



Towards a multi-stratigraphic global correlation of the late Upper Triassic

L. Krystyn (1), Y. Gallet (2), J. Marcoux (2), J. Besse (2) and W. Kuerschner (3)

(1) Department for Paleontology, Vienna University, Geozentrum, Althanstr. 9, Vienna, Austria, (2) Institut de Physique du Globe de Paris, UMR CNRS 7154, 4 Place Jussieu, 75252 Paris cedex 05, France, (3) Section Paleocology, Laboratory of Paleobotany and Palynology, Utrecht University, Budapestlaan 4, 3584 CD Utrecht, The Netherlands.

The end-Triassic was marked by one of the five important Phanerozoic global mass extinctions. The construction of a detailed magnetic polarity time scale for this period, that would integrate data from marine and terrestrial realms, is thus of particular interest. We report new magnetostratigraphic results from the Oyuklu section located in southwestern Turkey, which allow one to propose a complete late Upper Norian (Sevatian 2) to Rhaetian magnetic polarity sequence. The available data indicate that the Norian-Rhaetian boundary in the Newark basin (eastern North America) should be placed significantly higher than previously proposed. Two correlations are discussed between the new (marine) Tethyan and (continental) Newark sequences. Both options suggest that the Rhaetian is at least partly missing in the Newark basin, which would reconcile most late Triassic magnetostratigraphic results and biotic features observed from marine and continental environments. Following our preferred correlation, the Rhaetian would have a duration as short as approximately 2 Myr, and 4.5 Myr if the Sevatian 2 zone is included as part of the Rhaetian.