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3D models related to the publication: The world's largest worm lizard: a new giant trogonophid (Squamata: Amphisbaenia) with extreme dental adaptations from the Eocene of Chambi, Tunisia

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Georgios Georgalis, Krister Smith, Laurent Marivaux, Anthony Herrel, El Mabrouk Essid, et al.. 3D models related to the publication: The world's largest worm lizard: a new giant trogonophid (Squamata: Amphisbaenia) with extreme dental adaptations from the Eocene of Chambi, Tunisia. MorphoMuseum, 2024, 10 (3), pp.e245. 10.18563/journal.m3.245 . hal-04797512

HAL Id: hal-04797512

<https://hal.science/hal-04797512v1>

Submitted on 22 Nov 2024

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3D models related to the publication: "The world's largest worm lizard: a new giant trogonophid (Squamata: Amphisbaenia) with extreme dental adaptations from the Eocene of Chambi, Tunisia"

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Abstract

This contribution contains the 3D models described and figured in the following publication: Georgalis, G.L., K.T. Smith, L. Marivaux, A. Herrel, E.M. Essid, H. Khayati Ammar, W. Marzougui, R. Temani and R. Tabuce. 2024. The world's largest worm lizard: a new giant trogonophid (Squamata: Amphisbaenia) with extreme dental adaptations from the Eocene of Chambi, Tunisia. *Zoological Journal of the Linnean Society*. <https://doi.org/10.1093/zoolinnean/zlae133>

Keywords: Amphisbaenia, cranial anatomy, North Africa, Paleogene, size

Submitted: 10/09/2024, published online: 22/11/2024. <https://doi.org/10.18563/journal.m3.245>

INTRODUCTION

We conducted micro-CT scanning in several maxillae, dentaries, and premaxillae (including the holotype and paratype specimens) of *Terastiodontosaurus marcelosanchezi* from the Eocene of Chambi, Tunisia, plus the holotype dentary of *Todrasaurus gheerbranti* from the Paleocene of Adrar-Mgorn 1, Morocco, and we here present their surface 3D models (Table 1 and Fig. 1)

METHODS

The specimens were imaged using high-resolution microtomography (μ CT) with a μ CT-scanning station EasyTom 150 / Rx Solutions (Montpellier RIO Imaging [MRI], ISE-M, Montpellier, France). Image segmentation and 3D virtual restoration of the fossil specimens was performed with MorphoDig software (v. 1.5.3; Lebrun 2018), Avizo.Lite 2019.4 (Visualization Sciences Group) software, 3D Slicer (Fedorov et al. 2012), and VG Studio MAX (v. 2023.1). All virtually restored 3D models are provided in .ply format.

ACKNOWLEDGEMENTS

Grant sponsor: Research project no. 2023/49/B/ST10/02631 financed by the National Science Center of Poland (Narodowe Centrum Nauki) to GLG. Grant sponsor: ANR-ERC PALASI-AFRICA (ANR-08-JCJC-0017). 3D data acquisitions were

performed using the μ -CT facilities of the MRI platform member of the national infrastructure France-BioImaging supported by the French National Research Agency (ANR-10-INBS-04, «Investments for the future»), and of the Labex CEMEB (ANR-10-LABX-0004) and NUMEV (ANR-10-LABX-0020)

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Lebrun, R. 2018. MorphoDig, an open-source 3D freeware dedicated to biology. IPC5, Paris.

Inv nr.	Taxon	Description	Collection
ONM CBI-1-645	<i>Terastiodontosaurus marcelosanchezi</i>	Holotype right maxilla	MONM, Tunis
ONM CBI-1-646	<i>Terastiodontosaurus marcelosanchezi</i>	Paratype left dentary	MONM, Tunis
ONM CBI-1-648	<i>Terastiodontosaurus marcelosanchezi</i>	Left maxilla	MONM, Tunis
ONM CBI-1-649	<i>Terastiodontosaurus marcelosanchezi</i>	Right maxilla	MONM, Tunis
ONM CBI-1-650	<i>Terastiodontosaurus marcelosanchezi</i>	Right maxilla	MONM, Tunis
ONM CBI-1-651	<i>Terastiodontosaurus marcelosanchezi</i>	Right maxilla	MONM, Tunis
ONM CBI-1-653	<i>Terastiodontosaurus marcelosanchezi</i>	Left maxilla	MONM, Tunis
ONM CBI-1-654	<i>Terastiodontosaurus marcelosanchezi</i>	Right maxilla	MONM, Tunis
ONM CBI-1-657	<i>Terastiodontosaurus marcelosanchezi</i>	Left dentary	MONM, Tunis
ONM CBI-1-658	<i>Terastiodontosaurus marcelosanchezi</i>	Premaxilla	MONM, Tunis
ONM CBI-1-659	<i>Terastiodontosaurus marcelosanchezi</i>	Left dentary	MONM, Tunis
ONM CBI-1-660	<i>Terastiodontosaurus marcelosanchezi</i>	Right dentary	MONM, Tunis
ONM CBI-1-661	<i>Terastiodontosaurus marcelosanchezi</i>	Left dentary	MONM, Tunis
ONM CBI-1-668	<i>Terastiodontosaurus marcelosanchezi</i>	Left dentary	MONM, Tunis
ONM CBI-1-670	<i>Terastiodontosaurus marcelosanchezi</i>	Left dentary	MONM, Tunis
ONM CBI-1-672	<i>Terastiodontosaurus marcelosanchezi</i>	Premaxilla	MONM, Tunis
ONM CBI-1-711	<i>Terastiodontosaurus marcelosanchezi</i>	Premaxilla	MONM, Tunis
UM THR 407	<i>Todrasaurus gheerbranti</i>	Holotype left dentary	University Montpellier, ISEM, Montpellier

Table 1. List of 3D models. Collections: MONM: Palaeontological collections of the Museum of the Office National des Mines, Tunis, Tunisia; University of Montpellier, Institut des Sciences de l'Évolution de Montpellier, France.

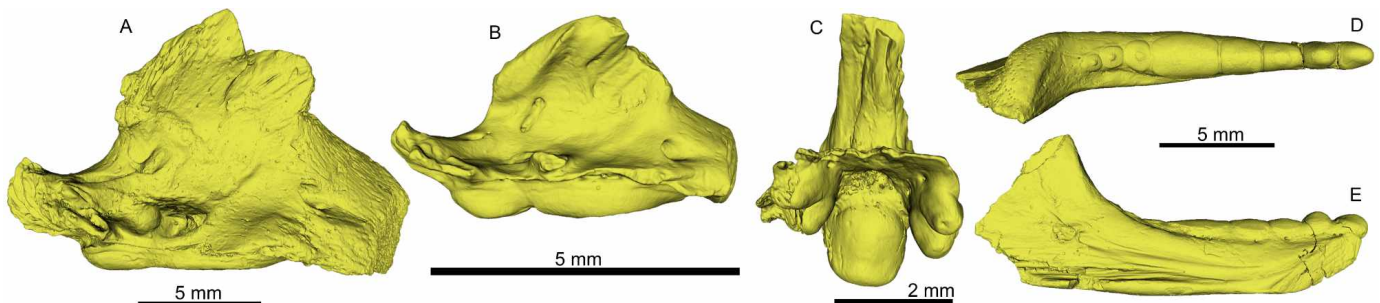


Figure 1. 3D model images of specimens of the trogonophid amphisbaenian *Terastiodontosaurus marcelosanchezi* from the Eocene of Chambi, Tunisia. A) holotype right maxilla (ONM CBI-1-645) in medial view; B) right maxilla (ONM CBI-1-649) in medial view; premaxilla (ONM CBI-1-711) in posterior view; D–E) paratype left dentary (ONM CBI-1-646) in dorsal (D) and medial (E) views. All these specimens pertain to the Palaeontological collections of the Museum of the Office National des Mines, Tunis, Tunisia.