Evolution of dinosaurs and their kin at the turn of the Late Triassic in northern Pangaea

Dinosaurs were the dominant group of medium- and large-sized terrestrial vertebrates in the ecosystems of the Mesozoic Era, represented by numerous, diverse species in the Jurassic and Cretaceous. Their early evolution and biogeography in the Late Triassic and Early Jurassic was a complex process shaped by global environmental factors.

Dinosaurs were initially a rare component of the Triassic terrestrial ecosystems. Their early diversification occurred at the Triassic-Jurassic boundary, about 200 million years ago. Despite its crucial importance for the evolutionary history of terrestrial vertebrates, this moment is very sparsely represented in the fossil record. Only a handful of sites with preserved terrestrial vertebrate remains of this age have been discovered worldwide, most of which are located in only a few geographic regions. Hence, the issues regarding the global evolutionary history of dinosauromorphs (dinosaurs and their close relatives) at the end of the Triassic and the diversification of dinosaurs in the Early Jurassic are still a matter of debate.

The hereby project aims to examine the new material of early dinosauromorphs and dinosaurs collected from the sediments dated to the Late Triassic in Poland. During the early Mesozoic, this region was located in the northern part of the Pangaea supercontinent. Due to the significant geographic placement and age of these finds, they are very promising for understanding of the diversity and distribution of dinosauromorphs and dinosaurs at the turn of the Late Triassic.