

Ber. Inst. Erdwiss. K.-F.-Univ. Graz	ISSN 1608-8166	Band 21	Graz 2015
STRATI 2015		Graz, 19 – 23 July 2015	

Upper Oligocene to Lower Miocene deposits of the North Alpine Foreland Basin: a testing ground for Central Paratethys stratigraphy

GRUNERT, Patrick^{1,2}, AUER, Gerald², HARZHAUSER, Mathias³, PILLER, Werner E.²

¹ Department of Earth and Planetary Sciences, Rutgers University, 610 Taylor Road, Piscataway, NJ 08854-8066, USA

² Institute of Earth Sciences, University of Graz, NAWI Graz, Heinrichstrasse 26, 8010 Graz, Austria

³ Geological-Palaeontological Department, Natural History Museum Vienna, Burgring 7, 1010 Wien, Austria

The North Alpine Foreland Basin (NAFB) represents a key-area for Central Paratethys stratigraphy, harboring the holostratotype of the Ottnangian stage (middle Burdigalian) as well as numerous faciostratotypes of the Kiscellian (Rupelian - ?Chattian), Egerian (Chattian – Aquitanian), Eggenburgian (?Aquitanian - middle Burdigalian), Ottnangian and Karpatian (upper Burdigalian) stages. Over the past decade, many of these classical sites have been re-evaluated by introducing new and improved stratigraphic methods, making the basin an important testing ground for stratigraphic concepts of the Central Paratethys.

Two key-sites of recent investigations are drill-site Hochburg 1 and the outcrop Ottnang-Schanze, the Ottnangian holostratotype. New bio-, chemo-, and magnetostratigraphic data not only allow for a more precise correlation of the regional Egerian, Eggenburgian and Ottnangian deposits to the global time scale, they also provide new perspectives on Central Paratethys stratigraphy. A major concern is the Egerian/Eggenburgian boundary, commonly correlated with the Aquitanian/Burdigalian boundary and represented in the NAFB by the lithostratigraphic boundary of the Puchkirchen Group (Egerian) and the Hall Formation (Eggenburgian). This view is contrasted by new results from Hochburg 1 that indicate an extension of the Puchkirchen Group well into the lower Burdigalian (<20 Ma). The implications of this new correlation for analyses of sedimentary budget, subsidence rates, sequence stratigraphy and the regional stage concept challenge our understanding of the development of the NAFB as well as the Central Paratethys.