Structural and Metamorphic Implications of the Final Emplacement of the Lyngen Nappe
A tectonometamorphic investigation of a nappe contact in the Northern Norwegian Caledonides

William Joel Schiffer
Holger Stünitz; Jiří Konopásek

OVERVIEW
- Juxtaposition of Greenschist-facies rocks (Lyngen Nappe) overlying Amphibolite- to Granulite-facies rocks (Nordmannvik Nappe)
- Wide, gradational, Greenschist-facies shear zone comprises boundary between the nappes
- Emplacement and deformation related to the Scandinavian phase of the Caledonian Orogeny
- Mineralogical and structural similarities between the shear zone phyllites and the rocks of the Nordmannvik Nappe below suggest a common origin and a retrograde metamorphic evolution
- Transitional schists at the base of the shear zone provide evidence for a prograde metamorphic history
- Micro- and macrostructural evidence points to an extensional, top-to-the-West, normal-faulting movement of the Lyngen Nappe during final emplacement

CONTEXT & LOCATION


CONTINENTAL extrusion may help to explain the opposing shear senses at the top and base of the shear zone. Here, the bounding faults define a wedge and converge downwards. The motion along these faults occur simultaneously. Channel flow, also proposed in the Himalayas, occurs during crustal extrusion, and is driven by a horizontal gradient in lithostatic pressure. The bounding faults here are nearly symmetric.

CRUSTAL EXTRUSION

REFERENCES