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Archosaur evidence in the Buntsandstein (Lower Triassic)

Harmut Haubold
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The vertebrate ichnofauna of the German Bunter, primarily horizons of the Hardegsen and Solling Formations, contains archosaur footprints of the genera *Brachychirotherium*, *Chirotherium*, *Isochirotherium*, *Rotodactylus*, and *Synaptichnium*. Footprint morphology, trackway pattern and stratigraphic occurrence show that only *Synaptichnium* and *Brachychirotherium* correspond with advanced proterosuchians and pseudosuchians. *Chirotherium* and *Isochirotherium* are above the pseudosuchian level. *Rotodactylus* somewhat resembles *Lagosuchus*. In the Lower Triassic existed at least five lines of fully terrestrially adapted archosaurs. From trackway evidence, the archosaurs of the Lower Triassic show a more complex radiation of terrestial locomotion types than would be expected from the presently known fossil bone record. The footprint fauna of the Buntsandstein may contain thecodonts as well as transitional (non pseudosuchian) forms which may foreshadow later crocodiles, ornithischians, and saurischians.

Key words: footprints, thecodonts, dinosaurs, Middle Buntsandstein, Triassic.

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