Sediment 2007

PLIENSBACHIAN RADIOLARIANS IN TELTSCHENGRABEN (NORTHERN CALCAREOUS ALPS, SALZKAMMERGUT AREA, AUSTRIA): A KEYSTONE IN RECONSTRUCTING THE EARLY JURASSIC EVOLUTION OF THE NEOTETHYS

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In the „Hallstatt Mélange" located in the northwest of Bad Mitterndorf, a slide of Pliensbachian marly radiolarites occurs in an upper-Middle to lower-Upper Jurassic succession. The matrix consists of radiolarites, cherty limestones and marls, dated by radiolarians as upper-Middle Jurassic (Callovian). The microfacies and lithology (mainly cherty sediments) of the Pliensbachian slide are nearly identical to those of the matrix, but it belongs to the Lower Jurassic Dürrnberg Formation of the outer-shelf area of the Northern Calcareous Alps (Hallstatt Zone), which was paleogeographically situated in the north-western rim of the Neotethys Ocean. The radiolarian fauna has low diversity but its good preservation allows an accurate age determination. The dating of that cherty slide as Pliensbachian is of high importance because: 1) it notices the first finding of sediments younger than Sinemurian in the Hallstatt Zone of the Northern Calcareous Alps; 2) it represents the first record of Pliensbachian radiolarians in the European Alpine area; 3) it confirms that the north-western passive margin of the Neotethys Ocean persisted in the Alps at least until the Pliensbachian. Our paleontological and stratigraphic data prove that the closure of the Neotethys Ocean in this region is younger than Pliensbachian, but older than Callovian.

We determine following radiolarians: *Foremania sandilandsensis* WHALEN and CARTER, *Canoptum dixoni* PESSAGNO and WHALEN, *Parahsuum longiconicum* SASHIDA, *Laxtorum* sp., *Laxtorum* sp., *Parahsuum mostleri* (YEH), *Praeconeta* ? sp., *Parahsuum edenshawi* (CARTER), *Parahsuum simplum* YAO, *Katroma megasphaera* YEH and CHENG, *Katroma* cf. *bicornus* DE WEVER, *Katroma angusta* YEH, *Bagotum* cf. *modestum* PESSAGNO and WHALEN, *Lantus obesus* (YEH), *Lantus* sp. A, *Gorgansium* sp. 1, *Lantus* sp. A, Nassellaria NA2 sensu YAO, *Orbiculiformella callosa* (YEH), *Spongotropus* sp., *Praeconocaryomma* sp. 2 sensu CARTER in progress, *Spongotripus* sp. B sensu YAO, *Paronaella* sp. 1, *Pantanellium inornatum* PESSAGNO and POISSON, *Paronaella bona* (YEH), *Paronaella tripla* DE WEVER, *Paronaella bona* (YEH), *Homoeparonaella lowryensis* WHALEN and CARTER, *Hagiastrum* sp. 1, *Hagiastrid* g. et sp. indet G sensu YAO (new species) WHALEN and CARTER, *Cyclastrum* sp. A (new species), *Crucella spongase* DE WEVER, *Archaeohagiastrum longipes* BAUMGARTNER.

Middle and Late Jurassic as well as Early Jurassic radiolarian faunas from cherty sediments have been studied in the Northern Calcareous Alps in recent times. The Middle to Late Jurassic radiolarian faunas are well known from a taxonomic and biochronological point of view, whereas some problems remain. By this, in the Northern Calcareous Alps these radiolarian faunas are used for the reconstruction of the basin dynamics and the reconstruction of the destruction of the distal European continental margin in late Middle to Late Jurassic due to the closure of the Tethys Ocean.

Early Jurassic radiolarian assemblages in the Northern Calcareous Alps as well as in the Tethyan realm are rare (Gorican et al. 2003). Hettangian to Sinemurian radiolarian assemblages in the Northern Calcareous Alps are described by Kozur & Mostler (1990) for the continent near part (lower nappe system) of the Northern Calcareous Alps and from Gawlick et al. (2001) for the continent far part (Hallstatt Mélange). The discovery of a well-preserved and diverse radiolarian fauna in Teltschengraben northwest of Bad Mitterndorf represents the first record of Pliensbachian radiolarians in the northwestern Tethys.

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