Recent collecting of the Lower Permian Robledo Mountains Formation within the newly established Prehistoric Trackways National Monument and from its periphery near Las Cruces, New Mexico, has yielded several previously unrecorded ichnofossils, all of which are unusual. A resting impression has been found on a small slab of mudstone that contains associated *Paleohelcura* trackways. The morphology of the impression is consistent with an interpretation of having been produced by a scorpion. Neoichnological experiments have likewise demonstrated that scorpions can produce *Paleohelcura*. A bilobed ribbon trail preserved in convex hyporelief on a small mudstone slab has also been found. Arthropod appendage impressions appear outside of the lateral margins on either side of the lobes, indicating that this is a locomotion trail. Although this specimen resembles some relatively common ichnogenera, the presence of appendage impressions external to the margins is distinctive. This trace fossil probably represents a new ichnotaxon. Lastly, an enigmatic ovoid burrow preserved in convex hyporelief has been found on a mudstone slab that contains *Monomorphichnus* and tetrapod claw drags. It bears some resemblance to insect breeding chambers, which are more commonly found in Mesozoic or younger strata. There is one previous record of a possible insect chamber from the Robledo Mountains Formation, which differs in size and appearance from the ovoid burrow. Although ichnofossils from the Robledo Mountains Formation have been studied for nearly two decades, these newly discovered specimens indicate that continued collecting has a high potential for providing new or unusual ichnotaxa.

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ichnofossils, paleontology, trackways, fossils

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