

## MACROPALEONTOLOGY AND AMMONITES, SUBCOMMISSION GSSP DISCUSSIONS

### **1097 - Basal Berriasian Ammonite Assemblages and Tracking of the J K Boundary in Carbonate Sequences of Gerecse Mts. Hungary**

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The Upper Jurassic-Lower Cretaceous fossiliferous deposits of the Gerecse Mts. (Transdanubian Range, Hungary) are well known and studied for decades. Calpionellids and ammonites are among the most important fossil groups to help us fixing the basal Berriasian as the base of the Cretaceous system. In Gerecse Mts., Early Tithonian ammonite record is excellent and it seemed that in some outcrops also the J/K boundary can be traced. Overall 17 outcrops were investigated, 5 of them were possible candidates for finding J/K boundary containing good cephalopod and calpionellid assemblages from both Tithonian and Berriasian.

Where macrofossil record was insufficient or ambiguous, more thin sections were made and let calpionellids decide the age. On the basis of integrated studies we concluded all of the 5 localities were incontinuous, and basal Berriasian deposited directly on Early/Middle Tithonian beds. Semiforme and Fallauxi Zones were recognized, in some cases the Ponti Zone, and the basal Berriasian Jacobi Zone also provided a rich suite of ammonite material. No evidence were found to prove the presence of Microcanthum Zone.

Summarizing the results, carbonate sections of the Gerecse Mts. are incomplete, lack Upper Tithonian deposits, besides are more condensed as the coeval, classic localities localities of Bakony Mts. (Hungary).

### **1090 - The species of genus *Ovulaster* Cotteau 1884 (Echinoidea Micrasterina) distribution in time and space**

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A total of eight species have been assigned to the genus *Ovulaster* Cotteau, 1884: *Ovulaster zignoanus* (dOrbigny, 1853), *O. gauthieri* Cotteau, 1884, *O. auberti* Gauthier, 1892, *O. obtusus* Cottreau, 1910, *O. elevatus* Tzankov, 1984, *O. conicus* (Ilieva, 1998), *O. reticulatus* Smith & Gallemit, 1999, and *O. protodecimae* Giusberti, Fantin & Buckeridge, 2005. Two of them (*O. elevatus* and *O. protodecimae*) are junior synonyms of formerly described species.

The vague Senonian or Upper Cretaceous stratigraphic distribution of the species described between 1853 and 1984 was partially reassessed in the late 1970's using data relying on biostratigraphically significant macrofossils and foraminifera. Species described from 1998 to 2005, ranging from the Lower Maastrichtian to the lower Danian, have benefited from such biostratigraphic tools including calcareous nannoplankton.

Fieldwork in Pyrenees and in the Betic Ranges, as well as access to *Ovulaster* specimens kept in palaeontological collections of Paris, Lyons, Munich, Sofia, Padova, Valdagno and Cinto Euganeo have resulted in a more complete image not only of their ecology but also of their biostratigraphic and palaeogeographic distribution across the Upper Cretaceous/Palaeocene Tethyan sedimentary record.

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### **1191 - Ammonite extinction revisited**

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For the causes of ammonoid extinction (Class Cephalopoda, °Early Devonian Late Cretaceous), an entire array of different hypotheses and theories have yet been proposed. Among these, sea level changes, Deccan Trapp volcanism and the Chicxulub impact are the most popular and commonly cited. The inconsistencies between the proposed theories generally root in too narrowly geographically and geologically spread datasets, and more importantly in the different possible interpretations of negative evidence (absence of species/specimens). This applies to most fossil groups, and is certainly true for ammonoids. However, by intensive collection efforts in many classic sections and by the discovery of several new localities during the last decade, our understanding of latest Maastrichtian ammonoid diversity greatly improved. Today it is possible to give a much more refined overview based on much more positive evidence.