

Preliminary studies of a new dinosaur track locality from the Candeleros Formation (Cenomanian, Upper Cretaceous), Neuquén Basin, Argentina

ARTURO M. HEREDIA^{1*}, MATTIA A. BAIANO^{2,3}, DIEGO PINO², GUILLERMO J. WINDHOLZ^{2,3}, FLAVIO BELLARDINI^{3,4}

¹ CONICET - Universidad de Buenos Aires. Instituto de Estudios Andinos Don Pablo Groeber (IDEAN). Buenos Aires, Argentina

² CONICET - Universidad Nacional de Río Negro. Instituto de Investigación en Paleobiología y Geología (IIPG). General Roca, Río Negro, Argentina

³ CONICET - Museo Carmen Funes, Av. Córdoba 55, Plaza Huinca, Neuquén, Argentina

⁴ Ministerio de las Culturas, Dirección Provincial de Patrimonio Cultural, Neuquén, Argentina

*presenting author, heredia@gl.fcen.uba.ar

Abstract:

A new Upper Cretaceous (Cenomanian) dinosaur track locality "El Chocón Medio" from northwestern Patagonia, Argentina, is reported here. More than 30 true tracks (concave epireliefs) were recognized in fine-grained sandstone beds, interpreted as floodplain deposits. The only distinct trackway consist of six deep and medium-sized tridactyl tracks poorly preserved with distinct metatarsal impressions (about 50 cm long and 20 cm wide). This trackway does not reflect changes in footprint features such as track length, depth, pace and height of displacement rims, suggesting that the consistency of the substrate was homogenous along the complete distance. About 20 m from this trackway, several deeper and large tridactyl tracks (30 to 40 cm in length) with very pronounced rims have been identified. They are positioned close to each other and show different orientations, accordingly were considered as isolated tracks. They are poorly preserved and lack anatomical features, making it difficult to determine a theropod or ornithopod affinity. Finally, in the underlying bed (10 cm below) several subcircular (70 cm in diameter) and crescent-shaped (50 cm in width) natural cast tracks (pes-manus) of sauropods were documented. At least three sauropod pes from the same side (left or right) were arranged in an incomplete trackway, so the type of gauge could not be determined. Preliminarily, considering the similar morphology and heteropody, these tracks can be assigned to cf. *Sauropodichnus giganteus* Calvo, 1991, from the same unit and tracksite proximity. The present track assemblage shows that this site was repeatedly visited by different groups of dinosaurs.

Keywords: tridactyl footprints, metatarsal impressions, sauropod tracks, Cenomanian, Patagonia