



First record of the camboatá *Megalechis picta* (Müller & Troschel, 1849) (Siluriformes: Callichthyidae) for the Pantanal, Brazil

Luiz Tencatt^{1,4}, Francisco Severo-Neto² & Otávio Froehlich³

¹Programa de Pós-Graduação em Ecologia de Ambientes Aquáticos Continentais, Universidade Estadual de Maringá, Maringá, PR, Brazil.

²Laboratório de Zoologia, Departamento de Biologia, Universidade Federal de Mato Grosso do Sul, Campo Grande, MS, Brazil.

³Universidade Federal de Mato Grosso do Sul, Campo Grande, MS, Brazil.

⁴Corresponding author: Luiz Tencatt, e-mail: luiztencatt@hotmail.com

TENCATT, L., SEVERO-NETO, F., FROEHLICH, O. First record of the camboatá *Megalechis picta* (Müller & Troschel, 1849) (Siluriformes: Callichthyidae) for the Pantanal, Brazil. *Biota Neotropica*. 15(1): e20140096. <http://dx.doi.org/1676-06032015009614>

Abstract: Herein we report the first record of *Megalechis picta* in the Brazilian Pantanal based in a single specimen captured in a tributary to the rio Miranda, municipality of Corumbá, rio Paraguay basin, State of Mato Grosso do Sul, Brazil. Additional discussion about its co-occurrence with *M. thoracata* is also provided.

Keywords: *Callichthyinae*, *Introduced species*, *Neotropical region*, *rio Paraguay*, *rio Orinoco*.

TENCATT, L., SEVERO-NETO, F., FROEHLICH, O. Primeiro registro do camboatá *Megalechis picta* (Müller & Troschel, 1849) (Siluriformes: Callichthyidae) para o Pantanal, Brasil. *Biota Neotropica*. 15(1): e20140096. <http://dx.doi.org/1676-06032015009614>

Resumo: Aqui reportamos o primeiro registro de *Megalechis picta* no Pantanal brasileiro baseado em um único espécime capturado em um tributário do rio Miranda, município de Corumbá, bacia do rio Paraguai, Estado de Mato Grosso do Sul, Brasil. Uma discussão adicional sobre a sua coocorrência com *M. thoracata* também é fornecida.

Palavras-chave: *Callichthyinae*, *Espécies introduzidas*, *região Neotropical*, *rio Paraguai*, *rio Orinoco*.

Introduction

The Callichthyidae are characterized by the presence of two longitudinal series of dermal plates on flanks, and currently comprises about 200 valid species allocated in two subfamilies, Callichthyinae and Corydoradinae (Reis, 2003; Eschmeyer, 2014). Callichthyinae is composed by five valid genus, *Callichthys* Scopoli, 1777, *Dianema* Cope, 1871, *Hoplosternum* Gill, 1858, *Lepthoplosternum* Reis, 1997 and *Megalechis* Reis, 1997 (Reis 1998, 2003) and can be promptly distinguished from the remaining Callichthyidae by the presence of anal-fin spine (*vs.* absence). *Megalechis* is distinguished from the other Callichthyinae by the unique combination of features: infraorbital bones exposed (*vs.* covered by thick layer of skin), caudal fin truncate or convex (*vs.* forked or concave) and presence of two unbranched rays in dorsal fin (*vs.* one). The genus currently comprises two valid species, *M. picta*, from the Amazon, Orinoco and Essequibo river basins, and additionally from coastal rivers of northern Brazil, and *M. thoracata*, from the Amazon and Orinoco rivers basins, and further coastal drainages of Guianas and north-eastern Brazil (Reis et al. 2005).

After the analysis of all the *Megalechis* material hosted in the Coleção Zoológica de Referência da Universidade Federal

de Mato Grosso do Sul (ZUFMS-PIS), a single specimen of *M. picta* (Figure 1a) from the southern Pantanal region, State of Mato Grosso do Sul, was identified, consisting in the first record of this species for the Pantanal region, which is stated herein. A map showing the new record, with the addition of the other two available non-native records of *M. picta* is also provided (Figure 2).

Material and methods

The *Megalechis picta* specimen (Figure 1a) was collected by Otávio Froehlich, in October 1990, in the Baía do Quadrado, tributary to the rio Miranda, geographical coordinates 19° 24' 14" S and 57° 02' 40" W, municipality of Corumbá, State of Mato Grosso do Sul. The confection of the map was made through the software Quantum GIS, version 1.8.0. The specimen was captured using a trawl net, firstly fixed in 10% formalin, transferred to 70% hydrated ethanol, and posteriorly deposited in the Coleção Zoológica de Referência da Universidade Federal de Mato Grosso do Sul, under voucher ZUFMS-PIS 30. The identification of the species was performed according to Reis et al. (2005). In figure legends, SL means standard length and CP means “comprimento padrão”.



Figure 1. Lateral view of the (a) *Megalechis picta* specimen, ZUFMS-PIS 30, 100.0 mm SL, collected in the Baía do Quadrado, and (b) *Megalechis thoracata*, ZUFMS-PIS 54, 66.8 mm SL, from a lagoon tributary to the rio Miranda.

Results and discussion

Recently, Tencatt et al. (2013) reported the first occurrence record of *Megalechis picta* in the upper rio Paraná basin, region of the Corumbá IV Reservoir, and commented on the taxonomic rearrangements that resulted in the revalidation of *Megalechis picta* and the synonymy of *M. personata* under *M. thoracata* (for more details see Reis et al. 2005). The occurrence of *Megalechis thoracata* (Figure 1b) is already reported for the Pantanal region (see Britski et al. 2007: 153). *Megalechis picta* is native in the Amazon, Orinoco and Essequibo river basins and can be clearly distinguished from *M. thoracata* mainly by the color pattern of caudal fin (proximal and distal margins of caudal-fin blackened, with a conspicuous transversal black bar in its middle portion, the regions between the blackened bands are clearly whitish yellow vs. proximal margin of caudal-fin whitish, the remaining portion is dusky or black spotted).

In addition to the syntopic occurrence of *Megalechis thoracata* and *M. picta* in the rio Paraguay basin, other records also stated the presence of *M. thoracata* (Castro et al. 2004; Langeani et al. 2007; Perez-Júnior and Garavello 2007; Apone et al. 2008; Oliveira et al. 2009) and of *M. picta* (Tencatt et al. 2013) co-occurring in the upper rio Paraná basin. Despite this new record, the species was never captured again in the rio

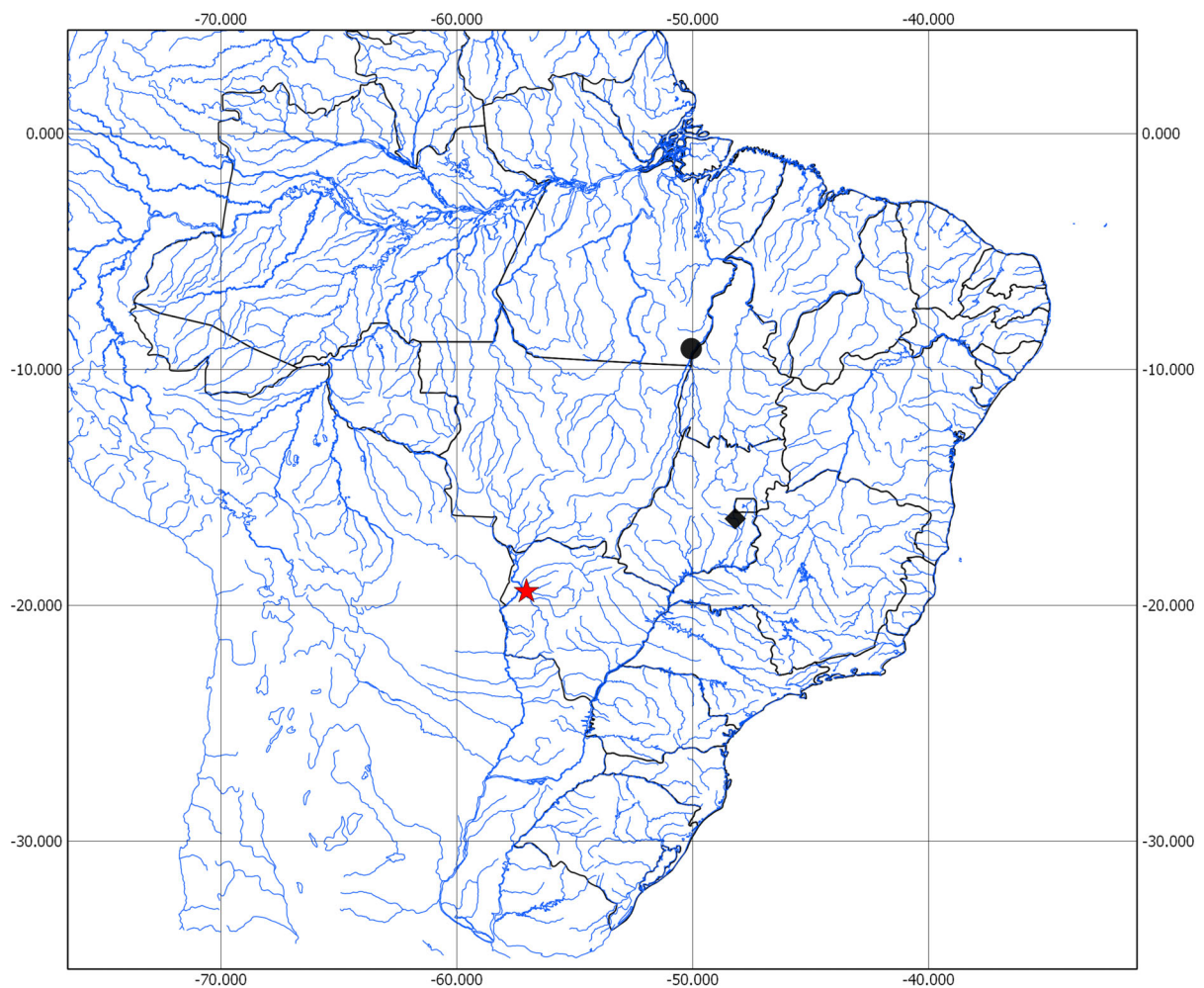


Figure 2. Map showing the new record for *Megalechis picta* in the southern Pantanal region (red star), and the available records for the rio Araguaia basin (black circle) and upper rio Paraná basin (black diamond).

Paraguay basin. The Núcleo de Pesquisas em Ictiologia, Limnologia e Aquicultura (Nupélia) staff have collected in the region of Manso Reservoir, State of Mato Grosso, for four years and no specimen of *M. picta* was captured. Additionally, other surveys efforts conducted by ZUFMS-PIS staff in the same region of the captured specimen and in the Bodoquena Plateau region also have not resulted in its capture. As mentioned by Tencatt et al. (2013) the introduction of *M. picta* in the upper rio Paraná basin is probably due to its use as a live bait, which can be a plausible explanation to its occurrence in the rio Paraguay basin. The possibility that both species were introduced together in these basins is also plausible due to their difficult distinction by non-experts, thus, can be easily mistaken and sold as a single species by sellers of live baits and in aquarium shops.

Acknowledgements

The authors are grateful to the Núcleo de Pesquisas em Limnologia, Ictiologia e Aquicultura (Nupélia) and the Laboratório de Zoologia da Universidade Federal de Mato Grosso do Sul for providing logistical support. The Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) provided fellowships to LFCT.

Literature cited

- APONE, F., OLIVEIRA, A.K. & GARAVELLO, J.C. 2008. Composição da ictiofauna do rio Quilombo, tributário do rio Mogi-Guaçu, bacia do alto rio Paraná, sudeste do Brasil. <http://www.biotaneotropica.org.br/v8n1/pt/abstract?article+bn02208012008> (last access 02/07/2014).
- BRITSKI, H.A., SILIMON, K.Z.S. & LOPES, B.S. 2007. Peixes do Pantanal: Manual de Identificação. 2 ed. Embrapa Informação Tecnológica, Brasília.
- CASTRO, R.M.C., CASATTI, L., SANTOS, H.F., MELO, A.L.A., MARTINS, L.S.F., FERREIRA, K.M., GIBRAN, F.Z., BENINE, R.C., CARVALHO, M., RIBEIRO, A.C., ABREU, T.X., BOCKMANN, F.A., DARDIS, G.Z.P., STOPIGLIA, R. & LANGEANI, F. 2004. Estrutura e composição da ictiofauna de riachos da bacia do Rio Grande, no Estado de São Paulo, Sudeste do Brasil. <http://www.biotaneotropica.org.br/v4n1/pt/abstract?article+BN0170402004> (last access 02/07/2014)
- ESCHMEYER, W.N. 2014. Catalog of Fishes. Available from <http://research.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (accessed in 25 June 2014)
- LANGEANI, F., CASTRO, R.M.C., OYAKAWA, O.T., SHIBATTA, O.A., PAVANELLI, C.S. & CASATTI, L. 2007. Diversidade da ictiofauna do alto Rio Paraná: composição atual e perspectivas futuras. <http://www.biotaneotropica.org.br/v7n3/pt/abstract?article+bn03407032007> (last access 02/07/2014)
- OLIVEIRA, A.K., APONE, F., BIRINDELLI, J.L.O. & PEREZ-JUNIOR, O.R. 2009. Fish, tributaries of middle Rio Mogi Guaçu, upper rio Paraná basin, São Paulo state, Southeastern Brazil. Check List. 5(3):488–494.
- PEREZ-JÚNIOR, O.R. & GARAVELLO, J.C. 2007. Ictiofauna do Ribeirão do Pântano, afluente do Rio Mogi-Guaçu, Bacia do Alto Rio Paraná, São Paulo, Brasil. Iheringia Zool. 97(3):328–335, <http://dx.doi.org/10.1590/S0073-47212007000300018>
- REIS, R.E. 1997. Revision of the Neotropical genus *Hoplosternum* (Ostariophysi: Siluriformes: Callichthyidae) with the description of two new genera and three new species. Ichthyological Exploration of Freshwaters. 7(4):299–326.
- REIS, R.E. 1998. Anatomy and phylogenetic analysis of the neotropical callichthyid catfishes (Ostariophysi, Siluriformes). Zoological Journal of the Linnaean Society, 124:105–168, <http://dx.doi.org/10.1111/j.1096-3642.1998.tb00571.x>
- REIS, R.E. 2003. Family Callichthyidae (armored catfishes). In Check List of the Freshwater Fishes of South and Central America. (Reis, R.E., Kullander, S.O. & Ferraris, C.J.J., eds.). Edipucers, Porto Alegre, p. 291-309.
- REIS, R.E., LE BAIL, P.Y. & MOL, J.H.A. 2005. New arrangement in the synonymy of *Megalechis* Reis, 1997 (Siluriformes: Callichthyidae). Copeia. 2005(3):678–682, <http://dx.doi.org/10.1643/CI-04-353R>
- TENCATT, L.F.C., GRAÇA, W.J. & PAVANELLI, C.S. 2013 First record of *Megalechis picta* (Müller & Troschel, 1849) (Siluriformes: Callichthyidae) in the upper Rio Paraná basin, Brazil. Check List. 9(5):1081–1083.

Received 02/07/2014
Revised 07/10/2014
Accepted 05/01/2015