

Towards an integrated Upper Triassic magneto-biostratigraphic time scale

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Krystyn et al. (2002) recently proposed a new geological calibration of the Upper Triassic sedimentary sequence recovered in the Newark continental basin of eastern North America. This calibration was established by correlating biostratigraphically-dated Upper Carnian to Norian magnetostratigraphic sections from the Tethyan realm and the astronomically tuned geomagnetic polarity time scale from the Newark basin. This correlation, however, introduced the need for a significant revision of the previously considered geologic age of the Newark deposits, lowering in particular the location of the Carnian-Norian boundary by some 500 meters, placing it at the base of magnetic interval E7n. If correct, the Newark sequence would lie between the Uppermost Carnian (Tuvalian 2) and the Norian-Rhaetian. We will show that the new calibration of the Newark sequence allows one to reconcile the magnetostratigraphic data obtained both from marine and continental environments, the Upper Triassic biostratigraphy (including data on Tethyan marine faunas and on vertebrates from North America), the cyclostratigraphy from the Newark sequence and the most recent geochronologic data for the Triassic.

References

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Conodont fauna from the Raibl Beds of Karavanke Mts., Slovenia and its stratigraphic significance

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Several geological studies dealing with "Raibl beds" have been conducted in western part of the southern Karavanke Mts. in the last few decades. Carnian "Raibl beds" of the Košuta nappe north of Mojstrana attain thickness of some hundred meters. A sequence situated between the Belca valley and Mt. Jepca (1610 m) was studied micropaleontologically. The upper part of an 85 m thick "Raibl beds" succession below Mt. Jepca was measured and sampled. It is mainly made up of dark grey limestone and marly limestone with intercalations of marls. Limestone is platy to thin-bedded, and according to its texture, biomicrite prevails. An internal lamination can be observed in some limestone beds, but rarely calcarenitic or brecciated beds also occur. Micropaleontological study revealed presence of diverse fossil content of the investigated section. Examined samples produced the conodont apparatus *Nicoraella ? budaensis* Kozur & Mock, sponge spicules, ostracods and holothurians, as well as frequent dasyclad algae and abundant posidonias. Ammonoids occur rather rare. Plant fossils of the genus *Voltzia*, and well preserved fishes with the prevailing genus *Peltopleurus* are frequent in more marly beds.

Presence of the conodont apparatus *Nicoraella ? budaensis* Kozur & Mock together with other fossils confirm a Carnian age. This conodont species was first described from the Middle Carnian (Julian) of Buda Mts. in Hungary, and it has been reported from few other locations of Pilis Mts., Hungary and Sicily, Italy, yet the entire range of the species is presently unknown. Dasyclad alga *Clypeina besici* Pantia is an index species of the taxon-range zone with verified Carnian range. Diverse fossil content of the study section in Karavanke Mts. makes possible wide biostratigraphic correlation, and contributes to the intercalibration of Upper Triassic conodont and dasyclad zonation.

Recovered conodont fauna from the »Raibl beds« of Slovenia yields segminate elements of a single genus, *Nicoraella*, and thus an apparatus reconstruction is feasible. *Nicoraella* apparatus beside the spathognathiform and ozarkodiniiform elements includes also enantiognathiform, hindeodelliform, prioniodiniiform and