



Palynostratigraphy and Carbon Isotope Stratigraphy of the Permian-Triassic Strata in the Timan-Pechora basin.

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The Timan–Pechora Basin is a complex of rift basins and a series of foreland basins along the Uralian orogenic front on the east margin of the basin. The Permian-Triassic (PT) strata were studied in 4 cores located alongside an East-West transect from the eastern Barents Sea into the eastern part of the Pechora sea including the Kolguyev Island. 25 sediment samples were analyzed for palynology, palynofacies and C-isotope composition of the bulk sedimentary organic matter. The aim of the present study was to establish a constrained stratigraphic correlation of the Permian/Triassic transition in the Norwegian and Russian Arctic sector as well as the Uralian foreland basin. The Upper Permian – Lower Triassic sediments comprise shallow marine to continental mixed siliciclastic sediments (sand-, silt- and mudstones) that are deposited on a shallow shelf with deltaic complexes to coastal plain environment with fluvial-estuarine sediments. All samples show a C-isotope composition of about -26 to -27 per mille. We did not find a negative C isotope excursion which is normally characteristic for the PT boundary interval. Some of the mud-siltstone samples yielded well preserved palynomorph assemblages dominated by taeniate and bisaccate pollen and spores. The maturity of the organic matter is low, TAS 1-2. The palynofacies is dominated by wood remains, cuticle fragments and some degraded amorphous matter characteristic for fluvio-deltaic sediments. The presence of acritarchs indicate a marine influence in a neritic depositional environment. Reduviasporonites and taeniate pollen (Weylandites, Vittatina) are indicative for the PT boundary interval. However, so far spore dominated assemblages, as reported from Greenland, the Barents Sea or Svalbard are absent. Our preliminary data may indicate a sedimentary hiatus at the PT boundary in the Timan-Pechora basin or the absence of PT boundary features are due to a still rather low sampling density in the cores.