



## **Palynology and Carbon isotope stratigraphy of the Triassic – Jurassic transition in the Salt Range (Pakistan)**

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The Triassic Jurassic transition is characterized by enhanced rates of biotic turnover in the marine and terrestrial realms. Negative C isotope anomalies have been reported that may indicate coeval disturbances in the biogeochemical cycles. However, most data are collected from sections located in the northern hemisphere. We present preliminary results of an integrated study on the palynology and the Carbon isotope composition of bulk sedimentary organic matter from a TJ section in the Salt Range (Pakistan). The studied Tethyan Salt Range sections consist of a succession of dolomites/green-black shales (Kingriali Formation) which is followed by a series of quartzose sandstone, shales, laterites and conglomerates/pebbly sandstones (Datta Formation). The shales of the Kingriali Formation yield well preserved palynomorph assemblages dominated by diverse bisccate pollen. Also prasinophytes (green algae) are common indicating a marine depositional environment. Of note is the presence of the dinoflagellate cysts *Rhaetogonyaulax*, *Suessia* and *Baumontella* which indicate a Rhaetian age for the Kingriali Formation. The continental siliciclastics which follow on top of the dolomites yield spore dominated assemblages. The first occurrence of *Cerebropollenites thiergatii* indicates the approximate position of the base of the Hettangian. Higher up in the section pollen assemblages from the shales of the Datta Formation yield monotonous pollen assemblages dominated by *Classopollis turosus*. While most samples analyzed for Carbon isotopes showed values around -25 permil only the shales of the uppermost Kingriali Formation show significant more negative values of about -30 permil. The established Carbon isotope record and palynostratigraphic events and their correlation with other TJ boundary sections will be discussed. Our results suggest a rather complete sedimentary record of the Triassic – Jurassic boundary in the studied Salt Range sections.