morphoMuseum

Dataset

3D model related to the publication: Extreme Cranial Asymmetry in Extinct Benthic Feeding Sperm Whales

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Abstract

This contribution contains the 3D model described and figured in the following publication: Benites-Palomino, A., Sánchez-Villagra, M. R., Paolucci, F., Vélez-Juarbe, J., Collareta, A., Alfsen, A., Dooley, A., Omura, D., Urbina, M., Salas-Gismondi, R., & Aguirre-Fernández, G. (2026). *"Extreme cranial asymmetry in extinct benthic feeding sperm whales"* . Communications Biology. https://doi.org/10.1038/s42003-026-11074-2

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Inv nr.	Taxon	Description
MUSM 972	*Scaphokogia huachafo*	Surface 3D model of MUSM 972

Table 1. Related specimen. Collection: Departamento de Paleontologia de Vertebrados, Museo de Historia Natural, Universidad Nacional Mayor de San Marcos UNMSM.

INTRODUCTION

This dataset features the skull of a mostly complete adult specimen of the Miocene sperm whale *Scaphokogia huachafo* sp. nov. described in Benites-Palomino et al. (2026). This three-dimensional model (see Fig. 1 and table 1) complemented direct specimen observations and was used to assess the cranial morphology of the new species. In addition, the digital model served as the basis for geometric morphometric and cranial asymmetry analyses, enabling comparisons with extant and extinct cetaceans.

METHODS

Textureless surface scans were acquired using an Artec Eva structured-light scanner together with Artec Studio 12. The resulting three-dimensional surface models were exported in .ply format, preserving the external morphology of the specimens. This widely supported file format can be opened and visualized using a broad range of freely available software.



Figure 1. *Scaphokogia huachafo* sp nov. MUSM 972 holotype skull in anterolateral view.

BIBLIOGRAPHY

Benites-Palomino, A., Sánchez-Villagra, M. R., Paolucci, F., Vélez-Juarbe, J., Collareta, A., Alfsen, A., Dooley, A., Omura, D., Urbina, M., Salas-Gismondi, R., & Aguirre-Fernández, G. (2026). *Extreme cranial asymmetry in extinct benthic feeding sperm whales*. *Communications Biology*. https://doi.org/10.1038/s42003-026-11074-2