

THE NORIAN – RHAETIAN TRANSITION: NEW PALYNOLOGICAL AND PALAEOONTOLOGICAL DATA FROM A TETHYAN KEY SECTION IN THE NORTHERN CALCAREOUS ALPS (AUSTRIA)

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New data from an integrated palynological (pollen/spores, dinoflagellate cysts, acritarchs), (micro)palaeontological (ammonoids, bivalves, conodonts, radiolarians) and magnetostratigraphic study of a 50 m thick Norian-Rhaetian boundary interval in the Zlambach Formation (Kleiner Zlambachgraben section near Hallstatt, Austria) are presented. This well exposed Western Tethys key section of alternating deeper water limestones and marls shows successive FO and LO events in the marine faunal and phytoplankton record, as well as in the coeval terrestrial pollen/spore record.

Pollen/spore assemblages are dominated by the Classopollis group. However, two distinct palynological zones can be recognized: Late Norian assemblages still include a variety of typical Late Triassic elements (*Enzonalasporites*, *Vallasporites*, *Patinasporites*, *Ellipsovelatisporites*, *Partitisporites*, *Triadispora*), whereas Rhaetian assemblages show the presence of new elements, such as *Chasmatosporites*, *Quadraeculina*, *Limbosporites*. Dinoflagellate cysts (*Rhaetogonyaulax*, *Suessia*, *Dapcodinium*,) are abundant in the higher part of the studied section. Intriguingly, the transition between the two zones is characterized by a dramatically increased spore/pollen ratio, while the marine organic-walled phytoplankton shows dinoflagellate blooms (*Rhaetogonyaulax*, *Noricysta*, *Heibergella*). These events in the palynological record coincide approximately with the FO of characteristic Late Triassic ammonoids (*Choristoceras*, *Cochloceras*).

It may be concluded that the Norian-Rhaetian transition in the Tethys realm is characterized by a concomitant turnover of marine and terrestrial biota. The regional and global significance of the nature and magnitude of this event is discussed.

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