3D model related to the publication: A stem therian mammal from the Early Cretaceous of Germany

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Abstract
This contribution contains the 3D model described and figured in the following publication: Martin, T., Averianov, A. O., Schultz, J. A., & Schwermann, A. H. (2023). A stem therian mammal from the Lower Cretaceous of Germany. Journal of Vertebrate Paleontology, e2224848.

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Inv nr.	Description
M3#1257	3D surface model
M3#1258	µCT data

Table 1. Related 3D data of *Spelaeomolitor speratus* (WMNM P99101). Collection : LWL-Museum of Natural History, Westphalian State Museum and Planetarium, Münster, Germany.

INTRODUCTION

The present 3D Dataset contains a 3D model and a CT imagestack of the single fossil molar of *Spelaeomolitor speratus* (see Table 1) published in Martin et al. (2023). The specimen was collected in Early Cretaceous sediments from karst cave systems in the Busche quarry near Balve-Beckum in North Rhine-Westphalia, northwestern Germany. The tooth (Fig. 1) is the only remain of an Early Cretaceous tribosphenidan known from Central Europe to date. Given the sparse fossil record of stem tribosphenidans in the Lower Cretaceous of Europe, the specimen adds important new information and was therefore described in detail in Martin et al. (2023). Here we present the underlying CT data and a 3D model of the well-preserved lower molar from the Lower Cretaceous of Germany that was assigned to a new genus and species of stem tribosphenidan mammals.

METHODS

The lower molar WMNM P99101 was scanned using the 180 kV x-ray tube of the µCT device v|tome|x s, GE Sensing & Inspection Technologies GmbH phoenix|x-ray of the Institute for Geosciences, Universität Bonn, Germany. The scanning resolution was 2.2 µm and scan settings were 60 kV and 100 µA. An exposure time of 500 ms per capture was used. The device produces isotropic voxels (same pixel size in each dimension), and the single image size is 2048 × 2048 pixels. Avizo 8 (Thermo Fisher Scientific) was used for segmentation of the 3D surface model. Reduction of the number of triangles was done using Polyworks (InnovMetric) to fit the file size requirements of MorphoMuseuM.

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BIBLIOGRAPHY

Martin, T., Averianov, A. O., Schultz, J. A., & Schwermann, A. H. (2023). A stem therian mammal from the Lower Cretaceous of Germany. Journal of Vertebrate Paleontology, e2224848. https://doi.org/10.1080/02724634.2023.2224848

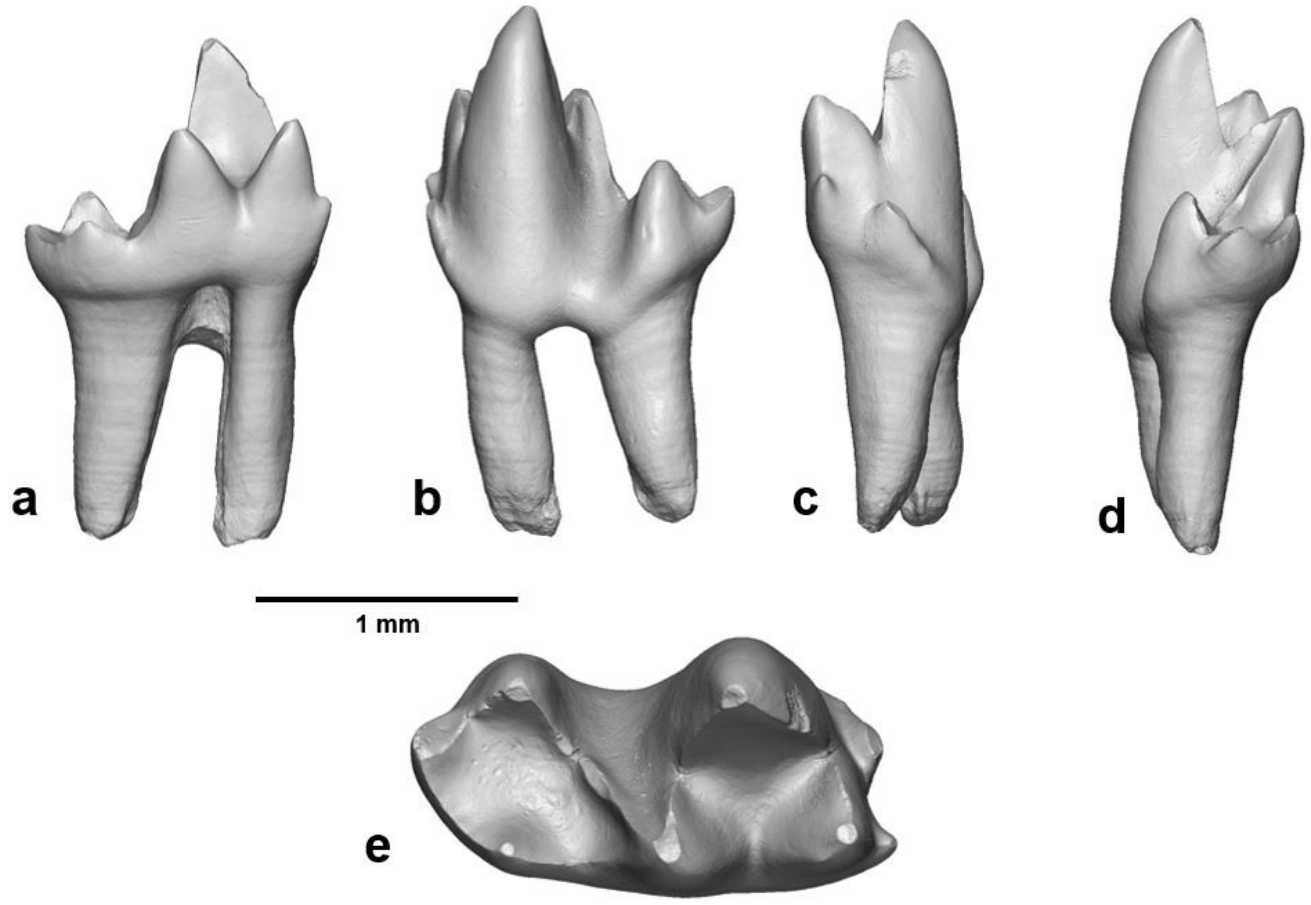

Figure 1. 3D surface model of the molar of *Spelaeomolitor speratus* (WMNM P99101) in different views: a) lingual, b) labial, c) mesial, d) distal, e) occlusal.

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