



Post-Permian tetrapod record in the Ischigualasto-Villa Unión Basin (Talampaya and Tarjados Formations, northwestern Argentina)

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Talampaya and Tarjados Formations correspond to the initial stage of the Ischigualasto-Villa Unión Basin filling, and record the oldest post-Permian events in the region. The sequence consists of red beds deposited essentially by ephemeral alluvial and fluvial systems, and overlay in discordance a Permian unit (Patquía = La Colina Formation). Until present contribution, only a manus-pes pair track of a putative therapsid was reported from the Talampaya Formation, whereas fragmentary skeletal remains of dicynodonts were the only mention of tetrapods from the Tarjados Formation. Here, we disclose new material found in recent field work at the upper member of the Tarjados Formation, from the equivalent levels where dicynodont remains were previously recovered. New material includes likely footprints from tetrapod in transversal section, associated with large burrows of morphology and dimensions comparable with burrows in which small therapsid remains were found. In addition, an isolated vertebra of a medium-sized archosaur (ca. 3cm long and 4cm high) was collected. The new record improves our knowledge of the post-Permian tetrapod fauna from Argentina. Thus, during the initial stage of basin filling, two groups of tetrapods, archosaurs and therapsids were present, as part of the beginning of the post-Permian recovery. Basal archosaurs and therapsids are also known from the Early Triassic of South Africa and the Middle Triassic of Brazil, although the fossil record is comparatively scarce in the Talampaya-Tarjados faunal association.

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