

First phylogenetic analysis of the Miocene armadillo *Vetelia* reveals novel affinities with Tolypeutinae

Daniel Barasoain, Laureano R. González Ruiz, Rodrigo L. Tomassini, Alfredo E. Zurita, Víctor H. Contreras, and Claudia I. Montalvo

Acta Palaeontologica Polonica 66 (3), 2021: s031-s046 doi:<https://doi.org/10.4202/app.00829.2020>

Vetelia is a Miocene genus of armadillos from Argentina and Chile, traditionally included within the subfamily Euphractinae (Chlamyphoridae, Cingulata, Xenarthra). It includes the species *Vetelia puncta* (early–middle Miocene), *Vetelia perforata* (middle–late Miocene), and *Vetelia gandhii* (late Miocene), mostly known by isolated osteoderms. In this contribution, we provide the first description of the skull for this genus, based on new materials (PVSJ-289 and PVSJ-154) here assigned to *V. gandhii*. A detailed characterization allows us to amend the diagnosis of the three known species, and to include, for the first time, the genus *Vetelia* into a morphological phylogenetic analysis. Phylogenetic results reveal a closer affinity to the Tolypeutinae, including the extant genera *Priodontes* (giant armadillos), *Cabassous* (naked-tailed armadillos), and *Tolypeutes* (three banded armadillos), and the fossil genera *Pedrolypeutes* and *Kuntinaru*, than to the Euphractinae. More specifically, *Vetelia* is included within the Priodontini, as sister group of the clade composed by *Cabassous* + *Priodontes*. Taking into account the scarce record of fossil Tolypeutinae, this new proposal fills an important temporal gap in the evolutionary history of this lineage. Finally, we also provide new information on the diagnostic morphological characters of the Priodontini and Tolypeutini.

Key words: Mammalia, Euphractinae, Tolypeutinae, phylogeny, Neogene, South America.

Daniel Barasoain [danielbarasoain@gmail.com] and Alfredo E. Zurita [aezurita74@yahoo.com.ar], Laboratorio de Evolución de Vertebrados y Ambientes Cenozoicos, Centro de Ecología Aplicada del Litoral (UNNE-CONICET) y Cátedra de Paleontología, Facultad de Ciencias Exactas, Naturales y Agrimensura, Universidad Nacional del Nordeste, RP5 3400 Corrientes, Argentina. Laureano R. González Ruiz [gonzalezlaureano@yahoo.com.ar], Laboratorio de Investigaciones en Evolución y Biodiversidad (LIEB-FCNyCS sede Esquel, UNPSJB) y Centro de Investigaciones Esquel de Montaña y Estepa Patagónica (CIEMEP), CONICET, Universidad Nacional de La Patagonia San Juan Bosco (UNPSJB), Roca 780, 9200 Esquel, Chubut, Argentina. Rodrigo L. Tomassini [rodrigo.tomassini@yahoo.com.ar], INGEOSUR, Departamento de Geología, Universidad Nacional del

Sur-CONICET, Avenida Alem 1253, 8000 Bahía Blanca, Argentina. Víctor H. Contreras [vcontre@unsj-cuim.edu.ar], Instituto de Geología Dr. Emiliano P. Aparicio, departamentos Geología y Biología, Facultad de Ciencias Exactas, Físicas y Naturales, Universidad Nacional de San Juan, Avenida Ignacio de La Rosa y calle Meglioli, Rivadavia, 5400, San Juan, Argentina. Claudia I. Montalvo [cmontalvolp@yahoo.com.ar], Facultad de Ciencias Exactas y Naturales, Universidad Nacional de La Pampa, Avenida Uruguay 151, 6300 Santa Rosa, Argentina.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see creativecommons.org), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

 [Full text \(1,983.2 kB\)](#) |

 [Supplementary file \(287.1 kB\)](#)