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Revalidation of *Saguinus ursula* Hoffmannsegg (Primates: Cebidae: Callitrichinae)

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Abstract

In this study, we review the taxonomy of *Saguinus niger* (É. Geoffroy) and revalidate *Saguinus ursula* Hoffmannsegg as a distinct species. The revalidation is based on pelage coloration, and the pattern of morphological divergence is corroborated by molecular data. Samples from the east bank of the Tocantins River (*S. ursulus*) were distinct from specimens of *S. niger* from the west bank in having mid-dorsal hair with an wide (5.0–55 mm) intermediary band of bright and golden buffy color; long (ca. 23–26 mm) dorsal hair at the inter-scapular region; and naked (not noticeably haired) face, hands and fingers. *Saguinus ursulus* and *S. niger* are allopatric, and Tocantins River is putatively acting as an effective barrier for gene flow. A lectotype to *S. ursulus* from syntypes was designated.

Key words: Black-handed tamarins, Platyrrhini, taxonomy, Revalidated taxon

Introduction

Herskovitz (1977) defined five species-groups of *Saguinus* Hoffmannsegg, a diverse genus of small Neotropical monkeys occurring from Panama through northern and western South America. *Saguinus midas* group is presently composed by two pairs of species: *S. martinsi* Thomas plus *S. bicolor* Spix, and *S. midas* Linnaeus plus *S. niger* Geoffroy (Vallinoto *et al.* 2006, Cunha *et al.* 2011). The later occurs in Guyana Shield, north of the lower Amazonas River, and south of the later, from Xingu River in the west, to where the forest meets the xeric Caatinga-Cerrado biomes in the east (Herskovitz 1977). Herskovitz (1977) recognized two subspecies for *S. midas*: *S. m. midas* to north of the Amazonas River and widespread in the Guyana Shield in Brazil, French Guiana, Suriname and Guyana, and *S. m. niger* occurring to the south of the lower Amazonas River, from eastern bank of Xingu River to eastern limits of Amazonian forest, in the State of Maranhão, Brazil. Studies by Natori & Hanihara (1988, 1992) and Canavez *et al.* (1999) indicated that *S. m. midas* is more related to *S. bicolor* than to *S. m. niger*. Thus, based on the potential non-monophyly of the polytypic *S. midas* and the high phenotypic divergence between both subspecies as defined by Herskovitz (1977), authors have presently ranked them as full species (see, for example, Rylands *et al.* 2000, Groves, 2001, 2005). However, there are genetic and morphological variation within both *S. midas* and *S. niger* that indicates a more complex taxonomic picture for these species (Thomas 1922, Herskovitz 1977, Vallinoto *et al.* 2006, Cunha *et al.* 2011).

Specimens from easternmost populations of *S. midas* (States of Amapá and Pará) differ in body dimensions from westernmost populations (State of Amazonas), a phenotypic variation recently corroborated by molecular markers (Tagliaro *et al.* 2005). *Saguinus niger*, likewise, is presently known to occurs from Xingu River to the boundaries of Amazonian forest in the State of Maranhão, Brazil (Groves 2005). Species shows geographical variation in pelage coloration when comparing specimens from western to eastern (Thomas 1922, Herskovitz 1977). Rylands *et al.* (2012), based on the results of molecular analysis (Vallinoto *et al.* 2006), recently suggested the recognition of an additional taxon (race or even full species) for the population occurring on the western side of Tocantins River.