morphoMuseum

Dataset

3D model related to the publication: A new gigantic carnivore (Carnivora, Amphicyonidae) from the late middle Miocene of France

Bastien Mennecart[1]*, Jérémy Tissier[2], Jean-François Lesport[3], Antoine Heitz[1], Floréal Solé[4]

[1] *Naturhistorisches Museum Basel, Augustinergasse 2, 4001 Basel, Switzerland*
[2] *American Museum of Natural History, New York, USA, 10024*
[3] *Private location, Sainte-Hélène, France, 33480*
[4] *Royal Belgian Institute of Natural Sciences, Brussels, Belgium, 1000*
***Corresponding author**: mennecartbastien@gmail.com

Abstract
The present 3D Dataset contains the 3D model analyzed in Solé F., Lesport J.-F., Heitz A., and Mennecart B. mino revision. A new gigantic carnivore (Carnivora, Amphicyonidae) from the late middle Miocene of France. PeerJ.

Keywords: bear dog, mandible, surface scan, *Tartarocyon cazanavei*

Submitted:2021-11-25, published online:2022-05-10. https://doi.org/10.18563/journal.m3.163

Inv nr.	Description
MHNBx2020.20.1	Surface scan (ply) and texture (png) of the holotype specimen of *Tartarocyon cazanavei*

Table 1. Related 3D model. Collection: Natural History Museum Bordeaux, France.

INTRODUCTION

Amphicyonidae, also known as bear dogs, are a family of extinct carnivorous mammals found in the old and new worlds. During the Miocene, members of this family reached impressive sizes, being more than 200kg. The evolution of this family in Europe has been explored by Viranta (1996), but recent paleontological findings (e.g. Morales et al. 2019, 2021) may give a new light on the crepuscule of this family. Solé and colleagues (mino revision) described a nicely preserved mandible of a new amphicyonid from France named *Tartarocyon cazanavei* (Table 1 and Fig. 1). Beside its geographical (Northern margin of the Pyrenean Mountains) and temporal (Serravalian, late middle Miocene) aspects, this taxon displays untypical morphology of the p4 confirming the attribution to a new genus (Fig. 1). To provide access to this material to a maximum of researchers, the holotype of *Tartarocyon cazanavei* MHNBx 2020.20.1 has been surface scanned and the 3D model is on open access display. *Tartarocyon* helps for better understanding the evolutionary dynamism of the European Amphicyonidae, dominated by large hypercarnivorous and bone crushing carnivores during their latest stages, while the group was more diversified in size and ecology earlier in the Miocene.

METHODS

The surface scans have been processed using an Artec Space Spider structured-light scanner and reconstructed with Artec Studio 10 Professional. The resulting 3D surface model is provided in .ply format, and can therefore be opened with a wide range of freeware. A texture file (.png) accompanies the 3D model for a better rendering. The acronym MHNBx stands for the Natural History Museum of Bordeaux (France).

ACKNOWLEDGEMENTS

Our thanks go to the Cazanave family and particularly to Alain, owner of the Carré farm for his welcome, authorization and various information. Laurent Charles and Nathalie Mémoire, curators of Museum Natural History of Bordeaux are also thanked.

BIBLIOGRAPHY

Morales, J., Fejfar, O., Heizmann, E., Wagner, J., Valenciano, A., Abella, J., 2019. A new Thaumastocyoninae (Amphicyonidae, Carnivora) from the early Miocene of Tuchořice, the Czech Republic. Fossil Imprint 75(3–4), 397–411. https://doi.org/10.2478/if-2019-0025

Morales, J., Abella, J., Sanisidro, O., Valenciano, A., 2021. *Ammitocyon kainos* gen. et sp. nov., a chimerical amphicyonid (Mammalia, Carnivora) from the late Miocene carnivore traps of Cerro de los Batallones (Madrid, Spain). Journal of Systematic Palaeontology 19(5), 393–415. https://doi.org/10.1080/14772019.2021.1910868

Solé F., Lesport J.-F., Heitz A., and Mennecart B. mino revision. A new gigantic carnivore (Carnivora, Amphicyonidae) from the late middle Miocene of France. PeerJ. https://doi.org/10.7717/peerj.13457

Viranta, S. 1996. European Miocene Amphicyonidae –taxonomy, systematics and ecology. Acta Zoologica Fenica 204, 1–61.

Figure 1. 3D surface scan of the holotype (MHNBx 2020.20.1) of *Tartarocyon cazanavei* nov. gen. & sp. from Sallespisse (MN7/8, Southwest France), in occlusal (A), lingual (B), and labial (C) views. Scale bare is 5 cm.

ISSN: 2274-0422