



Late Triassic (Carnian) Boreal vegetation and climate history and its relationship with the Wrangellia large igneous province

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The Late Triassic period is characterized by a series of major faunal and floral turnovers, which culminate in the end-Triassic mass extinction. This final collapse of the biosphere has been linked to the Central Magmatic Province. The preceding bio-events are of similar amplitude but less constrained. It has been suggested that the Carnian pluvial event is caused by the major flood basalt volcanism of the Wrangellia LIP. However, Carnian palaeoclimatic proxy records are scattered and mainly confined to the western Tethys realm. In this contribution we present preliminary palynological data from the Boreal realm. Early Carnian pollen and spore assemblages from Spitsbergen show pronounced quantitative changes in vegetation composition. Several warming pulses and a general trend to a more humid climate characterize the palaeoclimate inferred from principal component analysis of the palynological data. The observed warming events likely correlate with Wrangellia LIP and the Rheingraben event in the Tethys realm, but need further confirmation by additional data.