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New postcranial remains of large toxodontian notoungulates from the late Oligocene of Mendoza, Argentina and their systematic implications

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During the last decade, the Deseadan (late Oligocene) Quebrada Fiera locality, Mendoza Province, Argentina, has provided a large amount of mammal remains. Taxonomic studies have shown the presence of faunal elements common with other Deseadan associations from Patagonia and lower latitudes (Salla, Bolivia), as well as endemic taxa of different groups of mammals (Notohippidae, Leontiniidae, Homalodotheriidae, Hegetotheriidae, and Metatheria) and even a gastropod. In this work, we present a taxonomic and phylogenetic analysis of a set of postcranial fossils of three families of the suborder Toxodontia (Notoungulata). The postcranial elements are assigned to taxa previously recognized at Quebrada Fiera, such as the leontiniid *Gualta cuyana* and the homalodotheriid *Asmodeus petrasnerus*, but also to the family Toxodontidae that is represented by *Proadinotherium* sp. and another larger toxodontid; a few dental remains of *Proadinotherium* are also included as this is the first time that toxodontids from Quebrada Fiera are described. In the case of *A. petrasnerus*, an almost complete calcaneum allows us to expand the diagnosis of this taxon. The bones assigned to *G. cuyana* enlarge the anatomical knowledge of this species. In turn, the presence of the genus *Proadinotherium* extends its geographic distribution in Argentina and adds to the extra-Patagonian record of *P. saltoni* from Salla, Bolivia. Phylogenetic results do not differ much from previous analyses using postcranial characters, and the obtained consensus trees show low node supports. The various phylogenetic analyses performed here provide a more robust framework to interpret the relationships of the studied taxa.

Key words: Mammalia, Toxodontidae, Leontiniidae, Homalodotheriidae, postcranium, Deseadan Age, Argentina, Mendoza.

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