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3D model related to the publication: Billet G., Germain D., Ruf I., Muizon C. de, Hautier L. 2013. The inner ear of *Megatherium* and the evolution of the vestibular system in sloths.

**BILLET G.**, **GERMAIN D.**, **RUF I.**, **MUIZON C. de** and **HAUTIER L.**

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**Abstract**: This contribution contains the 3D model described and figured in the following publication: Billet G., Germain D., Ruf I., Muizon C. de, Hautier L. 2013. The inner ear of *Megatherium* and the evolution of the vestibular system in sloths. Journal of Anatomy 123:557-567

**Key words**: bony labyrinth, *Megatherium*, sloth

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**TECHNICAL AND SPECIMEN-RELATED PARAMETERS**

<table>
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<tr>
<th>Specimen inventory number</th>
<th>MNHN.F.PAM 276</th>
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<tr>
<td>Species</td>
<td><em>Megatherium americanum</em></td>
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<td>Repository institution</td>
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<td>3D data acquisition institution</td>
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<td>3D data acquisition operator</td>
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<td>Voxel size of original dataset</td>
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**Model short description**: The specimen corresponds to a virtually reconstructed bony labyrinth of the right inner ear of the skull MNHN-F-PAM 276, attributed to the extinct giant ground sloth *Megatherium americanum*. The fossil comes from Pleistocene deposits at Rio Salado (Prov. Buenos Aires, Argentina). The bony labyrinth of *Megatherium* shows semicircular canals that are proportionally much larger than in the modern two-toed and three-toed sloths. The cochlea in *Megatherium* shows 2.5 turns, which is a rather high value within Xenarthra. Overall, the shape of the bony labyrinth of *Megatherium* resembles more that of extant armadillos than that of its extant sloth relatives.

**METHODS**

The inner ear was extracted within MIMICS (Materialize NV), using the segmentation threshold selection tool. The 3D model is provided in .ply format, and as such can be opened with a wide range of freeware.

**ACKNOWLEDGEMENTS**

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**BIBLIOGRAPHY**