ACTA PALAEONTOLOGICA POLONICA

A new species of the metriorhynchid crocodylomorph *Cricosaurus* from the Upper Jurassic of southern Germany

Sven Sachs, Mark T. Young, Pascal Abel, and Heinrich Mallison
Acta Palaeontologica Polonica 64 (2), 2019: 343-356 doi:https://doi.org/10.4202/app.00541.2018

Here we describe a new species of the metriorhynchid thalattosuchian *Cricosaurus, C. bambergensis* sp. nov., from the Upper Jurassic Torleite Formation of Wattendorf near Bamberg, Bavaria (southern Germany). The holotype and only known specimen is a nearly complete skeleton that shows a number of diagnostic traits including a bicarinate dentition formed by labiolingually compressed tooth crowns that lack a conspicuous enamel ornamentation and the presence of a distinct midline ridge with paired depressions on the palatines. Our phylogenetic analysis recovers a grouping of *Cricosaurus bambergensis* sp. nov. with *C. elegans* and *C. suevicus*. The implications of the new *Cricosaurus* species to the species complex from the late Kimmeridgian–early Tithonian of southern Germany is discussed. Our description of *C. bambergensis* demonstrates that the specific, and morphological, diversity of *Cricosaurus* in southern Germany was higher than previously thought. This coincides with the recent trend of re-evaluating the species-complexes of extant taxa, and the identification of new “cryptic species”. As such, the crocodylomorph fossil record will need to be re- examined to ensure there is not an underestimation of their biodiversity.

Key words: Crocodylomorpha, Metriorhynchidae, *Cricosaurus*, Upper Jurassic, Torleite Formation, Germany.

Sven Sachs [Sachs.Pal@gmail.com], Naturkunde-Museum Bielefeld, Abteilung Geowissenschaften, Adenauerplatz 2, 33602 Bielefeld, Germany; Im Hof 9, 51766 Engelskirchen, Germany (correspondence address). Mark T. Young [mark.young@ed.ac.uk], School of GeoSciences, Grant Institute, University of Edinburgh, James Hutton Road, Edinburgh, EH9 3FE, UK. Pascal Abel [pascal.abel@ifg.uni-tuebingen.de], Senckenberg Centre for Human Evolution and Palaeoenvironment, Eberhard-Karls Universität Tübingen, Sigwartstraße 10, 72076 Tübingen, Germany.
Heinrich Mallison [mallison@palaeo3d.com], Palaeo3D, Talstr. 14, 86554 Pöttmes, Germany.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see creativecommons.org), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Full text (1,037.0 kB) |
Supplementary file (1,484.0 kB)