



Triassic tetrapod footprints in central Europe: a first comparative study

D. Valdiserri, G. Tichy

Dept. Geography and Geology, Division Paleontology, University of Salzburg, Austria
(diana.valdiserri@sbg.ac.at; phone: +43-662-8044-5493)

In central Europe middle Triassic vertebrate footprints are abundant. The study of those ichnofossils improves the knowledge of the paleogeographic and paleoecologic situation. Several Triassic ichnoassociations, some of which are still under study, have been found in the Dolomites (Italy), in the Central Massive area (France) and in middle-south Germany. All three different ichnosites have been investigated. The faunas comprise the following ichnogenera:

Rhynchosauroides, tracks of a lizard-like reptiles,

Synaptichnium and Chirotherium, probably coined by Archosaurs,

Parachirotherium, which is thought to be made by a Pseudosuchian,

and other single tracks which are not relevant for this comparative study.

The abundance of the single ichnogenera was considered with respect to the entire footprint population of each ichnosite.

Those data and the preservation conditions were statistically analysed suggesting some difference of the climatic conditions and of the terrigenous influence in the carbonate sedimentation.

This survey gives an important contribution for the understanding of the different paleoecological and sedimentological environments.

The shapes of the single tracks can be compared by using polygonal figures, through

the Landmark analysis. This method underlines substantial difference in the size of the footprints of a single ichnogenus relative to each ichnosite. The faunas in Germany and France show the predominance of arcosaurians and pseudosuchians, the single tracks are generally larger than in Italy where the lizard-like reptilians are dominant. The combined use of these methods allows to understand the relationship and the connection between the different tetrapod-footprint faunas during the middle Triassic in central Europe.

Refereces

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