



Palynological evidence of climatic change at the T/J boundary

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The composition and diversity of late Rhaetian/Hettangian microfloras of the NW Tethyan realm are investigated with respect to the Triassic/Jurassic mass extinction and the processes that may have caused this crisis. Key locations for detailed palynological studies are selected in the Tatra Mountains (Slovakia) and the Mecsek Mountains (Hungary).

The Furkaska section (Tatra Mts., Slovakia) exposes a complete succession of a proximal marine setting. The Upper Triassic Fatra Formation is characterised by bioclastic limestones and fine-grained clastics overlain by dark claystones with intercalated sandstones of the lowermost Jurassic Kopieniec Formation. Based on geochemical data and microfacies analyses, the boundary interval is placed near the transition of the two formations.

In the area of Pécs and Komló (Mecsek Mts., Hungary) outcrops and core material reveal a fluvial-lacustrine succession continued by paralic coal deposits. The Upper Triassic Karolinavölgy Sandstone Formation is built up by arkosic sandstones and siltstones overlain by the coal-bearing uppermost Triassic to Lower Liassic Mecsek Coal Formation.

The palynomorph assemblages of both settings display typical Rhaetian/Liassic microfloras, dominated by bisaccate pollen grains, trilete spores and *Circumpolles*. Striking quantitative changes in the composition of the palynomorph assemblages are interpreted with respect to climatic changes within this period.

Palynology has been proven as a powerful tool for terrestrial to marine correlation. The floral turnover on land can be directly read from changes in the palynomorph assemblages in the investigated marine and terrestrial sections.