

New mammal specimens from the marine Selandian of Maret, Belgium, and their implications in the age estimation of the continental deposits of Walbeck, Germany



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The Heersian (Selandian) sands of Orp-le-Grand at Maret have been well known by collectors of shark teeth for decades. Among the abundant vertebrate remains, extremely rare mammal specimens have been found. Two fragmentary teeth have already been reported by Herman and Sigé (1975). The purpose of this study is to present new well-preserved specimens from the same deposits. A small fragmentary jaw of an adapisoriculid, exhibiting p4 to m3, constitutes the best preserved specimen of the family ever discovered. The morphological comparisons indicate that it is very close to the species *Afrodon germanicus*, present in Walbeck. However, the association of characters visible on the lower molars of *A. germanicus* and especially p4 indicate a more advanced evolutionary stage than in the type species *Afrodon chleuhi* from Morocco, closer to the species *Bustylus marandati* and *B. folieae* from Hainin. Another interesting specimen from Maret is a labial fragment of upper molar that we refer to the species *Adunator lehmani*, also present in Walbeck. The match in morphology and size of the preserved part of the tooth with the German species is sufficient to assess it to *A. lehmani* with confidence. The last new mammal tooth is an anterior premolar of a large arctocyonid. The tooth is difficult to assess with certainty due to the lack of diagnostic features; based on the size it could belong to the species *Arctocyon primaevus* or *Mentoclaenodon walbeckensis*. The morphology does not match well that of either species, but the great variability in size and morphology observed in anterior premolars of these taxa does not allow reaching definite conclusions. Of the two teeth reported by Herman and Sigé (1975), one was a DP4 belonging to *Adapisorex* sp., and seemed to be closer to the species *A. abundans* from Walbeck than to *A. gaudryi* from Cernay. The other was a fragment referred to a possible arctocyonid; Smith and Smith (2003) considered the tooth as *Arctocyonides* cf. *weigelti*, the species being known from Walbeck only. The results concerning the mammals tend to indicate that the age of Maret is close to the age of Walbeck. Because the deposits in Walbeck consist of crack filling, the precise age could never be determined. It was usually thought to be slightly older than the late Thanetian of Cernay. Thanks to the mammal specimens found in Maret, we infer that the age of Walbeck is likely to be Selandian or early Thanetian.

Herman J., Sigé B. (1975). *Présence du genre Paléocène Adapisorex (Lipotyphla, Mammalia) dans les sables d'Orp-le-Grand (Heersien) à Maret en Brabant (Belgique)*. Geobios, Volume 8, n°4, pp 231-239.

Smith T., Smith R. (2003). *Terrestrial mammals as biostratigraphic indicators in upper Paleocene-lower Eocene marine deposits of the southern North Sea Basin*. In: Wing S. L., Gingerich P. D., Schmitz B., Thomas E., eds. *Causes and Consequences of Globally Warm Climates in the Early Paleogene*: Boulder, Colorado. Geological Society of America Special Paper, n°369, pp 513–520.



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