

Redescription of *Gymnotus coropinae* (Gymnotiformes, Gymnotidae), an often misidentified species of Neotropical electric fish, with notes on natural history and electric signals

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Abstract

Gymnotus coropinae, a diminutive species of Neotropical electric fish, was originally described by Hoedeman from Surinam. Shortly after its description, *G. coropinae* was synonymized with a syntopic congener, *G. anguillaris*. Here we redescribe *G. coropinae* as a valid species distinguishable from all congeners by a unique color pattern comprised of a dark brown background color marked by 8–18 white or pale yellow bands that in the anterior 1/3 to 2/3 of body are absent or largely restricted to the ventral part of the lateral surface. *Gymnotus coropinae* is further distinguishable from *G. anguillaris* and other congeners on the basis of several meristic and morphometric characters. *Gymnotus coropinae* is widely distributed throughout the Amazon and Orinoco Basins and the Guyana Shield. It inhabits small terra firme forest streams and swamps containing acidic, low-conductivity water.

Key words: Amazon, biodiversity, electrogenesis

Introduction

Gymnotus is the focus of intensive ongoing taxonomic attention and may now be the best known of all the Neotropical electric fish genera (Mago-Leccia 1994; Albert & Miller 1995; Campos da Paz 1996; Campos da Paz & Costa 1996; Fernandes-Matioli & Almeida-Toledo 1998; Fernandes-Matioli *et al.* 1998; Albert *et al.* 1999; Campos da Paz 2000; Fernandes-Matioli *et al.* 2000; Albert 2001; Albert & Crampton 2001; Fernandes-Matioli & Almeida-Toledo 2001; Campos da Paz 2002; Albert & Crampton 2003; Campos da Paz 2003; Crampton *et al.* 2003). *Gymnotus* is the most diverse of the gymnotiform genera, with 27 valid species including the species redescribed herein (Table 1). It is also the most geographically widespread, occurring throughout lowland Middle and South America from southern Mexico to the Pampas of Argentina (Albert 2001).