Dataset

3D models related to the publication: Redescription, taxonomic revaluation, and phylogenetic affinities of *Proterochampsa nodosa* (Archosauriformes: Proterochampsidae), early Late Triassic of Candelaria Sequence (Santa Maria Supersequence)

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Abstract

The present 3D dataset contains the 3D models of the holotype of *Proterochampsa nodosa* that were built and analysed in “Redescription, taxonomic revaluation, and phylogenetic affinities of *Proterochampsa nodosa* (Archosauriformes: Proterochampsidae), early Late Triassic of Candelaria Sequence (Santa Maria Supersequence)”.

Keywords: Archosauriformes, Late Triassic, osteology, Proterochampsia, taxonomy

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Inv nr.	Description
MCP1694-PV	Skull and mandible

Table 1. Related model of *Proterochampsa nodosa* belonging to the collections of the Escola de Ciências da Saúde e da Vida, Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS).

INTRODUCTION

Proterochampsidae is an extinct and small clade of crocodile-like non-archosaurian archosauriforms endemic to the Middle to Late Triassic of South America. Representatives of this group of animals are restricted to strata from the Ishigualasto and Chañares Formations of Argentina, and to the Santa Maria Supersequence of southern Brazil. Although scarce, the presence of proterochampsids in the Santa Maria Supersequence is important to the faunal diversity and chronological correlation of Brazil’s sedimentary deposits with Argentina. The taxon *Proteochampsa nodosa* (MCP 1694-PV), from the Candelaria Sequence (Late Triassic) of southern Brazil, was reassessed in the recent study by Simão-Oliveira et al. (2022). This work was set to re-describe and discuss the problems in the taxonomy of *Proterochampsa nodosa* and the genus *Proterochampsa* by means of CT-scanning and digital modelling of *Proterochampsa nodosa* (MCP 1694-PV). The resulting 3D models of the specimen that were analysed in the work are illustrated here (see Table 1 and Fig. 1.; Simão-Oliveira et al., 2022).

METHODS

MCP 1694-PV was subjected to medical CT-scan at the Instituto do Cérebro (InsCer) from the Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS), Porto Alegre, Brazil. Seven distinct scans were performed under different protocols with varying parameters of kv and mA, in order to test the better resolution outcomes. The scans under 120 kv / 300 mA and 140 kv / 255 mA displayed greater image detail and were the ones utilized for analysis, 3D segmentation and anatomic description. The CT-scans resulted in 739 tomographic slices, each with a voxel size of 0.625 mm. The scans were digitally treated in the software AvizoTM and the resulting 3D models were later exported as .stl files to be refined in the software Geomagic Studio and visualized in DesignSpark Mechanical 5.0. See Simão-Oliveira et al. (2022) for more details on the fossil condition and general anatomy of *Proterochampsa nodosa* (MCP 1694-PV).

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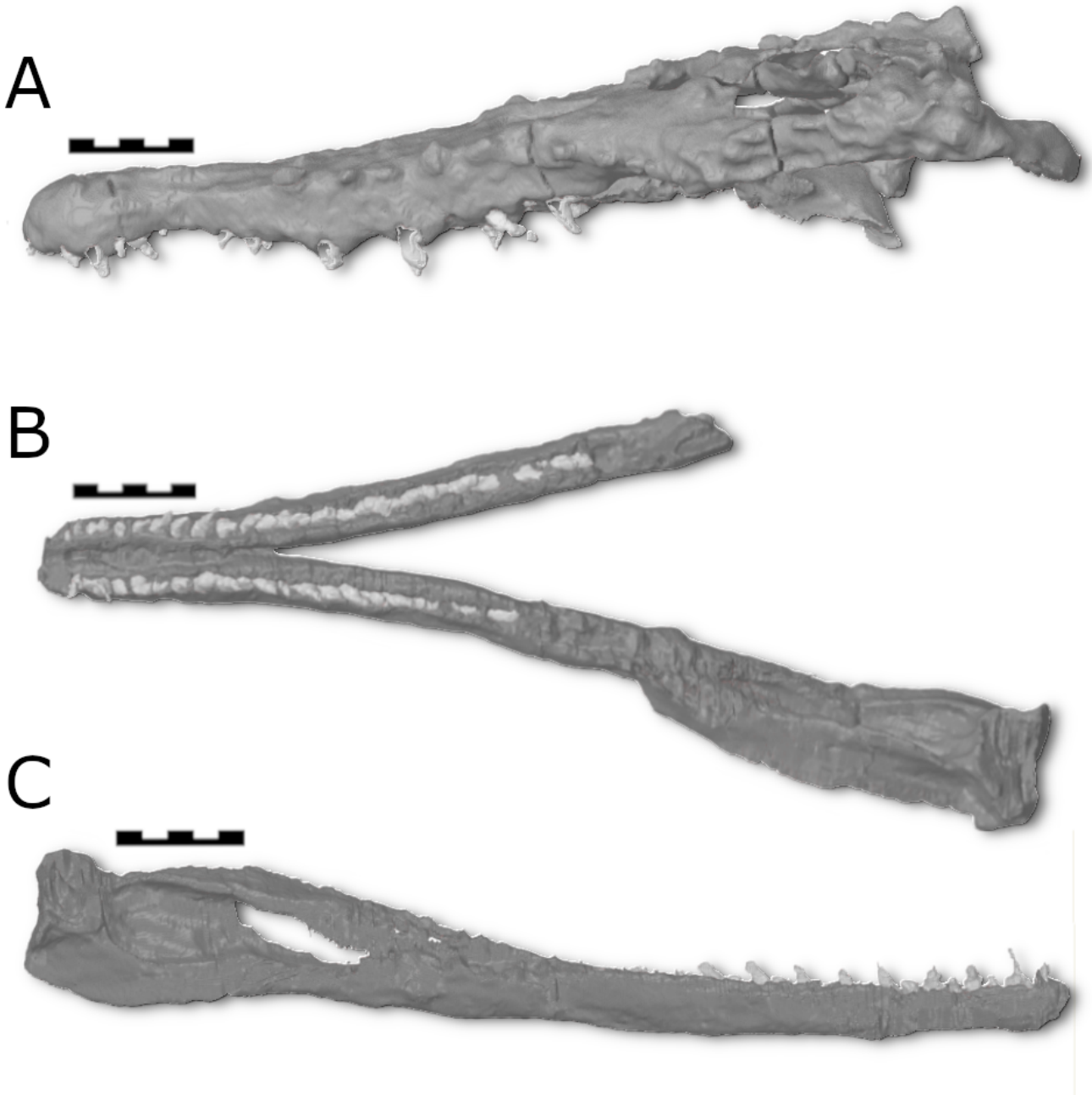

Figure 1. 3D models of *Proterochampsa nodosa* (MCP 1694-PV). A, skull in left lateral view; B, mandible in dorsal view; C, left mandibular ramus in medial view. Scales: 50 mm.

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