

Lopingian tetrapod footprints from the Venetian Prealps, Italy: New discoveries in a largely incomplete panorama

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After new studies were carried out in the Lopingian Val Gardena Sandstone of northern Italy, in the Recoaro area (Venetian Prealps, NE Italy), the following tetrapod ichnotaxa are identified: cf. *Capitosauroides* isp., cf. *Merifontichnus* isp., *Pachypes* isp., *Paradoxichnium* isp., and *Rynchosauroides* isp., probably corresponding to ?parareptile, captorhinid eureptile, pareiasaurid parareptile, archosauromorph neodiapsid, and lacertoid neodiapsid trackmakers, respectively. An undetermined track shows features consistent with possible therapsid producers. These are the first possible records of *Merifontichnus* and *Capitosauroides* in the Lopingian (late Permian) and one of the few records of *Paradoxichnium* worldwide. The paleoecology of the ichnoassociation highlights a relatively high diversity in the floodplain lithofacies, a monospecific association of *Rhynchosauroides* in distal floodplain/sabkha environments and the occurrence of *Paradoxichnium* isp. and cf. *Capitosauroides* only in the lagoon lithofacies, suggesting different habits of the trackmakers. The tetrapod ichnoassociation is characterized by eureptile and parareptile tracks, and differs from the classic Lopingian tetrapod ichnoassociation of the Dolomites mainly because of the absence of chirotheriid and small parareptile ichnotaxa. A comparison of the Italian tetrapod ichnoassociation with other Lopingian non-eolian ichnofaunas suggests a possible preference for marginal marine settings by the archosauromorph and therapsid trackmakers at low-latitudes of Pangaea.

Key words: Tetrapoda, footprints, paleoecology, Lopingian, Val Gardena Sandstone, Venetian Prealps.

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