

## **Taxonomic and stratigraphic update of the material historically attributed to *Megalosaurus* from Portugal**

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*Acta Palaeontologica Polonica* 69 (2), 2024: 127-171 doi:<https://doi.org/10.4202/app.01113.2023>

The first paleontological works on Mesozoic vertebrates from Portugal, carried out from the end of the 19th and the first half of the 20th century, provided the discovery of significant collections of vertebrate fossils. These collections are particularly relevant because they include several specimens collected from different regions of the Lusitanian Basin (some of the sites are currently inaccessible), whose fossil record is poorly known. Theropod remains are relatively scarce and generally consist of fragmentary material, mostly assigned to the megalosaurid *Megalosaurus* from the Middle Jurassic of England, the first dinosaur to be named and a “wastebasket” taxon used by many scientists to identify theropod material. The studied fossils mostly consist of isolated teeth and vertebrae collected from Upper Jurassic levels of the coastal region, with also some material from Lower and Upper Cretaceous strata from the central and northern sectors of the Lusitanian Basin. Here specimens attributed to *Megalosaurus* from different Portuguese institutions are reviewed and their taxonomic affinity and stratigraphic context are updated. Most specimens actually belong to different theropod groups, including several isolated teeth from different Upper Jurassic localities here assigned to *Ceratosaurus*, *Torvosaurus*, and *Allosaurus*, as well as an isolated tooth from the Lower Cretaceous that is attributed to an indeterminate allosauroid. Other theropod remains consist mostly of vertebral fragments of indeterminate avetheropods and allosauroids. Elements of other dinosaur groups are also represented, including a few vertebrae here referred to stegosaurians and iguanodontians, as well as a vertebra and some appendicular remains attributed to sauropods. Two vertebrae assigned to thalattosuchians were also identified. The study of this collection allows to better characterize the diversity of Late Jurassic dinosaur faunas from different areas of the Lusitanian Basin and provides some data on the poorly known Cretaceous fossil record of theropods from Portugal.

**Key words:** Crocodylomorpha, Dinosauria, Thalattosuchia, Stegosauria, Iguanodontia, Sauropoda, Eusauropoda, Titanosauriformes, Theropoda, Ceratosauria, Megalosauridae, Avetheropoda, Allosauroida, Lusitanian Basin, Upper Jurassic, Cretaceous.

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