Calpionellid stratigraphy and microfacies in the Clue de Taulanne section (Vocontian Basin, SE France)

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Abstract

The Clue de Taulanne section is located ca. 3.5 km to the NW from Castellane. The biostratigraphically studied part of the section included interval of ca. 100 m, of the early late Tithonian to earliest Valanginian age. Samples represent carbonate hemipelagic facies of a deep basinal slope with numerous resedimentation features (Beaudoin, 1977; Rameil, 2005). The section has been previously dated by Remane (1970) and Beaudoin (1977), using standart calpionellid zonation of A, B, C and D zones. Here we apply an updated calpionellid stratigraphy using a Reháková & Michalík (1997) Scheme developed in the Western Carpathians area.

Limestones are represented by bioclastic wackestone, in the upper part also mudstone. The most common bioclasts are calpionellids, calcareous dinocysts, ostracods, radiolarians, *Globochaete alpina* spores, fragments of echinoderms (in the Tithonian samples common *Saccocoma*). Aptychi and sections of ammonites are observed in part of the samples. Foraminifera are usually rare and represented mainly by calcareous benthic forms (spirillinids, nodosarids, lagenids), in some samples also agglutinated serial forms. A few specimens of planktic foraminifera were also found. Bioclasts typical of shallow zones are very rare (almost absent). Distinct admixture of silicilastic material was not observed. Bioturbations can be observed in many samples.

Originally siliceous bioclasts are calcified. Micritic matrix is often slightly recrystallized into fine microspar. Part of the Tithonian samples is more or less dolomitized.

Calpionellid zones and subzones were documented, from Chitinoidella boneti Subzone in the lower part of the upper Tithonian, through Tintinnopsella remanei Subzone and the upper part of the Crassicollaria Zone in the upper Tithonian, Calpionella alpina, Remaniella ferasini, C. elliptica subzones in the lower Berriasian, Calpionellopsis oblonga and Praecalpionellites murgeanui subzones in the upper Berriasian. The topmost 2.5 m belongs to the lower Valanginian Calpionellites darderi Subzone. Lack of Cps. simplex subzone might indicate erosion and stratigraphical gap in the lower part of the upper Berriasian.

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