

3D data related to the publication: A new species of *Palaeopython* (Serpentes) and other extinct squamates from the Eocene of Dielsdorf (Zurich, Switzerland)

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Abstract

The present 3D Dataset contains the 3D models analyzed in the following publication: Georgalis, G. L., and T. M. Scheyer. A new species of *Palaeopython* (Serpentes) and other extinct squamates from the Eocene of Dielsdorf (Zurich, Switzerland). Swiss Journal of Geosciences (in press). <https://doi.org/10.1007/s00015-019-00341-6>

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Inv nr	Taxon	Description
PIMUZA/III631-M3#399	<i>Palaeopython helveticus</i>	Vertebra (surface)
PIMUZA/III631-M3#403	<i>Palaeopython helveticus</i>	Vertebra (μCT data)
PIMUZA/III634-M3#400	<i>Palaeopython helveticus</i>	Vertebra holotype (surface)
PIMUZA/III634-M3#404	<i>Palaeopython helveticus</i>	Vertebra holotype (μCT data)
PIMUZA/III636-M3#401	<i>Palaeopython helveticus</i>	Vertebra (surface)
PIMUZA/III636-M3#406	<i>Palaeopython helveticus</i>	Vertebra (μCT data)
PIMUZA/III234-M3#402	<i>Palaeovaranus</i> sp.	Isolated dentary (surface)
PIMUZA/III234-M3#405	<i>Palaeovaranus</i> sp.	Isolated dentary (μCT data)

Table 1. List of surface and μCT data included in this study. All specimen belong to the Palaeontological Institute and Museum of the University of Zurich.

INTRODUCTION

CT scanning was conducted in three different-sized snake vertebrae of *Palaeopython helveticus* sp. nov., including its holotype PIMUZ A/III 634, from Eocene fissure fills at Dielsdorf, near Zurich, Switzerland (e.g., Rosselet, 1991) in order to detect and evaluate ontogenetic variability in these fossils. In addition, a dentary of *Palaeovaranus* sp. was scanned to elucidate its internal histology and tooth implementation (Fig. 1 and Table 1).

METHODS

The bones (snake vertebrae; dentary) from Dielsdorf were scanned with a Nikon XTH 225 ST CT Scanner housed at the Anthropological Department of the University of Zurich. The micro-computed tomography scan of the vertebrae was taken with a voltage of 91 kV and a current of 345 μA, yielding a voxel size of 0.03758 mm, with no filter used. The dentary was scanned with a voltage of 162 kV, a current of 102 μA, yielding a voxel size of 0.01654 mm, again with no filter used. Reconstruction of the digital stack for virtual 3D reconstruction was achieved using VG Studio Max 2.2. The 3D surface models are provided in .ply format and the datasets in DICOM format, and can therefore be opened with a wide range of freeware.

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Georgalis, G. L., and T. M. Scheyer. A new species of *Palaeopython* (Serpentes) and other extinct squamates from the Eocene of Dielsdorf (Zurich, Switzerland). Swiss Journal of Geosciences (in press). <https://doi.org/10.1007/s00015-019-00341-6>

Rosselet, C., 1991. Die Fauna der Spaltenfüllungen von Dielsdorf (Eozän, Kanton Zürich). Documenta naturae 64, 1-177.



Figure 1. 3D models of the three snake vertebrae of *Palaeopython helveticus* sp. nov. (left to right: PIMUZ A/III 631, PIMUZ A/III 636, PIMUZ A/III 634 (holotype); Palaeontological Institute and Museum of the University of Zurich) in anterior view and the *Palaeovaranus* dentary (PIMUZ A/III 234) in lateral and medial view.