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ABSTRACT BOOK

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Tetrapod tracks from the Vera Formation (Los Menucos Group, Río Negro province, Argentina) and their bearing on the chronostratigraphy of the Los Menucos Basin

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The Los Menucos locality, in the north-western sector of the North Patagonian Massif (Río Negro province, Argentina), hosts a volcanoclastic succession mainly composed of dacitic to rhyolitic ignimbrites, mesosilicic lavas and subordinate sedimentary rocks made up mainly of sandstones, all pertaining to the Los Menucos Group. Within the Los Menucos Group are included two units of lower rank, namely the Vera Formation and the Sierra Colorada Formation. The Vera Formation is notable for having produced one of the most important Triassic tetrapod ichnofauna of southern South America (e.g. Melchor & de Valais, 2006 and references therein). The ichnofauna, preserved both in volcanoclastic and sedimentary strata, is mostly documented both by small and large pentadactyl tetrapod tracks. These footprints are referred to the ichnogenera *Dicynodontipus* and *Pentasauropus*, respectively, and can be attributed to different therapsid trackmakers. The track-bearing levels from which *Dicynodontipus* and *Pentasauropus* were reported are exposed in two distinct areas, respectively to the west and east of the Los Menucos town. A Late Triassic age was historically proposed for the Los Menucos Group, based on palaeofloristic and palaeoichnological data, available from the Vera Formation, and radiometric datings available from the Sierra Colorada Formation. Recently, new geochronological evidence (Luppo et al., 2017) indicated ages ranging from the Wuchiapingian (Late Permian) to the Olenekian (Early Triassic) for the volcanics of Los Menucos Group, strongly contrasting with the current chronostratigraphical framework. Within this context, the ichnological record turn out to be binding for assessing the age of the sedimentary and volcanoclastic levels and estimating the starting of sedimentation in the Los Menucos Basin. The Late Triassic age for the whole Vera Formation can be questioned taking into account the global stratigraphical distribution of *Dicynodontipus*, spanning from the Late Permian to the early Middle Triassic (e.g. Klein & Lucas, 2010). Thus, while the *Pentasauropus*-bearing strata can be confidently referred to a Late Triassic age based on the global occurrence of the ichnogenus, sedimentary levels with *Dicynodontipus*, stratigraphically close to the dated volcanites, can be anticipated to Late Permian or Early Triassic times.

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