

Pisces, Gymnotiformes, Hypopomidae, *Brachyhypopomus gauderio* Giora and Malabarba, 2009: New species record at Taim Ecological Reserve, south Brazil

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ABSTRACT: The present paper describes a new occurrence of the species *Brachyhypopomus gauderio* Giora and Malabarba, 2009 in the Taim Ecological Reserve, Rio Grande do Sul state, Brazil.

Gymnotiformes is a Neotropical order of fishes occurring from southern Mexico to northern Argentina (Mago-Leccia 1994). One of six nominal families of this order is Hypopomidae that is comprised of approximately 25 species (Albert 2003; Sullivan and Hopkins 2009), all of which produce weakly electric impulses for the purposes of communication and electrolocation. *Brachyhypopomus gauderio* was recently described by Giora and Malabarba (2009) as a new electric fish belonging to the Hypopomidae family (Figure 1). According to Giora and Malabarba (2009) *B. gauderio* is characterized by the following aspects: first anterior perforated scale of lateral line above pectoral-fin origin; lateral line irregular, not extending to caudal filament; branchial aperture small and slightly anterior to pectoral-fin origin; pectoral fins rounded and with perpendicular insertion; pectoral-fin rays i-ii + 13-15; anal-fin relatively long with vi-x + 173-206 rays; anal-fin origin located at same line of posterior edge of pectoral fin.

On November 05th 2003, we collected twelve female specimens of *B. gauderio*, with average total length of 94.5 ± 13.5 mm and average total weight of 2.03 ± 0.81 g, in

a wetland area ($32^{\circ}32'25''$ S, $52^{\circ}32'24''$ W) adjacent to the BR-471 highway (km-495) in the Taim Ecological Reserve, in southern Brazil (Figure 2). They were collected by beach seine hauls during a field trip conducted by the Ichthyology Laboratory of the Rio Grande Federal University (FURG) for the Brazilian Long-Term Ecological program (known in Brazil as 'Pesquisas Ecológicas de Longa Duração' - PELD). Specimens were preserved in 10% formalin and later identified based primarily on Giora and Malabarba (2009). Specimens examined were stored at the Ichthyology Laboratory in the same university (FURG 3018). These individuals collected in the Taim Ecological Reserve had their general pattern coloration similar to that described by Giora and Malabarba (2009), such as body color varying from light brown to yellow, head darker than the rest of the body, dorsal surface with chocolate-brown stains that are connected forming reticulated drawing contrasting with yellow background.

Brachyhypopomus gauderio is widely distributed in the central, southern and coastal regions of the Rio Grande do Sul (RS) state, southern Brazil, especially in lagoons, rivers margins, slow-moving creeks and flood areas



FIGURE 1. Picture of female *Brachyhypopomus gauderio* Giora and Malabarba 2009 collected in a wetland area of the Taim Ecological Reserve, Rio Grande do Sul state, Brazil (Picture by Fabiano Corrêa).

with abundant floating vegetation (Giora and Malabarba 2009). However, the latest fish inventory available for the Taim Ecological Reserve (Garcia *et al.* 2006) did not mention *B. gauderio* among the 62 fish species reported to occur in several freshwater sites of this ecological reserve. Therefore, the present work reports for the first time the occurrence of this recently described species of electric fish, *B. gauderio*, in this important conservation area in southern Brazil. This Federal Reserve created in 1978 harbors a unique freshwater wetland ecosystem

encompassing a variety of habitats such as beaches, dunes, forests, grasslands and, especially, lakes and wetlands (Motta Marques *et al.* 2002). Since its foundation, it has been a crucial area for conservation of local fauna from increasing anthropogenic impacts in its surroundings, such as water diversion for rice irrigation and fishing. The occurrence of this recently described species of electric fish in the Taim Ecological Reserve highlights the urgent need to reinforce conservation actions aiming to protect its aquatic habitats and biodiversity.

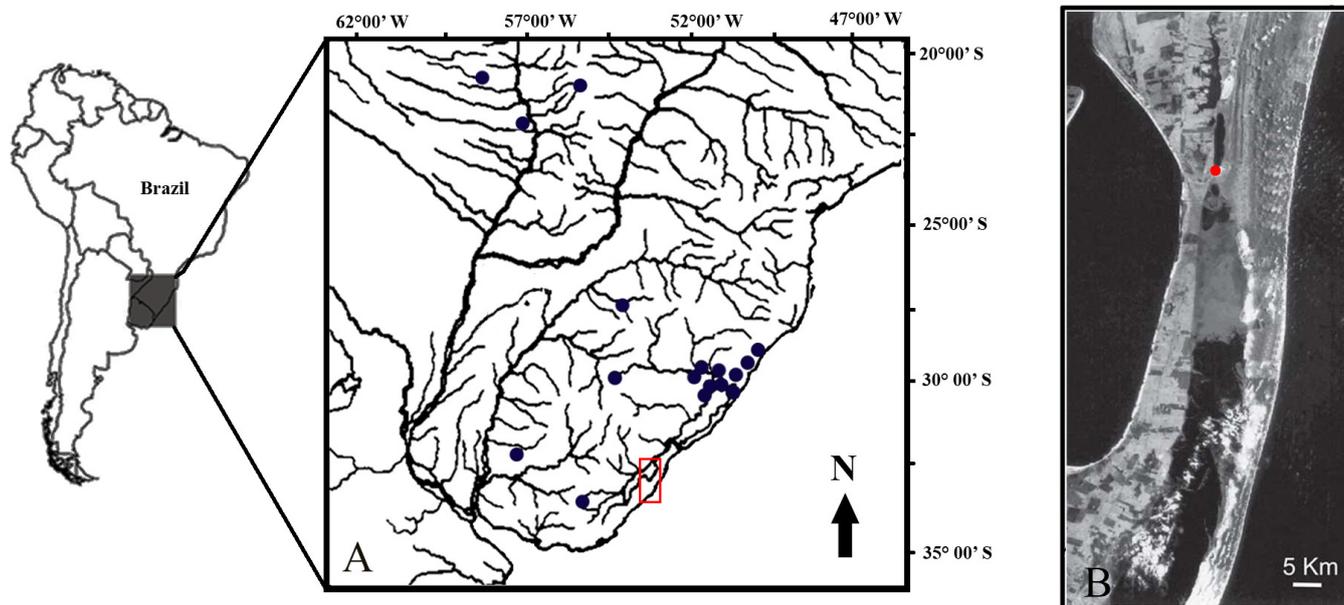


FIGURE 2. Southern Brazil (A) and the Taim Ecological Reserve (B) showing the location of the wetland area where the specimens of *Brachyhypopomus gauderio* were captured. Blue dots denote the previous known geographic distribution of *B. gauderio*. The red dot denotes the current record of *B. gauderio* inside the borders of the Taim Ecological Reserve.

ACKNOWLEDGMENTS: We are grateful to Júlia Giora and Luiz Roberto Malabarba for their assistance in species identification and Marluicy Coelho Claudino for her assistance in creating the location map.

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RECEIVED: September 2010

LAST REVISED: November 2010

ACCEPTED: January 2011

PUBLISHED ONLINE: January 2011

EDITORIAL RESPONSIBILITY: Marcelo Loureiro