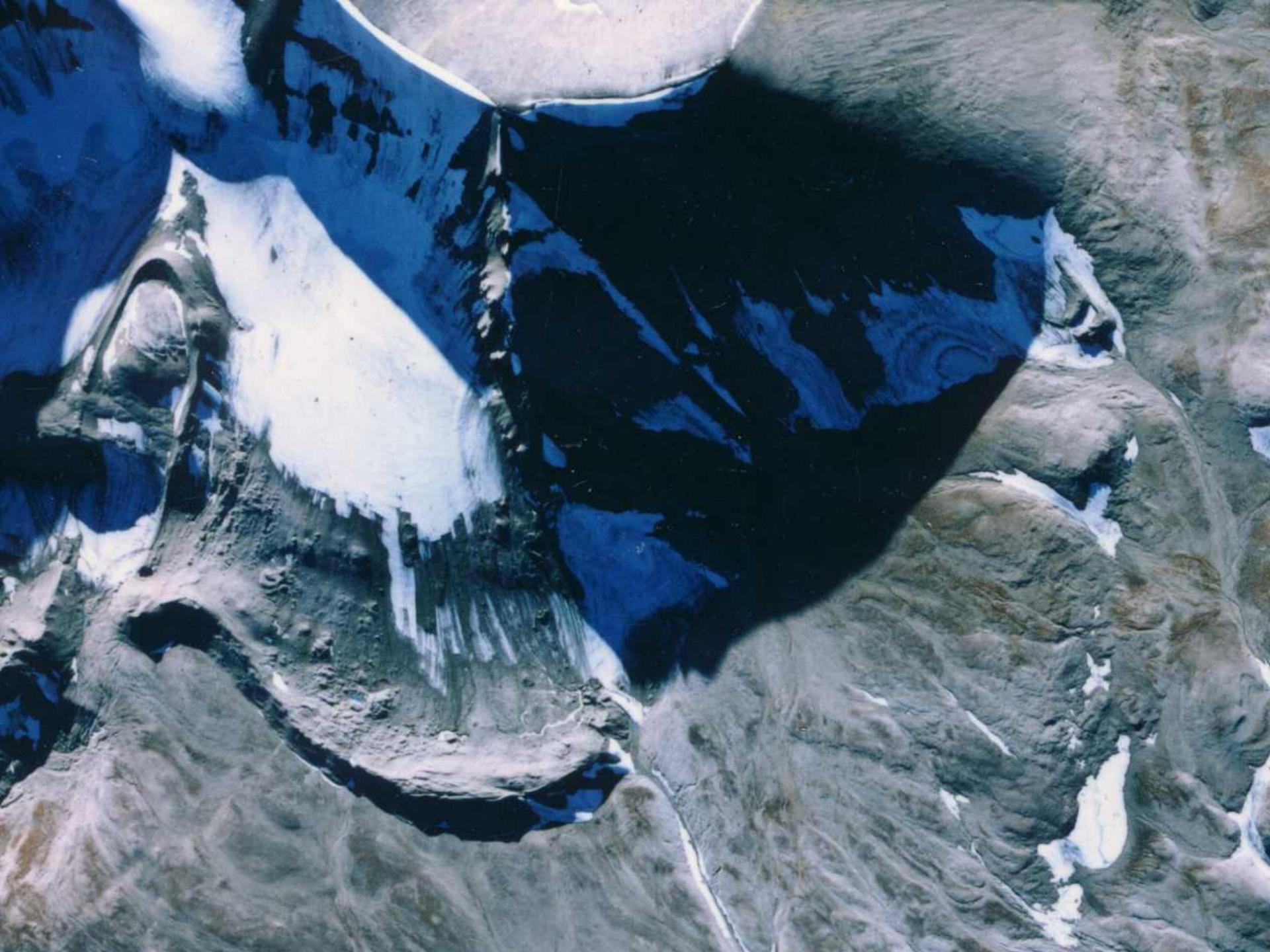




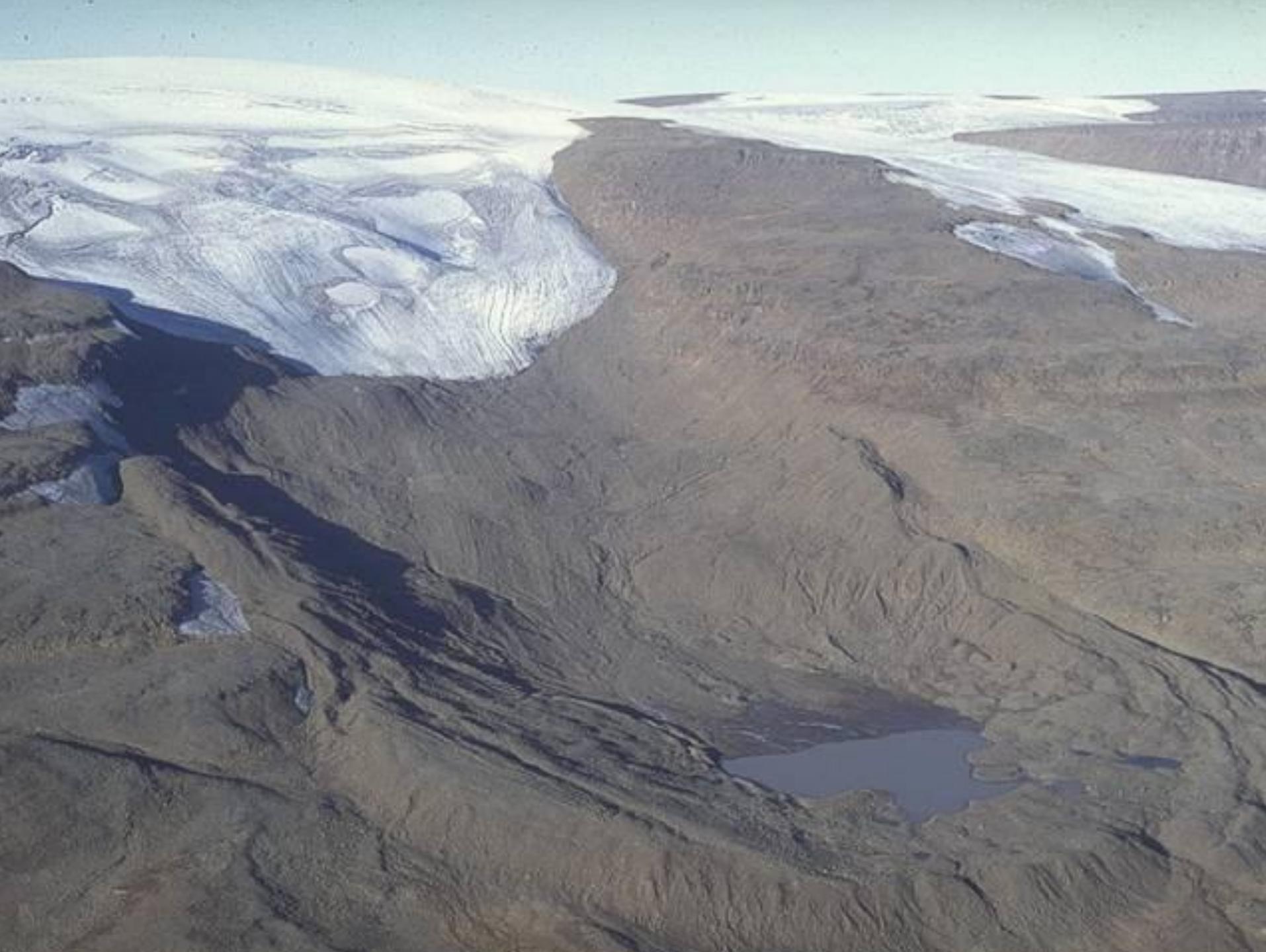


# Ice-cored moraines: a permafrost phenomenon







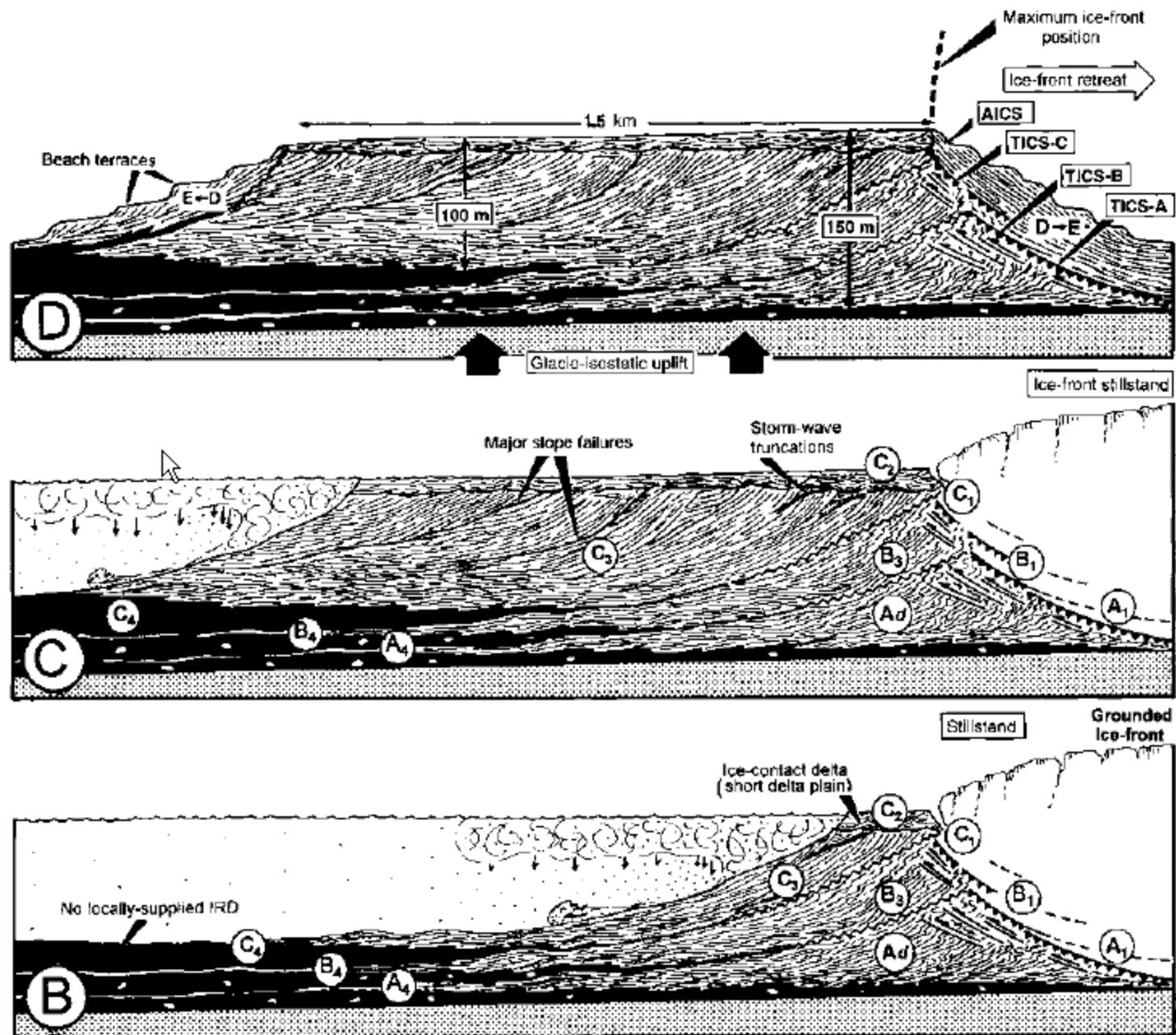




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# Marine moraines











# Medial moraines: The supraglacial environment





# Lateral drainage channels





# Ice-dammed lakes





# Extramarginal meltwater plains





