

The Turonian-Coniacian stage boundary in the Bohemian Cretaceous Basin (Czech Republic), correlated between nearshore and offshore facies

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During the latest Turonian – early Coniacian, the Bohemian Cretaceous Basin (BCB, Central Europe) was characterized by increased rates of tectonic subsidence compensated by high clastic supply (cf. ULIČNÝ et al., 2009). As a result, a succession of sand-rich, Gilbert-type deltas developed at the faulted basin margin, fining along depositional dip into prodeltaic heterolithic facies and offshore mudstones to marlstones. The active tectonic setting with accelerated subsidence and supply turned out to be an advantage for preservation of otherwise insufficiently known parts of the Turonian-Coniacian (T-C) record. In this study a combination of detailed biostratigraphy, genetic sequence stratigraphy, and carbon isotope chemostratigraphy is employed to characterize the T-C boundary in the northern part of the BCB, in both nearshore and offshore facies. Tracing of the continuity of foreset, bottomset, and offshore strata in individual delta bodies, at high stratigraphic resolution, was made possible by a combination of the study of outcrop stratigraphic architecture, well-log data, and a succession of biostratigraphic markers. The basis of the biostratigraphic framework was the establishment of the same succession of inoceramid bivalves and other molluscan marker taxa and bioevents as that in Salzgitter-Salder (Germany) and Słupia Nadbrzeżna (Poland), localities currently considered candidates for a combined type section for the Turonian-Coniacian boundary (WALASZCZYK et al., 2010). All the faunal markers from the *M. scupini* to *C.c. crassus* inoceramid zones were found both in the nearshore and offshore facies. The linkage of biostratigraphic and carbon isotope-stratigraphic data to a regional stratigraphic picture, as well as to individual outcrop and core sections, provides an important new database for further study of the boundary interval, with a direct link to the transgressive-regressive history of the nearshore depositional systems. Therefore it is proposed here that the T-C interval in the BCB complements the Salzgitter-Salder and Słupia Nadbrzeżna sections and together with them constitutes a broader type region for definition of the T-C boundary.

ULIČNÝ, D. et al., 2009. *Sedimentology*, **56**, 1077–1114.

WALASZCZYK, I. et al., 2010. *Acta Geologica Polonica*, **60**, 445–47.