

# New Middle Miocene Caviomorph Rodents from Quebrada Honda, Bolivia

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**Abstract** The rodents of the middle Miocene fauna of Quebrada Honda Bolivia are described. The most abundant rodent is the chinchillid *Prolagostomus* sp. More precise identification of this species will require revision of early to middle Miocene lagostomines, taking into account variation in modern populations. The next most common rodents are the tiny octodontoid *Acarechimys*, sp. nov.?, and the caviid *Guiomys unica*. The *Acarechimys* species may be unique to Quebrada Honda, but verification awaits revision of this geographically and temporally widespread genus. *Guiomys unica* is a recently described species otherwise known only from two Patagonian localities, El Petiso and Río Chico. Two rodents are unique to Quebrada Honda. *Mesoprocta hypsodus*, gen. et sp. nov., is a dasyproctid distinguished by its very hypsodont, cement-covered cheek teeth. *Quebradahondomys potosiensis*, gen. et sp. nov., is an adelphomyine echimyid distinguished by the less oblique lophids of its trilophodont cheek teeth, among other features. The

rodents of Quebrada Honda are more similar to those of Patagonia than those of northern South America, paralleling patterns seen in other mammal groups from this fauna.

**Keywords** Endemism · Laventan · Neogene · Neotropics · Provinciality · Rodentia · South America

## Introduction

Rodents are conspicuous members of nearly all modern South American terrestrial communities. The vast majority of the species pertain to two groups, each of which underwent an adaptive radiation in South America: cricetids (murids) and caviomorphs. The former includes far more species, but is a geological newcomer in South America. There is no definitive evidence for cricetids in South America prior to about five million years ago (Pardiñas et al. 2002; Prevosti and Pardiñas 2009). Even if cricetids entered South America several million years earlier than indicated by their fossil record, their remarkable diversification into more than 350 species—well over one third of all South American mammal species (Wilson and Reeder 2005)—took place in a surprisingly short period of time. They apparently dispersed to South America from North America via the Panamanian land bridge along with many other participants of the Great American Biotic Interchange (see Webb 2006 for a recent review).

Caviomorph rodents, in contrast, have been in South America for at least half of the Cenozoic, since at least the early Oligocene (Wyss et al. 1993, 1994; Vucetich et al. 1999, 2010b; Flynn et al. 2003). The fossil record of caviomorphs may extend into the late Eocene (Frailey and Campbell 2004), though this locality has no independent temporal constraints and could be as young as late Oligocene (Shockey et al. 2004). The origin of caviomorphs has long

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