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# Diversity of cingulate xenarthrans in the middle-late Eocene of Northwestern Argentina

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The study of Paleogene mammals of intermediate and low latitudes has increased in the last decades and has been clearly demonstrated their importance in the comprehension of the evolution and faunistic changes outside Patagonia. The study of these faunas permits establishing new comparisons among contemporaneous faunistic associations, completing the distributional patterns, and evaluating evolutionary changes in the lineages in relation to climatic conditions prevailing in each of the different regions. In this work we study the diversity of Dasypodidae recovered from the Geste Formation (Northwestern Argentina). Bearing levels of Geste Formation were referred alternatively to a Barrancan subage of Casamayoran SALMA (middle Eocene, Lutetian–Bartonian) or a Mustersan SALMA (middle–late Eocene, Bartonian–Priabonian) on faunistic comparations with their equivalent in Patagonia, although absolute isotopic data indicates ca. 37–35 Ma (late Eocene, Priabonian). We described the following taxa of Dasypodidae: (i) Dasypodinae Astegotheriini: cf. *Astegotherium* sp., ?*Prostegotherium* sp., *Parastegosimpsonia* cf. *P. peruana*; (ii) Dasypodinae indet.; (iii) Euphractinae Euphractini: *Parutaetus punaensis* sp. nov.; (iv) Dasypodidae incertae sedis: *Pucatherium parvum*, *Punatherium catamarcensis* gen. et sp. nov. In comparison with other beds bearing Eocene cingulate faunas from Northwestern Argentina, Geste Formation presents the greatest diversity of dasypodids. This association is consistent with a late Eocene age and shows a taxonomic and biogeographic relevant features given by a unique specific composition: (i) it differs from that known for contemporaneous faunas from Southern latitudes and younger associations from more tropical areas; (ii) it includes genera with close affinities to those distant areas; (iii) it presents unique taxa typical from Eocene units exposed at Northwestern Argentina. This highlights the evolutionary and biogeographic meaning of the cingulate of the Geste Formation and supports the idea that the faunistic regionalization probably obeyed to latitudinal than to temporal factors.

**Key words:** Mammalia, Cingulata, Dasypodidae, Palaeogene, South America, Central Andean Puna.

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