

A land micro-mammal fauna from the early Eocene marine Egem deposits (NP12, Belgium) and the first occurrence of the peradectid marsupial *Armintodelphis* outside North America

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Dental remains of land mammals are sometimes discovered in shallow marine Paleogene deposits of the North Sea Basin and they can then be used for biostratigraphic correlations. Such is the case for ten specimens we describe here from the early Eocene Egemkapel Member in the lower part of the Tielt Formation, found in the Egem quarry (West Flanders, Northwestern Belgium). The small fauna consists of 5 taxa, including the multituberculate *Neoplagiaulax*, the erinaceomorph insectivore *Macrocranion*, the nyctitheriid *Leptacodon*, a primitive eochiropteran bat and a new species of the peradectid marsupial *Armintodelphis*. The latter represents the first European occurrence of a genus that was previously only known from two species, *A. blacki* and *A. dawsoni*, from the late early Eocene Wind river Formation of Wyoming in North America. Biogeographical and biostratigraphical analysis of peradectid marsupials allows us to suggest that the genus migrated from North America to Europe around the time of the Early Eocene Climatic Optimum. The Egemkapel Member has been dated as middle NP12, early late Ypresian, whereas the Egem mammal fauna can be correlated to the fauna of Avenay from the Paris Basin, which is the international reference-level MP8+9 of the mammalian biochronological scale for the European Paleogene. Taphonomical analysis explains the presence of land micro-mammals in marine layers either through the action of predatory sea birds or through fluvial transport. The large quantity of shark and ray teeth discovered together with the micro-mammal teeth indicates an additional concentration effect of the material in the marine deposit.



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