

A NEW 3D PRESERVED ARTICULATED PARTIAL SKELETON OF NEOSUCHIA FROM THE UPPER JURASSIC OF PORTUGAL

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Neosuchians are a worldwide-distributed clade of crocodylomorphs very abundant in most semi-aquatic ecosystems, being Atoposauridae and Goniopholididae one of the most common taxa during the Jurassic–Late Cretaceous of Laurasia. Here, we describe an anatomically associated and 3D preserved partial skeleton of a small neosuchian Crocodylomorph from the Upper Jurassic of Porto das Barcas (Portugal). This new specimen represents one of the scarce 3D articulated skeletons of Neosuchia recovered in the fossil record from this time interval.

The skeleton consists of twelve dorsal osteoderms, three indeterminate osteoderms, five dorsal vertebrae, four thoracic ribs, the distal part of the left femur and proximal parts of the left tibia and fibula. The dermal armour is the best-preserved element. It consists of two rows of paired osteoderms, being rectangular in outline and up to twice as wide in a mediolateral direction as they are long. Each osteoderm presents its lateral margin ventrally tilted and an anterior process laterally placed for a peg-and-groove articulation. All these features are present in crocodylomorphs with closed paravertebral armour bracing system, such as some protosuchians, sphenosuchians, notosuchians, goniopholidids and atoposaurids. Most of the characters observed in this specimen are congruent with *Theriosuchus* or a related form, nevertheless, its belonging to a juvenile goniopholidid cannot be ruled out. A further CT scan of this specimen will allow us a better taxonomic assignment and the possibility to perform biomechanical analyses to test previous hypotheses related with the axial bracing mechanisms and locomotion of this group of crocodylomorphs.

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