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Tanystropheus still conspicuous—an osteological redescription of the first tanystropheid

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Archosauromorphs were the dominant clade of terrestrial vertebrates during the Mesozoic. Extant birds and crocodilians represent only a small remnant of the diversity of this lineage preserved within the fossil record. Especially in the Triassic, following the end-Permian mass extinction, archosauromorphs rapidly diversified into various forms with striking anatomical characteristics and disparate modes of life. Among these are the long-necked tanysaurians, which include the remarkable *Tanystropheus*, characterised by its extreme body proportions. Unlike other long-necked reptiles, it has relatively few cervical vertebrae, which are, however, extraordinarily elongated instead, resulting in morphology unseen in any other vertebrate. These elements, together with rod-like cervical ribs, form a bauplan that puzzled researchers for over a century. Its habitat, hunting strategy, and lifestyle have long remained enigmatic, due to the best preserved specimens being diagenetically flattened and spatially limited to the Monte San Giorgio area (Italy/ Switzerland) and China. Despite its long history of research, functional anatomy and ecology of *Tanystropheus* remained poorly understood. The recent discovery of a diverse Ladinian vertebrate assemblage site in Miedary, Poland, has transformed this situation. The new material includes the remains of at least twenty individuals of *Tanystropheus*, both three-dimensionally isolated elements and articulated portions of several skeletons that together comprise most of the skeleton. These discoveries offer a unique opportunity to reassess the anatomy, taxonomy, and environmental preferences of *Tanystropheus*. Herein, the osteology of *Tanystropheus conspicuus* is described in detail, including the first unambiguous cranial remains referred to this species, providing valuable insights into its biology. Due to taphonomical and depositional characteristics of the material, Miedary serves as a good proxy for reconstructing the habitat of this animal. *Tanystropheus* is confirmed to have been an aquatic ambush predator that hunted in shallow nearshore settings.

Key words: Archosauromorpha, Tanystropheidae, Central European Basin, Middle Triassic, Anisian, Ladinian, Poland.

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