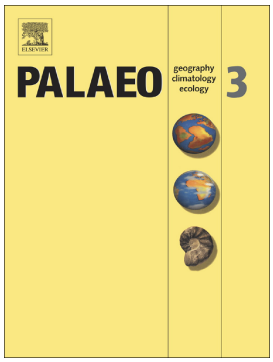

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Palaeoichnology of an MIS 3 cave bear settlement – Urşilor Cave (Western Carpathians, Romania)

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Abstract:

The palaeoichnology of the cave bear, *Ursus spelaeus*, was studied at Urşilor Cave, Apuseni Mountains, Romania, to acquire new data about the ethology and the metrics of this extinct species. Eight stations containing footprints, scratch marks and nests were surveyed using laser scanning to build tridimensional models for several cave bear nests, wall scratch marks and footprints. Morphological observations were made using the models, and precise measurements of the breadth or depth of the scratch marks were performed. In addition, more than 100 cave bear nests and 10 footprints were measured and analyzed. The palaeoichnogical data were corroborated with previously obtained information on the taphonomy, geomorphology, sedimentology and geochronology from this site. Several bioglyphs (*e.g.*, scratch marks, footprints) were indirectly dated to Marine Isotope Stage (MIS) 3 by identifying and assigning them to co-occurring cave bear skeletons. As a consequence, we stress the need for a multidisciplinary approach in order to assess the palaeoichnology of cave bear sites. Findings fill a gap in our knowledge because cave bear bioglyphs are one of the less studied branches of cave bear research due to the scarcity and fragility of ichnological features.

Key-words: Mammalia, *Ursus spelaeus*, Upper Pleistocene, bioglyphs, laser scanning.