Dataset

3D model related to the publication: The endocranial anatomy of the stem turtle *Naomichelys speciosa* from the Early Cretaceous of North America

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Abstract
The present 3D Dataset contains the 3D model analyzed in the following publication: Paulina-Carabajal, A., Sterli, J., Werneburg, I., 2019. The endocranial anatomy of the stem turtle *Naomichelys speciosa* from the Early Cretaceous of North America. Acta Palaeontologica Polonica, https://doi.org/10.4202/app.00606.2019

Keywords: brain endocast, inner ear, micro computed tomography, morphology, Testudinata

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Model IDs	Description
FMNHPR273	skull and endocasts

Table 1. *Naomichelys speciosa* skull model from the Field Museum of Natural History, Chicago, USA

INTRODUCTION

Helochelydrids belong to stem Testudines and were present in North America and in Europe since the Tithonian and up to the Maastrichtian. *Naomichelys speciosa* HAY 1908 is the only known helochelydrid species present in North America, and it has been recognized in different localities ranging from the Aptian to the Campanian (Joyce et al. 2011). Its skeletal anatomy has been studied by Joyce et al. (2014) and Lautenschlager et al. (2018). The endocasts of the brain, cranial nerves and blood vessels, and the inner ear have been reconstructed and described in detail based on µCT-data (see Table 1 and Fig. 1) (Paulina-Carabajal et al. 2019). *N. speciosa* was a terrestrial turtle characterized by a large olfactory region suggesting that olfaction was an important sense of this species.

METHODS

The 3D surfaces were extracted semi-automatically within MIMICS 18.0 using the segmentation threshold selection tool. The 3D surface models are provided in .ply format, and can therefore be opened with a wide range of freeware.

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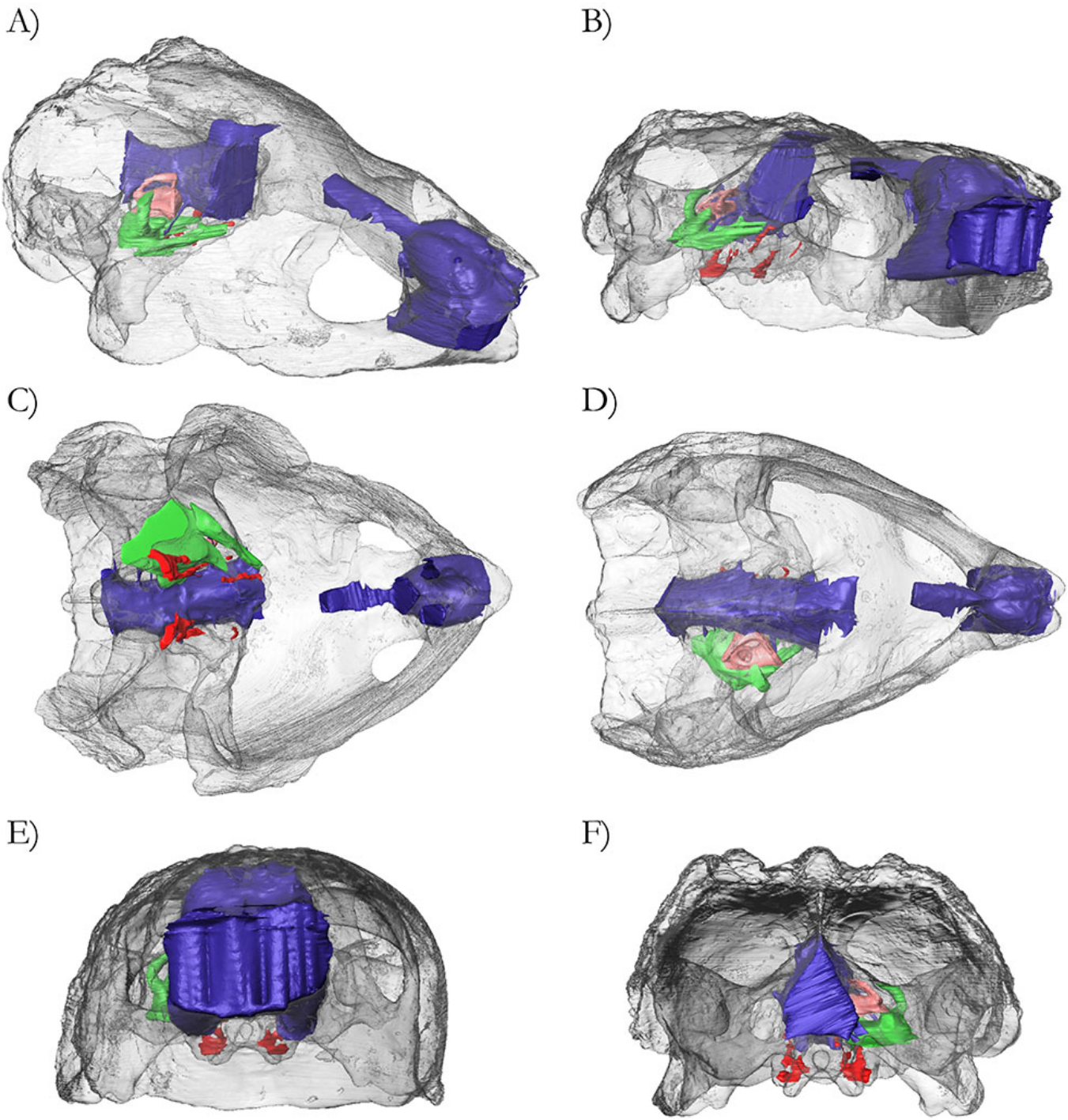

Figure 1. Skull and endocasts of the stem turtle *Naomichelys speciosa* (FMNH PR273; Field Museum of Natural History, Chicago, USA) in A) oblique anterodorsal, B) anterolateral, C) ventral, D) dorsal, E) anterior, and F) posterior view. Skull transparent. Blue, endocast of the brain, cranial nerves, and nasal cavity; red, blood vessel endocasts; green, endocast of the cavum acustico-jugulare; pink, cast of inner ear; yellow. Skull length: 129 mm.

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