



Geology of the metaperidotite-bearing Sjonsæter Group, south central Norway

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In the Scandinavian Caledonides, a metaperidotite-bearing metasedimentary complex has been investigated for its intricate lithological association and enigmatic tectonostratigraphic position. In the study area north of Lesja, south central Norway, the unit is represented by the Sjonsæter Group, structurally positioned in the Blåhø Nappe. The latter overlies the Sætra Nappe, which is in turn laterally correlated with the Seve Nappe Complex in Sweden. The Sjonsæter Group comprises a metaperidotite sheet at its base, overlain by ultramafic conglomerates and sandstones, mica- and quartz-rich schists, amphibolites and mafic schists. Some metaperidotites are truncated by mafic dykes. The Sjonsæter Group has been deformed and metamorphosed during the Scandian phase of the Caledonian Orogeny and late- to post-orogenic extension. To the west, the Sjonsæter Group is folded with the structurally lower basement of the Western Gneiss Region. The rocks of the Sjonsæter Group are folded by east-west as well as northeast-southwest-trending folds. The mineral stretching lineations plunge chiefly to the northeast. The metaperidotites crop out in the cores of NE-SW trending antiforms and are overlain by mica schists and mafic rocks that are exposed in synforms. Locally, the contacts of the metasediments/mafic magmatic rocks with the metaperidotites are overturned. To the northeast, the Sjonsæter Group is in contact with the WGR. Locally this contact is also overturned. We suggest that in the Sjonsæter Group an original stratigraphy of metasediments with a metaperidotite substratum is preserved.