Structural and lithological divisions of the western border of the East Greenland Caledonides in the Scoresby Sund region between 71° 00′ and 71° 22′N
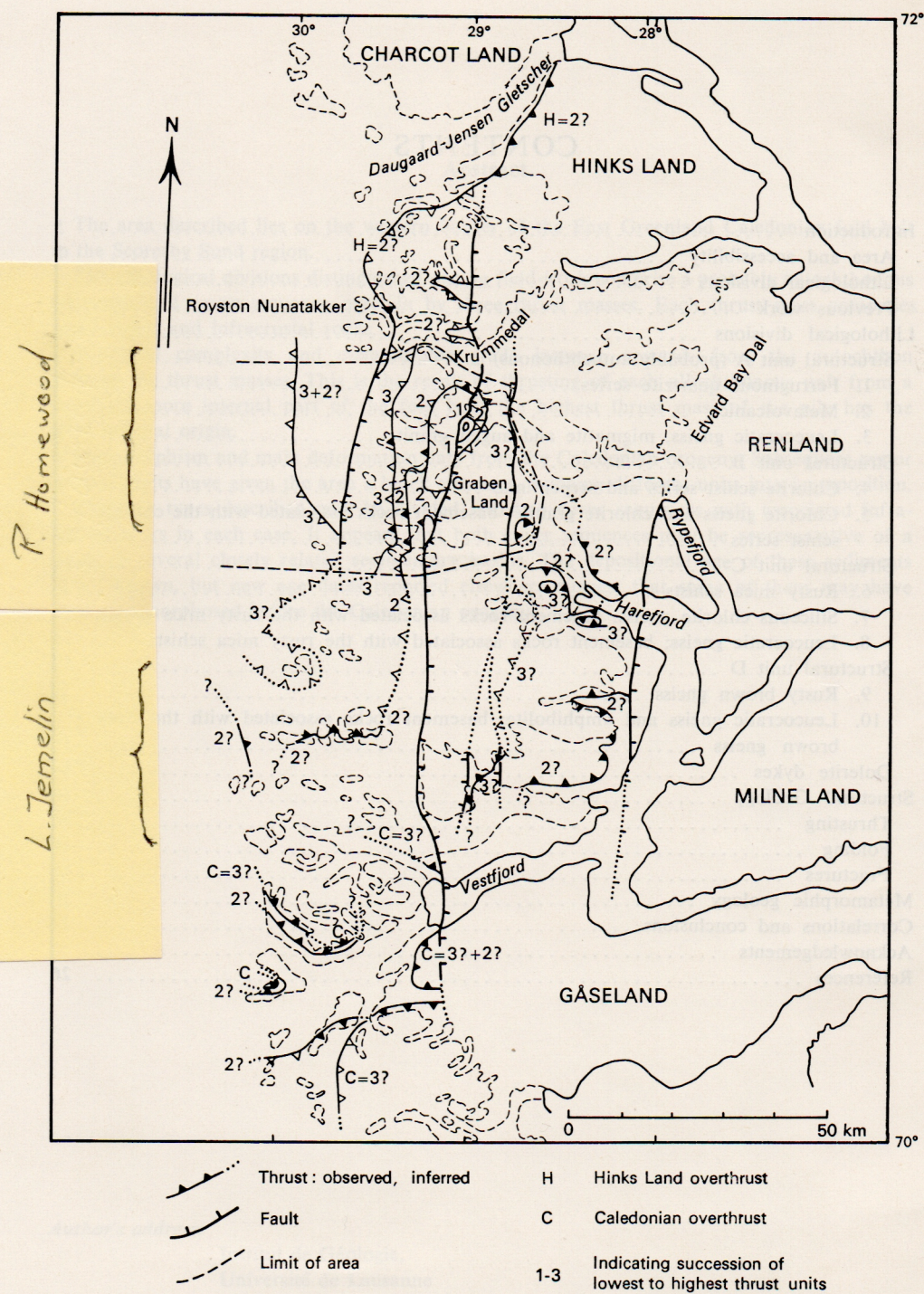
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1 map in pocket

1973

Fig. 1. Main structural lineaments of the western border of the Caledonian fold belt 70–72° N.

Legend:

Thrust: observed, inferred
Fault
Limit of area

H — Hinks Land overthrust
C — Caledonian overthrust
1-3 — Indicating succession of lowest to highest thrust units

INTRODUCTION

Area and accessibility

The area described in this report, roughly covering 800 km², was mapped during July and August 1970 as part of the five year series of expeditions to the Scoresby Sund region of East Greenland carried out by the Geological Survey of Greenland (Henriksen & Higgins 1969, 1970, 1971).

The area is formed by a group of nunataks and lies WNW of Harefjord and Rypefjord, inner Scoresby Sund region, between 71° 00′ and 71° 22′ N and 28° 30′ and 30° 30′ W (fig. 1 and Plate 1).

The larger nunataks, to the east, are mountainous with moraine covered plains and small ice-caps. To the west, a number of small nunataks crop out from the ice. Altitude varies from 800 to 2500 m.

Access was mainly by foot on the larger nunataks; helicopter and skis were used to visit the small nunataks and the less accessible areas of the larger nunataks.

Lithological divisions

Field mapping has revealed the following principal lithological divisions mainly found in distinct thrust units:
1. Ferruginous quartzite series
2. Metavolcanics
3. Leucocratic gneiss, migmatite and augen granite
4. Chlorite schist series and serpentinite
5. Chlorite gneiss and chlorite granite: basement rocks associated with the chlorite schist series
6. Rusty mica schists
7. Siliceous chlorite gneiss associated with the rusty mica schists
8. Leucocratic gneiss associated with the rusty mica schists
9. Rusty brown gneiss
10. Leucocratic gneiss and amphibolite: basement rocks associated with the rusty brown gneises

These may be divided into two distinct cover sequences, the ferruginous quartzite series and the chlorite schist series forming the first, the rusty mica schists