

A dicynodont-theropod association in the latest Triassic of Poland

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It is generally accepted that during the Triassic the composition of tetrapod faunas underwent a series of fundamental transformations, mainly as a result of diversification of archosaurs and decline of therapsids (Benton 1994, 2004, 2006). The last herbivorous basal synapsids, dicynodonts, disappeared from the record in the early Norian of the Americas, about 220 Ma (Langer et al. 2007), being unknown from the Late Triassic of Europe. Here, we report a partially articulated skeleton and isolated bones of a giant rhino–size dicynodont in the Upper Triassic fluvial sediments at Lisowice (Lipie Śląskie clay–pit) in southern Poland. Paleobotanical data indicate an early Rhaetian age for the fauna (Dzik et al. 2008; Niedźwiedzki and Sulej 2008). The dicynodont bones are associated with bones of carnivorous dinosaurs, pterosaurs, as well as capitosaur and plagiosaur amphibians. Dicynodonts were represented in the Germanic Basin throughout the Late Triassic, as proven by findings of smaller dicynodonts in older deposits in the same area, associated there with temnospondyl amphibians. It appears, thus, that the fossil record of tetrapod succession in the Late Triassic was strongly controlled by ecological factors and biased by uneven representation of particular environments. The Lisowice assemblage proves that faunas dominated by dicynodonts did not entirely disappear at least until the end of the Triassic.

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