



3rd Workshop on the Jurassic/Cretaceous Boundary of the IUGS Subcommission of Cretaceous Stratigraphy, Milano, Italy

On March 6–8th, 2009, a workshop of the Subcommission of Cretaceous Stratigraphy of the International Commission on Stratigraphy was held in the Università degli Studi di Milano, Milan, Italy. The meeting, which has been organized by Prof. ELISABETTA ERBA, Prof. ISABELLA PREMOLI SILVA and Dr. CRISTINA CASELLATO was guided by Dr. WILLIAM W. WIMBLEDON. It focused on discussion of the role of critical indicators of the Jurassic/Cretaceous boundary and on correlation possibilities between the Tethyan and Boreal regions.

The Jurassic/Cretaceous boundary is probably the most problematic boundary in the framework of the Mesozoic System. During almost two centuries of modern stratigraphic research, a dozen local terms have been introduced for formations between topmost Jurassic and basal Cretaceous sequences (Portlandian, Bolonian, Purbeckian, Wealdenian, Neocomian, Tithonian, Infravalanginian, Berriasian, Ryazanian, Volgian, Yixian, etc.). In spite of several more-or-less successful attempts to correlate these divisions with the use of ammonites, calpionellids, palynomorphs, radiolarians, bivalves, sequence stratigraphy, magnetostratigraphy, isotope stratigraphy and other tools, the J/K boundary is correlatively one of the most difficult, and “it is not chance that it is one of the very last GSSP tasks to be tackled by the ICS and its subcommissions” (Wimbledon 2008).

According to ammonites, it was proposed to draw the Berriasian base at the base (or, alternatively at the top) of the *Berriassella jacobii* Zone (Hoedemaeker 1987). A restricted interval of calpionellid distribution, an acme of *Calpionella alpina* has been used as an indicator of the J/K boundary (Houša et al. 1999). From the point of view of magnetostratigraphy, the Brodno Subchron (M19n-1r) seems to be closest to the most frequently proposed boundary. Several proposals also occurred to put into coincidence the J/K boundary and the Mjølner- or the Morokweng impacts connected with iridium-, phosphate- and kaolinite enrichment, and synsedimentary slumping phenomena (Tremolada et al. 2006). However, this line should be put somewhat higher, at the base of the *Berriassella privasensis* Zone (=M17r base).

The best regional key section of the J/K boundary in the Western Carpathians is located by Brodno near Žilina (Michalík et al. 2009). Another good section was documented in the Hlboča Valley near Smolenice. This was the reason a proposal was given to organize the 2010 workshop of the J/K Boundary Subcommission in Smolenice, Slovakia. This proposal will be discussed at the Cretaceous Conference in Plymouth, U.K., in September 2009.

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Houša V., Krs M., Krsová M., Man O., Pruner P., Venhodová D., 1999: High resolution magnetostratigraphy and micropalaeontology across the J/K boundary strata at Brodno near Žilina, western Slovakia: summary of results. *Cretaceous Research* 20, 699–717.

Michalík J., Reháková D., Halášová E., Lintnerová O., 2009: The Brodno section — a potential regional stratotype of the Jurassic/Cretaceous boundary (West Carpathians). *Geologica Carpathica* 60, 3, 213–232.

Tremolada F., Bornemann A., Bralower T., Koeberl C., van de Schootbrugge B., 2006: Paleooceanographic changes across the Jurassic/Cretaceous Boundary: the calcareous phytoplankton response. *Earth and Planet. Letters* 241, 361–371.

Wimbledon W.A.P., 2008: The Jurassic-Cretaceous boundary: an age-old correlative enigma. *Episodes* 31, 4, 423–428.



Bill Wimbledon – opening the Milano workshop



Cristina Casellato – J/K boundary in the Torre de Busi section

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