Early Pleistocene herpetofauna from Tegelen (The Netherlands)

EARLY PLEISTOCENE HERPETOFAUNA FROM TEGELEN (THE NETHERLANDS)

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Preliminary identifications (Hoek Ostende & Vos 2006) have pointed out a significant diversity in the herpetofauna from the Tiglian (early Pleistocene) of Tegelen (Province of Limburg, The Netherlands), but a complete study of the remains of amphibians and reptiles from this locality has never been made. A more exhaustive analysis on >1500 skeletal elements has confirmed the presence of previously recognized taxa, but also yielded new ones. Based on the new identifications, fossil amphibians from Tegelen consist of *Triturus* gr. *T*. *cristatus*, *Lissotriton* sp., *Pelobates fuscus*, *Bufo bufo*, *Bombina* sp., *Pelophylax* sp., *Rana* sp., *Hyla* sp. and *Palaeobatrachus* sp., whereas reptiles are presented by *Lacerta* sp., cf. *Podarcis* sp., *Anguis* gr. *A*. *fragilis*, *Natrix natrix*, undeterminate Colubrinae, *Vipera* sp. and *Mauremys* sp. This collection comes from the infilling which also yielded the micromammal remains (Freudenthal et al. 1976) and is considered to represent the warm period TC5 in an otherwise relatively cool Tiglian.
This herpetofauna hosts mostly extant taxa but also a member of the extinct genus *Palaeobatrachus.* The presence of a palaeobatrachid in the early Pleistocene of The Netherlands is of great significance for the palaeobiogeography of this extinct family of anurans, since it was thought that it had disappeared from western Europe by the Miocene/Pliocene boundary (while it survived up to middle Pleistocene in the eastern part; Wuttke et al. 2012). Finding a still undeterminate species at Tegelen points out that at the beginning of Quaternary *Palaeobatrachus* was still present west to the Rhine Graben, at least with a relict population, possibly because of particularly favourable climatic conditions.
With one exception, the extant taxa from Tegelen have currently a broad latitudinal distribution. Remains of the European pond turtle, *Emys orbicularis*, have been reported for Tegelen by Schreuder (1946) and following authors, but the only identifiable turtle remain within the material we have studied, a fragmentary nuchal, is not attributable to this species and can be identified as *Mauremys* sp.
With the exception of some recently introduced populations of *Mauremys leprosa*, the present and Pleistocene-Holocene occurrences of this genus in Europe are limited to some Mediterranean countries and to the coast of Caspian Sea (Böhme & Ilg 2003; Sillero et al. 2014). The occurrence of *Mauremys* suggests that the climate during TC5 was potentially warmer than indicated by the rest of the herpetofauna.

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