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1 Biostratigraphy and facies of Uppermost Jurassic – Lower Cretaceous pelagic sediments in the Northern Calcareous Alps and Outer Western Carpathians

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Jurrasic/Cretaceous boundary sediments were studied in two totally different regions: Silesian Unit of the Outer Western Carpathians and Northern Calcareous Alps. As for the Silesian Unit, the basinal development was processed. This development is characterised by a considerable thickness of dark grey, prevailingly pelitic deposits. A higher part of the pelitic Vendryně Formation and Těšín Limestone in detritic development was studied. Upper Tithonian was identified in uppermost part of the Vendryně Formation with dinocysts *Amphorula metaelliptica, Systematophora penicillata* and *S. scoriacea*. The base of the Berriassian was defined on the occurence of *Endoscrinium campanula*. *Circulodinium distinctum, Ctenidodinium elegantulum* and *Prolixosphaeridium* sp. A occur for the first time in the Early Berriasian Těšín Limestone of the calpionellid Calpionella biozone, Alpina Subzone. In the uppermost part of Early Berriasian non-calcareous dinoflagellates were successfully correlated with the calpionellid Elliptica subzone. As for dinocysts, the presence of the species *Achomosphaera neptunii* that does not confirm Leereveld's conclusions (1995), i.e. the first occurrence of the species in the Mediterranean area from the Middle Berriasian, is the most important. Data from the Silesian Unit confirm its occurrence already in the uppermost part of Early Berriasian as stated by Monteil (1991, 1993). The abundance of this species leads me to the delimitation of a new *Achomosphaera neptunii* (Ane)

dinozone that would replace the upper part of the *Biorbifera johnewingii* zone defined by Leereveld. Another criterion for the delimitation of a new zone in the Western Carpathians is the first occurrences of *Muderongia tabulata* and *Systematophora* sp. A.

The studied part of the Northern Calcareous Alps is of a wholly different character and is characterised by pelagic carbonate sedimentation. The upper part of the Oberalm Formation begins with the basal breccia and calcareous deposits of the mentioned formation belong to the late Tithonian (Crassicollaria Zone, Intermedia Subzone). Pelagic marly-calcareous deposits of the Schrambach Formation then start in the Crassicollaria Zone. Assemblages of noncalcareous dinoflagellate cysts are relative poor, but well preserved. The palynological assemblages are mainly composed of dinocysts, only in few samples were found few representatives of sporomorphs and foraminifera linings. In addition, dark amorphous particles, plant debris (light and dark brown in colour) occur in the samples. Samples from the Oberalm Formation contain dinocysts, such as *Ctenidodinium ornatum, Occisucysta balois, Prolixosphaeridium mixtispinosum, Senoniasphaera jurassica, Systematophora areolata, Tehamadinium evittii* etc., which are typical of Tithonian to Lower Berriasian age (Monteil, 1992, Stover et al., 1996). The lowermost part of the Schrambach Formation is palynologically very poor. As far as the recovered dinocyst species are concerned, the early Berriasian age is proposed. Stratigraphically the most important species *Muderongia tabulata* and *Achomosphaera neptunii* occurs firstly. The first appearance of these species was reported from the early Berriasian (Jacobi ammonite Zone) of southeastern France (Monteil, 1992). Simultaneously this interval includes *Amphorula delicata, Circulodinium distinctum, Ctenidodinium elegantulum, Endoscrinium campanula, Systematophora areolata, S. complicata, S. scoriacea,* etc., so species well known from the Berriasian. Than stratigraphically important species *Biorbifera johnewingii* occurs. Jardine et al. (1984) found out the first occurrence of *B. johnewingii* at the base of the Occitanica Zone of the middle Berriasian.

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