

## Upper Permian dykes in southern Scoresby Land, East Greenland

Lars Stemmerik and Mads Sørensen

During field work in the Upper Permian of Scoresby Land, a number of thin lamprophyric dykes were found in the area around Revdal (fig. 36). Direct field evidence indicates a Late Permian age for at least some of these dykes. Such dykes are known to occur elsewhere in East Greenland (Haller, 1971, fig. 122), where some are thought to be of Devonian age (Haller, 1971).

Of the nine lamprophyric dykes recorded in the Revdal district, all are less than one metre thick. The dykes are characterised by euhedral biotite phenocrysts reaching up to 2 cm in size, set in a medium-grained, dark grey to greenish basaltic groundmass. Two of the dykes cut the entire sequence of Upper Permian rocks (Stemmerik, 1979, and this report) and seven of the dykes cut only part of that sequence.

Based on their relation to the Permian sediments (Stemmerik, this report), the dykes may be divided into three groups (fig. 37) representing at least two Late Permian events. Where the dykes intrude restricted parts of the Permian sequence, overlying limestone breccias are locally very rich in clasts of lamprophyric rocks. This indicates that the dykes were already exposed to erosion in Late Permian time.

The strike of the lamprophyric dykes varies between 116° and 154°, roughly parallel to the margin of the Late Permian sedimentary basin. These dykes are therefore possibly a continuation of the pre-Late Permian tensional tectonic events (Kempton, 1961). It is possible that radiometric age determination of the dykes may enable a more precise age limit to be set for the Late Permian marine transgression.

### *Acknowledgements*

The investigations have been carried out with the support of the Danish Natural Science Research Council (SNF), and this is gratefully acknowledged.

### *References*

- Haller, J. 1971: *Geology of East Greenland Caledonides*. New York: Interscience, 413 pp.  
 Kempton, E. 1961: Die jungpaläozoischen Sedimente von Süd Scoresby Land (Ostgrönland). *Meddr Grønland* **164**(1), 123 pp.  
 Stemmerik, L. 1979: Observations on the Upper Permian of Wegener Halvø, East Greenland. *Rapp. Grønlands geol. Unders.* **95**, 90–92.

*Institut for historisk Geologi og Palæontologi,  
 University of Copenhagen,  
 Øster Voldgade 10,  
 DK-1350 Copenhagen K.*