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A new species of swamp rat of the genus *Scapteromys* Waterhouse, 1837 (Rodentia: Sigmodontinae) endemic to *Araucaria angustifolia* Forest in Southern Brazil

FERNANDO MARQUES QUINTELA^{1,7}, GISLENE LOPES GONÇALVES^{2,3}, SÉRGIO LUIZ ALTHOFF⁴,
IVES JOSE SBALQUEIRO⁵, LUIZ FLAMARION BARBOSA OLIVEIRA⁶ &
THALES RENATO OCHOTORENA DE FREITAS^{1,2}

¹Universidade Federal do Rio Grande do Sul, Programa de Pós-Graduação em Biologia Animal, Av. Bento Gonçalves 9500, Porto Alegre, RS, Brazil

²Universidade Federal do Rio Grande do Sul, Departamento de Genética, Av. Bento Gonçalves 9500, Porto Alegre, RS, Brazil

³Instituto de Alta Investigación, Universidad de Tarapacá, Antofagasta 1520, Arica, Chile.

⁴Fundação Universidade Regional de Blumenau, R. Antônio da Veiga, 140, Blumenau, SC, Brazil

⁵Universidade Federal do Paraná, Departamento de Genética, Centro Politécnico, Curitiba, PR, Brazil

⁶Museu Nacional / Universidade Federal do Rio de Janeiro, Departamento de Vertebrados, Quinta da Boa Vista, Rio de Janeiro, RJ, Brazil

⁷Corresponding author

Abstract

A new species of swamp rat of the genus *Scapteromys* from the Meridional Plateau of Southern Brazil is described. Morphological, molecular, and karyological analysis support the recognition of the new species, distinct from *S. aquaticus* and *S. tumidus*. *Scapteromys* sp. nov. is significantly smaller than the congeneric taxa considering most of the external and craniometric measurements and the pelage is conspicuously grayer and darker. It can be distinguished from *S. tumidus* by the laterally extended thenar pad of the manus and the parallel edges of the hamular process of the pterygoid, and from *S. aquaticus* by a grayer and darker pelage and smaller values of most external and craniometric measurements. Karyological analysis indicated a difference in chromosome numbers across the distributional range: $2n=34$ and $2n=36$. A total of 11 haplotypes were found along the range of the new species within the biogeographic province of *Araucaria angustifolia* Forest. Strongly supported substructure was found within the new taxon, resulting in two reciprocally monophyletic clades.

Key words: biodiversity, cytochrome *b*, molecular phylogeny, morphology, new taxon

Introduction

Scapteromys Waterhouse, 1837 comprises two recognized species of medium sized rats associated to areas bordering rivers, swamps, lagoons and small creeks (D'Elía & Pardinãs 2004; González & Martínez-Lanfranco 2010). Analysis of the mitochondrial cytochrome *b* (cyt *b*) gene and the nuclear interphotoreceptor retinoid binding protein (IRBP) gene allocated this sigmodontine genus to the tribe Akodontini (Smith & Patton 1999; D'Elía 2003). *Scapteromys* has received some attention by researchers, which resulted in taxonomic and systematic reevaluations. Gyldenstolpe (1932) redescribed the genus, providing new morphological observations and listed five species (*S. aquaticus*, *S. fronto*, *S. gnambiquarae*, *S. tomentosus*, and *S. tumidus*). Ellerman (1941) provided generic external and craniodental anatomical definitions and listed the five named forms recognized by Gyldenstolpe (1932). Massoia & Fornes (1964) compared qualitative (coat-color, fronto-parietal suture and mesopterygoid fossa shape) and quantitative (external, cranial, penile and bacular) characters between Argentinean and Uruguayan samples, assuming a subspecific classification (*S. t. tumidus* for Uruguay and *S. t. aquaticus* for Argentina). Hershkovitz (1966) presented external, craniodental, penile and bacular anatomical descriptions and some external, cranial and bacular measures, and did not consider the Argentinean and Uruguayan forms as distinct

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