

sobrevivientes y extirpados apoyan la relevancia de este carácter en la supervivencia de la fauna. Finalmente, se propone profundizar estos estudios para comprender este evento biótico con mayor claridad.

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#### **COMPOSITION AND STRUCTURE ANALYSIS OF THE BENTHIC MARINE ASSOCIATIONS FROM THE *LEVIPUSTULA LEVIS* BIOZONE FROM CENTRAL WESTERN ARGENTINIAN BASINS\***

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Despite being coeval faunas from the *Levipustula levis* biozone from the Late Paleozoic western central Argentinian basins, *Levipustula* and *Aseptella-Tuberculatella/Rhipidomella-Micraphelia* (AT/RM) associations show high compositional differences suggesting that their wide vs. restricted distribution is probably linked to a set of abiotic factors. We hypothesize that bathymetric preferences from dominant genera could partly explain some of their paleoecological differences. We describe and compare the faunas' structure at a regional scale using a proportional rank plot and estimated richness by rarefaction based on a generic occurrence data set. We also use an index for each genus' environmental preferences according to their occupancy along the bathymetric gradient. The *Levipustula* association is more diverse than AT/RM fauna. First, it is co-dominated by brachiopods (57%) and bivalves (43%), while the AT/RM fauna is brachiopod-dominated (>70%). Higher richness and evenness indicate that the *Levipustula* association would develop in more heterogeneous environments than the AT/RM association. Moreover, a higher dominance of brachiopods in the AT/RM association could be a paleoecological response to environments with low turbidity. So far, the bathymetric distribution assessment indicates that the AT/RM association exhibits preferences for deep waters while taxa with broader bathymetric affinities characterize the *Levipustula* association. Hence, the less diverse AT/RM association bearing deep-water specialists could have developed under greater glacial-influence in low turbiditic fjord-like environments, whereas the generalist *Levipustula* association could have occurred in open marine settings.

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#### **MORPHOLOGICAL VARIATIONS IN BIPEDAL DINOSAUR TRACKS FROM THE AGUADA DE TUCO TRACKSITE, CANDELEROS FORMATION (CENOMANIAN, UPPER CRETACEOUS) OF NORTHWESTERN PATAGONIA, ARGENTINA\***

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New bipedal dinosaur tracks from the Aguada de Tuco tracksite of the Cenomanian Candeleros Formation (Neuquén Group, Neuquén Basin, Argentina) are reported here. These tracks are preserved in medium grain-sized sandstones from fluvial deposits in three different stratigraphic levels (Level 1–3). The Level 1 comprises deep tridactyl tracks with apparent metatarsal impressions (average length of 31 cm) preserved as true tracks and undertracks, perhaps generated due to simply sinking of the pes into a soft substrate. The Level 2 includes large tridactyl tracks (average length of 58 cm) found a few meters close to a previously studied sauropod trackway. These bipedal and quadrupedal large tracks differ in several preservational features probably due to differences in the pedal shape and substrate interaction between these trackmakers. Level 3 comprises small to large tridactyl tracks (length from 6 to 34 cm) with a broad variety of morphologies including intra-trackway variation, suggesting changes in the substrate properties, mainly moisture content, along the tracking surface. Considering that the footprints studied here are poorly preserved, they were not assigned to any particular ichnotaxon. The large tridactyl tracks were attributed to theropod trackmakers while medium and small tracks to undetermined bipedal dinosaurs. This tracksite exemplifies inter- and intra-trackways morphological variability of dinosaur tridactyl tracks controlled mainly by the substrate properties.

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#### **THE FAMILY SIGMAGRAPTIDAE (GRAPTOLITHINA) IN THE CENTRAL ANDEAN BASIN\***

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The sigmagraptids from the Central Andean Basin were scarce and poorly known until now. Based on the taxonomic classification of Graptolithina, recently published as part of the *Treatise on Invertebrate Paleontology*, the best-preserved specimens of the family Sigmagraptidae, coming from different regions of the Central Andean Basin, are reviewed. This study allows documenting four additional taxa as part of the Ph.D. of the former author. Single-stiped colonies of *Azygograptus lapworthi* Nicholson were recognized from early Dapingian levels (Middle Ordovician) at the Los Colorados and La Quiaca sections, Argentine Cordillera Oriental; Muñayoc and Huaytiquina sections, Argentine Puna;