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Late Pennsylvanian-Early Triassic conchostracan biostratigraphy: A preliminary approach

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Abstract

© 2018 The Author(s). Conchostracans are one of the most common fossil animal groups of continental deposits from late Palaeozoic to modern times. Their habitats have ranged from perennial lakes of the Carboniferous and Early Permian to seasonal playa lakes and temporary ponds from the late Early Permian into the Triassic, where they could form mass occurrences. This, together with relatively high speciation rates, makes them ideal guide fossils, especially in otherwise fossil-poor wet and dry red beds. Based on material and data collected since the 1980s from both surface outcrops and well cores in central Europe, a preliminary conchostracan zonation is proposed.We used a conservative approach, erecting assemblage zones comprising two or three species instead of speciesrange zones with only one or, sometimes, two forms. Assemblage zones are more robust and provide more reliability for each delineated time interval. Isotopically dated occurrences of conchostracan zone species, or co-occurrences of conchostracans, insect zone species and marine index fossils such as conodonts and fusulinids, allow us to correlate our assemblage zones with the marine Standard Global Chronostratigraphic Scale.

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