Evidence of two lineages of metriorrhynchid crocodylomorphs in the Lower Cretaceous of the Czech Republic

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Metriorrhynchid crocodylomorphs were an important component in shallow marine ecosystems during the Middle Jurassic to Early Cretaceous in the European archipelago. While metriorrhynchids are well known from western European countries, their central and eastern European record is poor and usually limited to isolated or fragmentary specimens which often hinders a precise taxonomic assignment. However, isolated elements such as tooth crowns, have been found to provide informative taxonomic identifications. Here we describe two isolated metriorrhynchid tooth crowns from the upper Valanginian (Lower Cretaceous) of the Štramberk area, Czech Republic. Our assessment of the specimens, including multivariate analysis of dental measurements and surface enamel structures, indicates that the crowns belong to two distinct geosaurin taxa (Plesiosuchina? indet. and Torvoneustes? sp.) with different feeding adaptations. The specimens represent the first evidence of Metriorrhynchidae from the Czech Republic and some of the youngest metriorrhynchid specimens worldwide.

Key words: Crocodylomorpha, Thalattosuchia, Metriorrhynchidae, Lower Cretaceous, Valanginian, Czech Republic.

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