

EARLY JURASSIC AMMONOIDS FROM THE PERȘANI MTS. (EAST CARPATHIANS, ROMANIA)

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Early Jurassic ammonoids from the Perșani Mts. (East Carpathians, Romania) have a 120-years-long history of study (e.g. HERBICH, 1878; VADÁSZ, 1908; POPA & PATRULIUS 1996). Well-preserved, loose fossils weathered out from Rosso Ammonitico facies are found abundantly in streambeds (e.g. in Tepei (=Töpe) Valley) and formed the basis of the early studies. Despite the profuse *ex situ* material, little was known about the detailed biostratigraphy until recently. The Rosso Ammonitico beds occur as olistoliths included within the Barremian–Aptian Wildflysch Formation of the Olt Nappe (Transylvanian Nappe System).

An apparently conformable, 12 m thick section was located and sampled for macrofauna along a tributary of the Tepei Creek. Separated from the measured section by a covered interval concealing some 4 m that may be tectonically disrupted, older beds of Rosso Ammonitico marl contain a fauna of the uppermost Hettangian to possibly lowermost Sinemurian Marmoreum Zone (incl. *Schlotheimia* spp., *Charmasseiceras? marmoreum*, *Ectocentrites petersi*). In the measured section, the following biostratigraphic units were recognized based on an abundant ammonoid fauna: Rotiforme Zone, Lower Sinemurian (e.g. *Coroniceras rotiforme*); Jamesoni Zone, Lower Pliensbachian (e.g. *Uptonia cf. jamesoni*); and Bifrons Zone, Lower Toarcian (e.g. *Hildoceras semipolatum*). A published compilation of biostratigraphic data from numerous olistoliths in the Perșani Mts. documented a nearly complete composite spanning the Middle Hettangian–Lower Pliensbachian interval (POPA & PATRULIUS 1996). The new results suggest that the deposition of red, nodular marl and limestone continued locally until the Early Toarcian, i.e. longer than previously established. The highly discontinuous nature of the Rosso Ammonitico is either a primary feature, or a result of bedding-parallel, cryptic tectonic omission of less cohesive layers of high clay content after emplacement in the wildflysch.

This study was complemented by a revision of collections made from the area by Vadász and others, and kept in the Hungarian Geological Institute. A significant new finding is the occurrence of middle and late Hettangian *Sunrisites* and *Badouxia*, which provides further evidence for faunal links of the western Tethyan and East Pacific marine basins during the early Liassic. Taxa of Ammonitina and the high proportion of phylloceratids indicate strong paleobiogeographic affinities with the Mediterranean Province, contrary to several other areas in Transylvania and the East Carpathians.

References:

- HERBICH, K., 1878: Das Széklerland. – Jb. kön. ung. geol. Anstalt, Mitt., 5, 19-365.
POPA, E. & PATRULIUS, D., 1996: Lower Jurassic ammonites in the Romanian Carpathians. – Mem. Inst. Geol. României, 36, 53-63.
VADÁSZ, E., 1908: Die unterliassische Fauna von Alsórákos im Komitat Nagykovács. – Jb. kön. ung. geol. Anstalt, Mitt., 16, 309-406.