

3D models related to the publication: Neogene sloth assemblages (Mammalia, Pilosa) of the Cocinetas Basin (La Guajira, Colombia): implications for the Great American Biotic Interchange

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Abstract

The present 3D Dataset contains the 3D models analyzed in Neogene sloth assemblages (Mammalia, Pilosa) of the Cocinetas Basin (La Guajira, Colombia): implications for the Great American Biotic Interchange. Palaeontology. doi: [10.1111/pala.12244](https://doi.org/10.1111/pala.12244).

Keywords: Great American Biotic Interchange, Neotropics, palaeobiodiversity, Tardigrada, Ware Formation

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Model IDs	Taxon	Short description
M3#106_MUN STRI 12924	cf. <i>Nothrotherium</i>	Fragmentary basicranium with posterior portion of the skull roof.
M3#107_MUN STRI 16535	Scelidotheriinae gen. et sp. indet.	Complete left ulna.

Table 1. List of models

INTRODUCTION

We here present the surface models of two specimens of sloths (Mammalia, Tardigrada) coming from the Late Pliocene Ware Formation (Cocinetas Basin, La Guajira, Colombia, see Table 1). Along with three additional sloth taxa found in the same Formation, these specimens document the great diversity of this Neotropical locality. Furthermore, they represent a sloth assemblage from a locality just a few hundred thousand years older than the classically recognized first main pulse of the Great American Biotic interchange, that is located few hundred kilometers away from the Isthmus of Panama, the most likely route of migration of terrestrial taxa. These specimens are hence important in the understanding of this major paleobiogeographic event.

METHODS

The fossil specimens were scanned with an Artec Spider 3D using the geometry and texture tracking setting and processed with Artec Studio 9 Education Software (Artec 3D). The 3D surfaces scans were aligned semi-automatically with Artec

Studio 9. The aligned scans were converted into a single coordinate system using the Global Registration function (texture and geometry) and then fused into a single 3D model with the Fast Fusion function of Artec Studio. The 3D surface models are provided in .ply format, and can therefore be opened with a wide range of freeware.

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