

# 3D models related to the publication: *Micromeryx? eiselei* - a new moschid species from Steinheim am Albuch, Germany, and the first comprehensive description of moschid cranial material from the Miocene of Central Europe

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## Abstract

The present 3D Dataset contains the 3D models of the holotype (NMB Sth. 833) of the new species *Micromeryx? eiselei* analysed in the article Aiglstorfer, M., Costeur, L., Mennecart, B., Heizmann, E.P.J.. 2017. *Micromeryx? eiselei* - a new moschid species from Steinheim am Albuch, Germany, and the first comprehensive description of moschid cranial material from the Miocene of Central Europe. PlosOne <https://doi.org/10.1371/journal.pone.0185679>

**Keywords:** inner ear, Miocene, Moschidae, petrosal, skull

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Inv nr	Taxon	Models
NMBStH.833	<i>Micromeryx? eiselei</i>	cranium, petrosal and bony labyrinth

**Table 1.** List of presented models of the holotype (NMB Sth. 833) for the new species *Micromeryx? eiselei*.

## INTRODUCTION

We described the new moschid species *Micromeryx? eiselei* from the Middle Miocene locality Steinheim am Albuch (Germany; Serravallian; about 13.5 Ma (Tütken et al. 2006)). The new species is based on characters of cranium, petrosal, bony labyrinth, and dentition. As holotype we defined the specimen NMB Sth. 833 housed at the Naturhistorisches Museum Basel (Fig. 1; see Table 1 for list of presented models). We ran a phylogenetic analysis with fossil and extant pecoran ruminants that showed the monophyly of a “hornless ruminant clade”, most likely representing the family Moschidae, comprising *Moschus*, *Micromeryx flourensianus* and *Micromeryx? eiselei*. In the analysis the new species is the sister taxon of the Miocene moschid *M. flourensianus*. Besides the erection of a new species our work showed the usefulness of ear data for the resolution of phylogenetic relationships among ruminants, as well as the sympatric co-occurrence of two moschid taxa in the locality Steinheim am Albuch.

## METHODS

The 3D surfaces of the skull, the inner ear and the petrosal were gained from  $\mu$ CT scans. They were achieved creating the isosurface or using the segmentation editor of the software AVIZO® 7.0 and AMIRA® 6.2 respectively. The 3D surface

models are provided in .ply format, and can therefore be opened with a wide range of freeware.

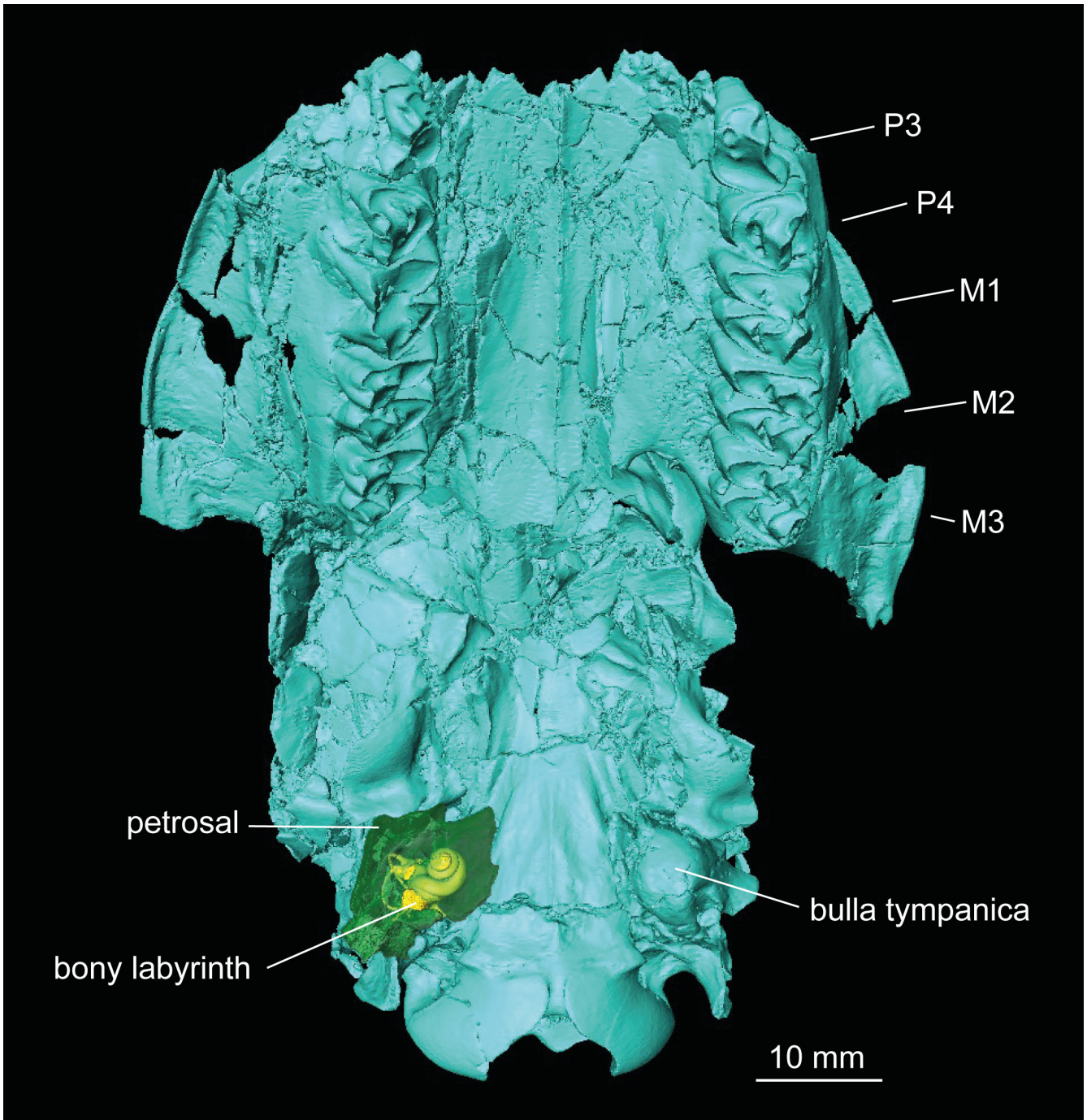
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**Figure 1.** 3D reconstruction of the holotype of *Micromeryx? eiselei* (skull NMB Sth. 833) from Steinheim am Albuch in ventral view (reconstructed right petrosal (dark green) and bony labyrinth (yellow) highlighted).