

A new *Gymnotus* (Teleostei: Gymnotiformes: Gymnotidae) from the Pantanal Matogrossense of Brazil and adjacent drainages: continued documentation of a cryptic fauna

FLORA M. C. FERNANDES¹, JAMES S. ALBERT², MARIA DE FATIMA Z. DANIEL-SILVA³, CARLOS E. LOPES^{3,4}, WILLIAM G. R. CRAMPTON⁵ & LURDES F. ALMEIDA-TOLEDO^{3,5}

¹ Museu de Zoologia, Universidade de São Paulo, São Paulo, 042563-000, Brazil;
E-mail: fmcampcos@ib.usp.br

² Department of Biology, University of Louisiana, Lafayette, LA, 70504-2451. E-mail: jalbert@louisiana.edu

³ Departamento de Biologia, Instituto de Biociências, Universidade de São Paulo, 05508-900, Brazil; E-mail: feifiszi@ib.usp.br

⁴ E-mail: celopes@usp.br

⁵ E-mail: willc@fimnh.ufl.edu

⁶ E-mail: lftoledo@ib.usp.br

Abstract

Here we describe a new species of *Gymnotus*, *G. pantanal* n. sp., from the Pantanal Matogrossense of Brazil, using morphological, cytogenetic, and molecular data. Specimens ascribed to the new species are also known from areas downstream in Paraguay, and from the adjacent Guaporé basin of Bolivia. The new species most closely resembles *G. anguillaris* in possessing an elongate body, slender profile, long body cavity, and shorter head than other congeners. The new species also resembles *G. anguillaris* in the presence of pale narrow bands restricted to the area below the lateral line on the anterior half of the body. The new taxon differs from *G. anguillaris* in possessing more narrowly set eyes, a wider and deeper head, a larger branchial opening, longer pectoral fins with more fin rays, and fewer pored posterior lateral-line scales. The new species inhabits rooted grasses and floating macrophytes in small creeks and along the banks of larger blackwater rivers. Populations are found syntopically with *G. inaequilabiatus* and *G. sylvius*. Compared with these species, the new species exhibits a distinct combination of microsatellite DNA amplification patterns, and chromosomal and external features. These results confirm earlier studies showing the power of a multidisciplinary approach to characterizing the enormous and often cryptic diversity of Neotropical fishes.

Key words: Gymnotiformes, microsatellite, chromosome, cryptic diversity