

## 3D models related to the publication: Morphological and functional changes in the vertebral column with increasing aquatic adaptation in crocodylomorphs

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**Abstract:** This contribution contains the 3D models described and figured in the following publication: Molnar, JL, Pierce, SE, Bhullar, B-A, Turner, AH, Hutchinson, JR (2015). Morphological and functional changes in the crocodylomorph vertebral column with increasing aquatic adaptation. Royal Society Open Science. [doi: 10.1098/rsos.150439](https://doi.org/10.1098/rsos.150439)

**Key words:** crocodylomorph, vertebrae, axial skeleton, stiffness, range of motion, aquatic adaptation

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### SPECIMEN LIST

M3 id(s) of 3D model(s)	Species	Repository institution	3D data acquisition institution	3D data acquisition method	3D Data acquisition facility model	Voxel size of original 3D dataset	3D data acquisition operator
<a href="#">M3#45_NHM-PV R 7562</a>	<i>Terrestrisuchus gracilis</i>	Natural History Museum, London, UK	Natural History Museum, London, UK	X-ray $\mu$ CT	Metris X-Tek HMX ST 225	0.06x0.06x0.06 (mm)	F. Ahmed, J. Molnar
<a href="#">M3#44_AMNH-VP 3024</a>	<i>Protosuchus richardsoni</i>	American Museum of Natural History, New York, USA	Stony Brook University, New York, USA	X-ray CT	LightSpeed VCT	0.39x0.39x0.39 (mm)	A. Turner
<a href="#">M3#46_NHM-PV OR 32598</a>	<i>Pelagosaurus typus</i>	Natural History Museum, London, UK	Natural History Museum, London, UK	X-ray $\mu$ CT	Metris X-Tek HMX ST 225	0.08x0.08x0.08 (mm)	F. Ahmed, J. Molnar
<a href="#">M3#47_NHM-PV R 2054</a>	<i>Metriorhynchus moreli</i>	Natural History Museum, London, UK	Royal Veterinary College, London, UK	X-ray CT	GE Lightspeed	0.36x0.36x0.36 (mm)	JR. Hutchinson
<a href="#">M3#48_FNC0</a>	<i>Crocodylus niloticus</i>	Royal Veterinary College, London, UK	Royal Veterinary College, London, UK	X-ray CT	GE Lightspeed	0.41x0.41x0.41 (mm)	JR. Hutchinson

J. Molnar is the author of all derived 3D surface models

## **METHODS**

The 3D surfaces were extracted semi-automatically within Materialise Mimics (Materialise Inc. ([www.materialise.com/mimics](http://www.materialise.com/mimics)); Leeuwen, Belgium) using the segmentation threshold selection tool. The 3D surface models are provided in .stl format, and can therefore be opened with a wide range of freeware.

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## **BIBLIOGRAPHY**

Molnar, J. L., Pierce, S. E., Bhullar, B.-A., Turner, A. H., Hutchinson, J. R., 2015. Morphological and functional changes in the crocodylomorph vertebral column with increasing aquatic adaptation. Royal Society Open Science. [doi: 10.1098/rsos.150439](https://doi.org/10.1098/rsos.150439).