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An introduction to the systematics of *Akodon orophilus* Osgood, 1913 (Rodentia: Cricetidae) with the description of a new species

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Abstract

The genus *Akodon* is one of the most species-rich rodent lineages in South America. In Peru, this genus contains 14 species subdivided in two groups: *aerosus* and *boliviensis*. *Akodon orophilus* Osgood, 1913 (Rodentia: Cricetidae) is a member of the *Akodon aerosus* group that inhabits the northern Peruvian montane forest, but is poorly characterized and its distribution is vaguely known. We review the status of the species based on morphology, morphometric and karyology, and compared with all members of the *Akodon aerosus* clade from Peruvian montane forests. As a result, we provide a complete redescription of *A. orophilus*, present new information on its natural history, restrict its distribution to the east of Río Marañón, and describe a new species of *Akodon* from Huánuco Department, central Peru, a population previously assigned to *A. orophilus*.

Key words: *Akodon*, Huánuco, montane forest, Peru, Río Marañón, taxonomy

Introduction

The genus *Akodon* Meyen (Rodentia: Cricetidae), with about 41 species, is the most diverse group in the subfamily Sigmodontinae (D’Elía 2003; Musser & Carleton 2005; Smith & Patton 2007; Jayat *et al.* 2010) but its taxonomy is still complex and confusing. Within *Akodon*, five main species groups have been recovered by phenetic and phylogenetic analyses: *aerosus*, *boliviensis*, *cursor*, *dolores*, and *varius* (Smith & Patton 2007; Jayat *et al.* 2010).

Pacheco *et al.* (2009) summarized that 14 species of *Akodon* were known from Peru, belonging to the *aerosus* and *boliviensis* groups. Myers *et al.* (1990) revised the *boliviensis* group based mainly on Peruvian and Bolivian specimens, and provided detailed descriptions for each of the nine species and subspecies. Posteriorly, Jayat *et al.* (2010) expanded the revision of this group including Argentinean specimens. On the other hand, the *A. aerosus* group includes eight species: *A. aerosus*, *A. cf. budini*, *A. affinis*, *A. mollis*, *A. orophilus*, *A. siberiae*, *A. surdus* and *A. torques*. They are usually ubiquitous along their ranges, but are not well delimited, and lack a complete and updated morphological characterization. All are present in Peru except *A. cf. budini*, *A. affinis*, and *A. siberiae*.

Among the species of the *Akodon aerosus* species clade, *A. orophilus* is one of the least studied species. It was described by Osgood (1913) as *A. mollis orophilus* along with *A. mollis orientalis*, both distinguished mainly on the basis of braincase width and coloration. Thomas (1921) implied that *A. m. orophilus* and *A. m. orientalis* belong, together with *A. torques*, to the genus *Microxus* Thomas. However, Osgood (1943) argued that *Microxus* was not different from *Akodon* and elevated *Akodon orophilus* to full species with 3 subspecies: *A. o. orophilus*, *A. o. orientalis*, and *A. o. torques*. This arrangement was later followed by Cabrera (1961). Besides, Patton & Smith (1992) considered *A. orophilus* and *A. mollis* as full separated taxa, supporting Osgood (1943)’s argument, but suggested that an in-depth review of both species was needed because of their great morphological variability among geographic populations. Musser & Carleton (1993; 2005) also accepted *Akodon orophilus* as full species with *orientalis* as a synonym. Patton & Smith (1992) and Smith & Patton (1993; 2007) reinforced the status of *Akodon orophilus* as a valid species based on sequences of cytochrome *b* (*cyt b*), suggesting this species might