

3D models related to the publication: A new prozostrodonian cynodont (Eucynodontia, Probainognathia) from the Upper Triassic of southern Brazil

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Abstract

The present 3D Dataset contains the 3D models and CT-Scan slices of the lower jaws and teeth analyzed in "A new prozostrodonian cynodont (Eucynodontia, Probainognathia) from the Upper Triassic of southern Brazil".

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Inv nr.	Description
CAPPA/UFSM0262_M3#546	3D surface of left lower jaw and cheek teeth
CAPPA/UFSM0262_M3#547	µCT data
CAPPA/UFSM0208_M3#548	3D surface of right lower jaw
CAPPA/UFSM0208_M3#549	µCT data

Table 1. List of models of *Agudotherium gassenae*. Collection: Centro de Apoio à Pesquisa Paleontológica da Quarta Colônia (CAPPA), Universidade Federal de Santa Maria, Brazil

INTRODUCTION

Agudotherium gassenae Stefanello et al. (2020) is a new non-mammaliaform prozostrodonian cynodont found in Brazil. The new taxon is described based on two lower jaws found in Upper Triassic strata from southern Brazil that share a combination of features unknown in other Carnian and Norian non-mammaliaform cynodonts. The new probainognathian cynodont furnishes new evidence on the knowledge of the adaptative radiation of small-sized prozostrodonians in western Gondwana that occurred during the Late Triassic and led to the emergence of several groups, including Mammaliaformes. This contribution contains the 3D models and µCT-Scan slices of the lower jaws and teeth of *Agudotherium gassenae* (Fig. 1 and table 1).

METHODS

The lower jaws of CAPPA/UFSM 0262 (holotype) and CAPPA/UFSM 0208 (Centro de Apoio à Pesquisa Paleontológica da Quarta Colônia, Universidade Federal de Santa Maria) were scanned using a micro-CT Skyscan 1173 at the Laboratório de Sedimentologia e Petrologia (LASEPE), Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS), Porto Alegre, southern Brazil. The analysis (parameters: voltage 85 kV; amperage 65 µA; pixel size 15,166 µm) generated a total of 3443 slices for

CAPPA/UFSM 0262, and 3696 slices (parameters: voltage 80 kV; amperage 100 µA; pixel size 14,108 µm) for CAPPA/UFSM 0208. The tomograms were imported into Mimics Medical 21.0 for virtual reconstruction and virtual segmentation of structures. The 3D surface models are provided in .ply format, and can therefore be opened with a wide range of freeware. The slices accompanying this publication were binned and converted to DICOM, resulting in 1578 slices, with pixel size 0.0282177 mm (CAPPA/UFSM 0262) and 1768 slices, with pixel size 0.0303324 mm (CAPPA/UFSM 0208).

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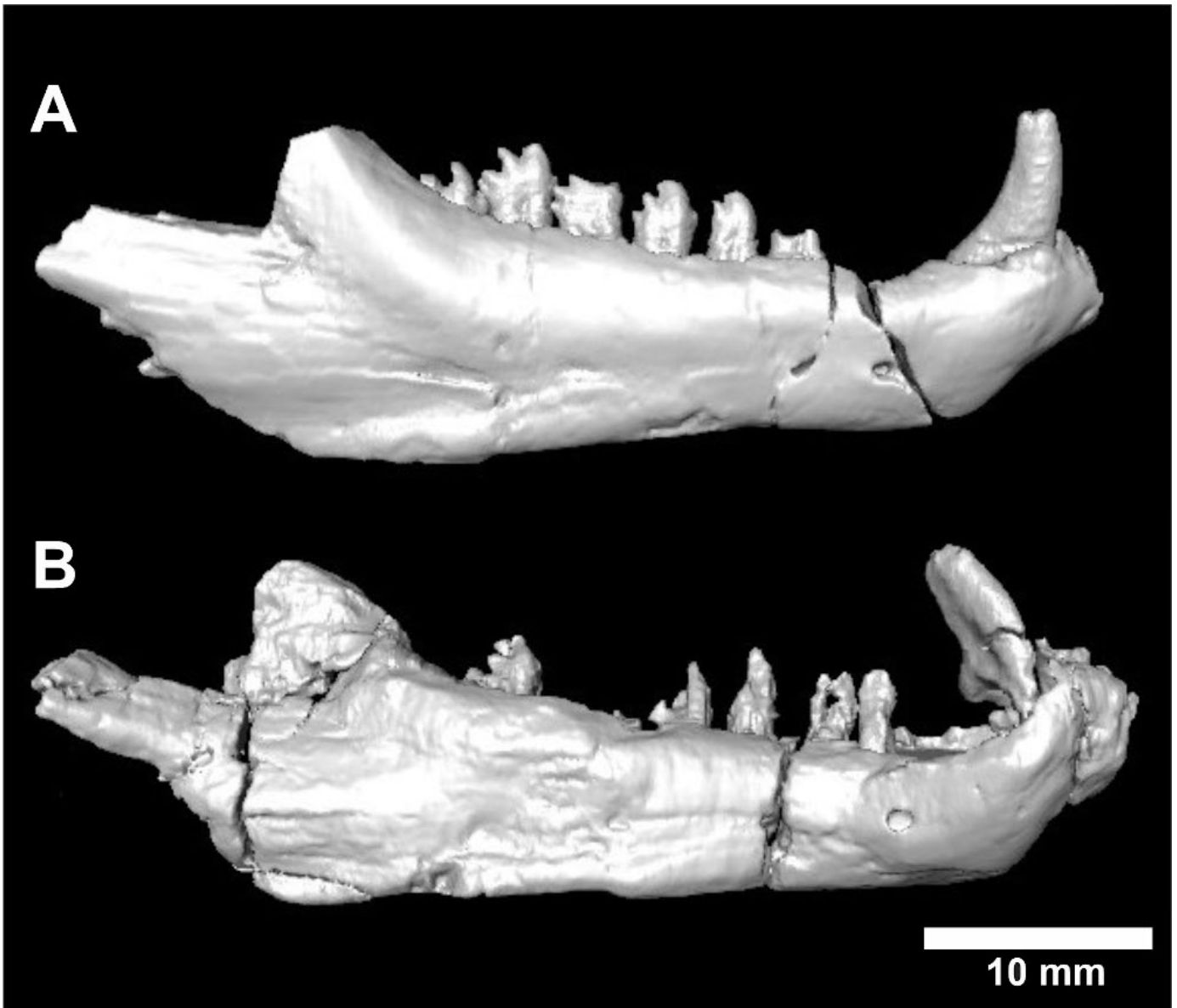


Figure 1. 3D models of the lower jaws and teeth of *Agudotherium gassenae* from the Upper Triassic of southern Brazil. **A:** Left lower jaw (reversed, CAPP/UFMS 0262) in lateral view. **B:** right lower jaw (CAPP/UFMS 0208) in lateral view.