INTRODUCTION

During the period between 1.0-0.7 Ma, the climate became drier and colder, consequently the forested areas were rolled back and the steppes vegetation was expanded in Europe. The process began in the Eastern margin of the continent, and coincided with the first immigration of the genus *Mammuthus* (the mammoths). This species, which replaced the indigenous *Mammuthus meridionalis* (often associated with closed habitats), was adapted to the steppe conditions. By 0.6 Mya, only *M. trogontherii* occurred in Europe, as at Süssenborn (Germany), the type locality of the species (Lister et al. 2003).

The extinction of the *M. meridionalis* populations was most plausibly triggered not solely by the immigration of the steppe-adapted, grazier *M. trogontherii* from Eastern Asia, but the arival of the brown or mixed-feeder *Elephas* (Pleistocene) antiques from Africa through the Levant, which happened broadly 0.8-0.5 Ma according to Alroy & Lister (2012) or Van der Made & Mazo (2003). The earliest occurrence of the latter species in Hungary is most plausibly Győrűfalu. Following this period, *E. antiquus* has unfortunately very scanty record in Hungary.

About 800-760 ka, the opening of the vegetation reached Western Europe. The first *M. trogontherii* remains in the central and western part of the continent can be dated to the beginning of this period, nevertheless, contemporaneously *M. meridionalis* populations were also documented in the region (e.g. from Győrűfalu in Hungary or from the Ponte Gélata Formation in Italy). From Dorn-Dürkheim 3 in Germany (Palombo & Ferretti 2005 and van Esen 2011). Despite the slight recovery of closed vegetation, *M. meridionalis* almost entirely disappeared from Europe by the end of this period. Only the remains of hybrid individuals suggest that the last representatives of the species were had to be present in some refugia at that time. Such mosaic specimen (an upper third molar with a reconstructed plate number of 17 or even 18 and relatively high crown but with pleiomorphic enamel, thicker than 3.0 mm, see Višes 2009 for details) was found in the 800-700 ka locality, called Úröm Mill (North Hungary). Similar specimen turned out from Gürün in Turkey (Alroy & Lister 2015), Campo del Conte in Italy (although Capoza 2001 and Palombo et al. 2003 identified the molar as *M. meridionalis* or from Volgšteidt and Edersleben in Germany (van Esen 2011). According to Lister & Sier (2001) or Lister et al. (2003), even the typical form of *M. trogontherii* with 15 or more plates is present at Volgšteidt (Germany) and West Runton (Great-Britain).

The fauna of Úröm Mill mainly contain hygrophilous taxa (like *Desman* sculpta, *Micromys minutus*, *Hipposideros anticus* and the micromammal fauna of the contemporaneous Kőváralak locality (North Hungary) unequivocally indicate warm-humid climate and closed, forested vegetation with the dominance of dormice (Guide, *Microtus* and *Myodes*) (Janoski 1996). Similar warm-temperate conditions with mainly forest-edges and scantly open landscape indicators (such as *Spermophilus*) are typical for Volgšteidt (Maul & Paffett 2010).

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