

RANGE EXTENSION OF *Microglanis pleriqueater* (SILURIFORMES: PSEUDOPIMELODIDAE) FOR THE MACABU RIVER BASIN, EASTERN BRAZIL

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ABSTRACT

The geographic distribution of *Microglanis pleriqueater*, described from the São João River basin, Rio de Janeiro state, eastern Brazil, is herein extended for the Macabu River basin, Rio de Janeiro state, eastern Brazil. In addition, a third case of sympatric distribution among species of *Microglanis* is herein recorded. This new record shows *M. parahybae* and *M. pleriqueater* occurring sympatrically in the Macabu River basin, eastern Brazil.

Key words: Coastal River basins, distribution extension, *Microglanis nigripinnis*, Ostariophysi; Rio de Janeiro state, southeastern Brazil, sympatry.

Resumo

Ampliação de distribuição de *Microglanis pleriqueater* (SILURIFORMES: PSEUDOPIMELODIDAE) para bacia hidrográfica de Macabu, Leste do Brasil

A distribuição geográfica de *Microglanis pleriqueater*, descrita para a bacia do Rio São João, Estado do Rio de Janeiro, Leste do Brasil, é aqui estendida para a bacia do Rio Macabu, Estado do Rio de Janeiro, Leste do Brasil. Além disso, um terceiro caso de distribuição simpátrica entre espécies do gênero *Microglanis* é aqui registrado. Esse novo registro demonstrou que *M. parahybae* e *M. pleriqueater* ocorrem simpatricamente na Bacia do Rio Macabu, Leste do Brasil.

Palavras chave: Ampliação de distribuição, Bacias costeiras, *Microglanis nigripinnis*, Ostariophysi, Simpatria, sudeste do Brasil.

INTRODUCTION

Microglanis Eigenmann, 1912 is the most species rich genus of the family Pseudopimelodidae (Ruiz & Shibatta, 2010; 2011; Jarduli & Shibatta, 2013), comprising more than 20 valid species (Jarduli & Shibatta, 2013; Shibatta, 2014), occurring along almost all cis-andinean River basins of South America, and along the trans-andinean Rivers basins in Ecuador (Shibatta, 2003a; Bertaco & Cardoso, 2005; Sarmiento-Soares et al., 2006; Alcaraz et al., 2008; Ottoni et al., 2010; Ruiz & Shibatta, 2011). The

genus is mainly characterized by adults not greater than 110 mm SL, having mouth gape approximately equal to head in width, barbels short not surpassing pectoral-fin base, eyes small and without free orbital margin, absence of axillary pore, pre-maxillary plate with rounded margin, and mesocoracoid arch thin (Shibatta, 2003a–b; Shibatta & Benine, 2005; Sarmiento-Soares et al., 2006; Alcaraz et al., 2008; Ottoni et al., 2010; Ruiz & Shibatta, 2010).

Microglanis pleriqueater Mattos, Ottoni & Barbosa, 2013 was recently described from the São João River basin, Rio de Janeiro state, eastern

Brazil. This species was previously misidentified as *M. nigripinnis*, a species described from the Macacu River basin, Rio de Janeiro state, by Bizerril (1997). *Microglanis nigripinnis* is currently known only from its type locality; and *M. pleriqueater* only from the São João river basin, more precisely, only from the localities listed in its original description.

The objective of the present paper is to extend the distribution of *M. pleriqueater* for the Macabu river basin, eastern Brazil, based on examined collection material. In addition, the paper intends to discuss about the cases of sympatry in the genus, which have not been commonly recorded.

MATERIALS AND METHODS

Morphological characters were obtained following Mattos et al. (2013), as well as, the identification of the new material herein examined of *Microglanis pleriqueater* was based in this same paper. Comparative material is listed in listed in Ottoni et al. (2010) and Mattos et al. (2013). Additional material is deposited in: UFRJ, Instituto de Biologia, Universidade Federal do Rio de Janeiro, Brazil.

Microglanis pleriqueater: Brazil: Rio de Janeiro state: UFRJ 7681, 3, 37.8–42.3 mm SL; bridge on the Macabu River, limit between Conceição de Macabu and Santa Maria Madalena municipalities, coordinates 22° 04' 5.70''S 41° 54' 35.75''W; H. Lazaroto, H. Jabor and S. Lima, 29 Jun. 2006.

Microglanis parahybae: Brazil: Rio de Janeiro state: UFRJ 9925, 1, 34.0 mm SL; bridge on the Macabu River, limit between Conceição de Macabu and Santa Maria Madalena municipalities, coordinates 22°04'5.70''S 41° 54' 35.75''W; H. Lazaroto, H. Jabor and S. Lima, 29 Jun. 2006.

RESULTS AND DISCUSSION

The examination of three specimens of *Microglanis* (Figure 1) collected in the Macabu River basin, Rio de Janeiro state, eastern Brazil (Figure 2), revealed that *M. pleriqueater* has a wider distribution. These specimens fit in the diagnosis proposed by Mattos et al. (2013) for *M. pleriqueater*, in which the body and dorsal fin are almost black or dark brown (Figure 1), thus contrasting with all its congeners, except *M. ater* Ahl, 1936 and *M. nigripinnis* Bizerril & Perez-Neto, 1992, which possess body light brown, with few saddles dark brown. In addition, the specimens herein examined possess a third whitish brown band on trunk located on the origin of the caudal peduncle, presence of two light brown regions on adipose fin, one anterior and other on the posterior margin of the fin, and pectoral fins light brown (Figure 1), whereas *M. nigripinnis* and *M. ater* do not possess a third whitish brown band on trunk, has only the anterior light brown region on adipose fin, and entire pectoral-fin black (Bizerril & Perez-Neto, 1992: fig. 1; Sarmiento-Soares et al., 2006: fig. 11 a; Menezes et al., 2007: 279; Mattos et al., 2013: Figure 2). Therefore, the distribution of *M. pleriqueater* is herein extended for the Macabu River basin, Rio de Janeiro state, eastern Brazil (Figure 2).

Sympatric congener distributions have not been commonly recorded for the species of *Microglanis*. According to Mattos et al. (2013), there are only two published cases of sympatry: *M. pleriqueater* occurring sympatrically with *M. parahybae* (Steindachner, 1880) in the São João River basin, recorded by Bizerril (1997); and *M. oliverai* Ruiz & Shibatta, 2011 occurring sympatrically with *M. xylographicus* Ruiz & Shibatta, 2011 in the Araguaia River basin, recorded by Ruiz & Shibatta (2011). A second case of sympatry involving *M. parahybae* and *M. pleriqueater* is herein recorded. In the present study, we found both species (Figure 1 and Figure 3) occurring sympatrically in the Macabu River basin, eastern Brazil.



Figure 1. *Microglanis pleriqueater*, UFRJ 7681, 42.3 mm SL: Brazil: Rio de Janeiro state: Conceição de Macabu River basin. Red arrows indicate the diagnostic colour pattern character states.

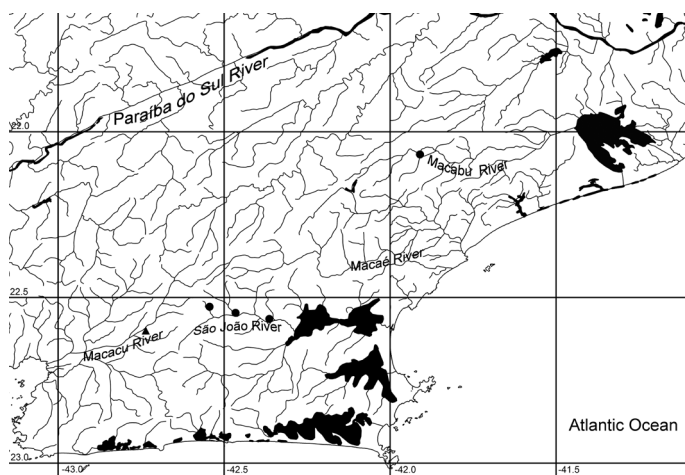


Figure 2. Distribution map of: (●) *M. pleriqueater* and (▲) *M. nigripinnis*.



Figure 3. *Microglanis parahybae*, UFRJ 9925, 34.0 mm SL: Brazil: Rio de Janeiro state: Conceição de Macabú River basin.

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LITERATURE CITED

- ALCARAZ, H. S. V., GRAÇA, W. J., & SHIBATTA, O. A. 2008. *Microglanis carlae*, a new species of bumblebee catfish (Siluriformes: Pseudopimelodidae) from the río Paraguay basin in Paraguay. *Neotropical Ichthyology*, 6 (3): 425-432.
- BERTACO, V. A. & CARDOSO, A. R. 2005. A new species of *Microglanis* (Siluriformes: Pseudopimelodidae) from the rio Uruguay drainage, Brazil. *Neotropical Ichthyology*, 3 (1): 61-67.
- BIZERRIL, C. R. F. Mudanças temporais de comunidades icticas em uma bacia hidrográfica do leste brasileiro. *Comunicações do Museu de Ciências e Tecnologia da PUCRS, série Zoologia*, v. 10: p.53-75, 1997.
- BIZERRIL, C. R. F. & PEREZ-NETO, P. R. 1992. Description of a new species of *Microglanis* (Silurioidei: Pimelodidae) from eastern Brazil. *Revue Française d'Aquariologie et Hépertologie*, 18: 97-100.
- JARDULI, L.R. & SHIBATTA, O.A. 2013. Description of new species of *Microglanis* (Siluriformes: Pseudopimelodidae) from the Amazon basin, Amazonas State, Brazil. *Neotropical Ichthyology* 11(3):507-512.
- MATTOS, J. L. O., OTTONI, F. P. & BARBOSA, M. A. 2013. *Microglanis pleriqueater*, a new species of catfish from the São João river basin, eastern Brazil (Teleostei: Pseudopimelodidae). *Ichthyological Exploration of Freshwaters*, 24 (2): 147-154.
- MENEZES, N. A., WEITZMAN, S. H., OYAKAWA, O. T., LIMA, F. C. T., CASTRO, R. M. C. & WEITZMAN, M. J. 2007. Peixes de água doce da Mata Atlântica, São Paulo: Museu de Zoologia-Universidade de São Paulo. 408p.
- OTTONI, F.P., MATTOS, J.L.O. & BARBOSA, M. A. 2010. Description of a new species of *Microglanis*

- from the rio Barra Seca basin, southeastern Brazil (Teleostei: Siluriformes: Pseudopimelodidae). *Vertebrate Zoology*, 60 (3): 187-192.
- RUIZ, W. B. G. & SHIBATTA, O. A. 2010. A new species of *Microglanis* (Siluriformes, Pseudopimelodidae) from lower rio Tocantins basin, Pará, Brazil, with description of superficial neuromasts and pores of lateral line system. *Zootaxa*, 2632: 53-66.
- RUIZ, W. B. G. & SHIBATTA, O. A. 2011. Two new species of *Microglanis* (Siluriformes: Pseudopimelodidae) from the upper-middle rio Araguaia basin, Central Brazil. *Neotropical Ichthyology*, 9 (4): 697-707, 2011.
- SARMENTO-SOARES, L. M., MARTINS-PINHEIRO, R. F., ARANDA, A. T. & CHAMON, C. C. 2006. *Microglanis pataxo*, a new catfish from southern Bahia coastal rivers, northeastern Brazil (Siluriformes: Pseudopimelodidae), *Neotropical Ichthyology*, 4 (2): 157-166.
- SHIBATTA, O. A. Family Pseudopimelodidae (Bumblebee catfishes, dwarf marbled catfishes). In: REIS, R. E.; KULLANDER, S. O. & FERRARIS JR, C. J. (eds.). Check List of the Freshwater Fishes of South and Central America. Porto Alegre, Editora Universitária – EDIPUCRS, 2003a, p. 401-405.
- SHIBATTA, O. A. Phylogeny and classification of ‘Pimelodidae’. In: ARRATIA, G., KAPOOR B. G., CHARDON, M. & DIOGO R (eds.). Catfishes. Enfield, Sciences Publishers Inc. vol.1, 2003b, p. 385-400
- SHIBATTA, O.A. 2014. A new species of *Microglanis* (Siluriformes: Pseudopimelodidae) from the upper rio Tocantins basin, Goiás State, Central Brazil. *Neotropical Ichthyology*. 12(1):81-87.
- SHIBATTA, O. A. & BENINE, R. C. 2005. A new species of *Microglanis* (Siluriformes: Pseudopimelodidae) from upper rio Paraná basin, Brazil. *Neotropical Ichthyology*, 3 (4): 579-585.