

First record of *Diapoma pyrrhopteryx* Menezes & Weitzman, 2011 (Characiformes: Characidae) from freshwaters of Argentina.

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Abstract

Diapoma pyrrhopteryx is registered for the first time in freshwaters of Argentina, upper río Uruguay basin, in the province of Misiones. This species was found in arroyo Toro, tributary of the río Pepirí Guazú, the only river of Argentina included in the Upper Uruguay freshwater ecoregion. *D. pyrrhopteryx* is one of 27 endemic fish species known from this ecoregion.

Introduction

The genus *Diapoma* is part of the subfamily Stevardiinae, tribe Diapomini (Weitzman & Menezes, 1998; Thomaz et al., 2015a, b). According to the morphological study of Weitzman & Menezes (1998) the tribe Diapomini includes the genera *Diapoma*, *Acrobrycon*, and *Planaltina*. Based on the molecular study of Thomaz et al. (2015a,b) the tribe is much larger and composed of more and also different taxa such as *Attonitus*, *Bryconacidnus*, *Ceratobranchia*, *Diapoma*, *Knodus*, *Piabina*, *Piabarchus*, *Rhinobrycon*, *Lepidocharax*, many species of *Bryconamericus*, and possibly *Planaltina*.

According to Thomaz et al. (2015b), the genus *Diapoma* includes the following species: *D. alburnus* (Hensel, 1870), *D. alegretense* (Malabarba & Weitzman, 2003), *D. dicropotamicus* (Malabarba & Weitzman, 2003), *D. guarani* (Mahnert & Géry, 1987), *D. itaimbe* (Malabarba & Weitzman, 2003), *D. lepiclastus* (Malabarba, Weitzman & Casciotta, 2003), *D. obi* (Casciotta, Almirón, Piálek & Říčan, 2012), *D. pyrrhopteryx* Menezes & Weitzman, 2011, *D. speculiferum* Cope, 1894, *D. terofali* (Géry, 1964), *D. tipiaia* (Malabarba & Weitzman, 2003), *D. uruguayense* (Messner, 1962), and *D. thauma* Menezes & Weitzman, 2011. Six species of *Diapoma* have been reported from freshwaters in Argentina: *D. guarani* and *D. obi* (restricted to the río Paraná basin in Misiones province), *D. alburnus*, *D. lepiclastus* and *D. uruguayense* (río Uruguay basin), and *D. terofali* (río Paraná, río Uruguay, and Río de la Plata basins).

The aim of this paper is to report the first Argentinean record of *Diapoma pyrrhopteryx* from the arroyo Toro, upper río Uruguay basin. This stream is an affluent of the río Pepirí Guazú, the only river of Argentina included in the Upper Uruguay Freshwater Ecoregion, as defined by Hales & Petry (2015). *D. pyrrhopteryx* is one of 27 endemic fish species known from this ecoregion (Hales & Petry 2015).

Morphometric and meristic data were taken following Fink & Weitzman (1974) and Menezes & Weitzman (1990).

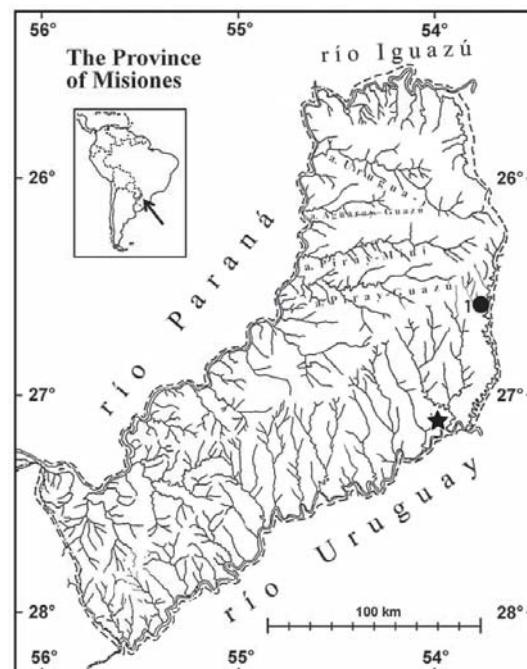


fig. 1. arroyo Toro (dot) and Moconá/Yucumá falls (star)



fig. 2. *Diapoma pyrrhoptyyx*, upon capture, MLP 10915, male, arroyo Toro

The identification of *D. pyrrhoptyyx* was made based on the original description published by Menezes & Weitzman (2011).

Diapoma pyrrhoptyyx. Morphometric data are given in Table 1.

According to Menezes & Weitzman (2011) and the specimens analyzed herein, *Diapoma pyrrhoptyyx* is distinguished from its congeners known from Argentina by the presence of a posterior bony expansion of the opercular and subopercular bones; males with adipose fin; upper portion of dorsal and caudal fins, posterior portion of pelvic fins, and ventral portion of anal-fin anterior lobe red in live specimens. The only specimen with red fins collected in the arroyo Toro presented some differences with respect to the description mentioned above (fig. 2).

The following values of meristic characters were counted in the specimens analyzed: dorsal-fin rays 2i,8; anal-fin rays 4i,24-27; pectoral-fin rays i,11; pelvic-fin rays i,6; lateral line scales incomplete with perforated scales in the anterior segment 11-14 followed by 8-10 non-perforated scales and a last segment with 13-16 perforated scales; lateral series scales 36-37, and scales between dorsal-fin origin and anal-fin origin 10-12.

All specimens discussed herein were collected in the río Uruguay basin, arroyo Toro, affluent of the río Pepirí Guazú, above the Moconá falls (figs. 1, 3).

Material examined:

MLP 10915, 4 specimens, 1 c&s; 51.9-53.1 mm SL; Argentina, río Uruguay basin, arroyo Toro, 26°36'32.8"S – 53°44'13.9"W.; coll. Casciotta et al. 19.Feb.2012

Acknowledgements

Thanks to Gustavo Pauni, the owner of the premises along the Toro stream, and to the authorities of the Ministerio de Ecología y Recursos Naturales Renovables de la provincia de Misiones for the fishing permits. Financial support was provided by Comisión de Investigaciones Científicas de la provincia de Buenos Aires (CIC), Facultad de Ciencias Naturales y Museo (UNLP), and Grant Agency of the Czech Republic (GAČR) (grant number 14-26060P) to Š.R.

fig. 3. Arroyo Toro, río Pepirí Guazú, río Uruguay basin, Misiones Province

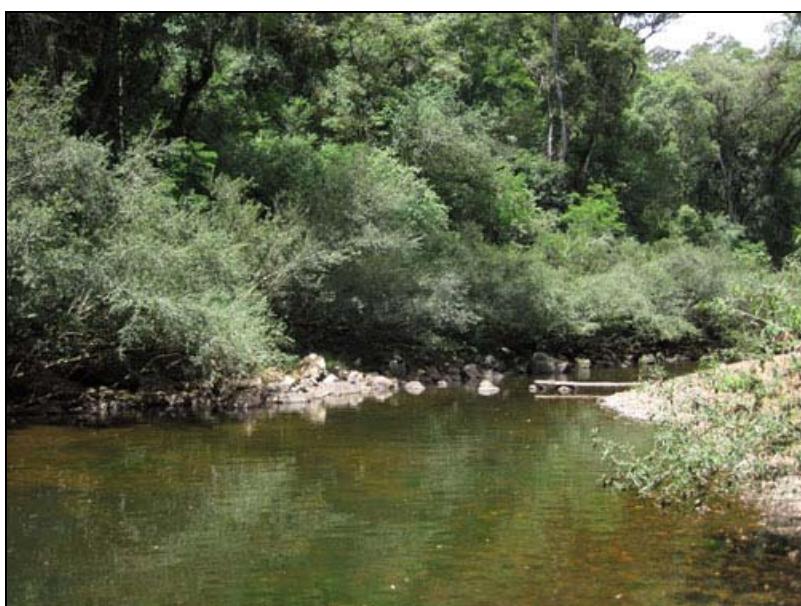


Table 1. Morphometric of four specimens of *Diapoma pyrrhoptynx*, MLP 10915.

	mean	range	SD
standard length (mm)	52.5	51.9-53.1	
percentage of standard length			
depth at dorsal-fin origin	30.1	29.5-31.3	0.78
snout to dorsal-fin origin	53.9	53.0-54.9	0.79
snout to pectoral-fin origin	24.7	24.2-25.2	0.46
snout to pelvic-fin origin	48.4	47.2-49.1	0.82
snouth to anal-fin origin	62.6	61.5-63.6	0.91
caudal peduncle depth	11.3	11.0-11.7	0.36
caudal peduncle length	9.1	8.7-9.6	0.45
pectoral-fin length	22.1	21.7-22.7	0.45
pelvic-fin length	14.7	14.4-14.9	0.21
dorsal-fin base length	10.9	10.5-11.2	0.27
dorsal-fin height	23.3	22.2-24.1	0.83
anal-fin base length	30.3	29.3-31.5	0.97
anal-fin lobe length	19.2	18.5-19.9	0.59
eye to dorsal-fin origin	43.1	42.6-43.6	0.45
dorsal-fin origin to caudal-fin base	47.0	46.1-47.7	0.69
bony head length	23.6	22.7-23.9	0.57
percentage of head length			
horizontal eye diameter	38.0	37.0-38.9	0.77
snout length	23.5	23.0-23.8	0.36
least interorbital width	33.4	32.3-34.1	0.82
upper jaw length	46.9	46.0-47.6	0.77

References

- Fink, W.L. & S.H. Weitzman (1974): The so-called cheirodontin fishes of Central America with descriptions of two new species (Pisces: Characidae). Smithsonian Contributions to Zoology 172: 1-46
- Hales, J. & P. Petry (2015): Freshwater Ecoregions of the World. 333 Upper Uruguay. Last updated 2.Oct.2015 when accessed 10.Mar.2016 on www.feow.org/ecoregions/details/upper_uruguay
- Menezes, N.A. & S.H. Weitzman (1990): Two new species of *Mimagoniates* (Teleostei: Characidae: Glandulocaudinae), their phylogeny and biogeography and a key to the glandulocaudin fishes of Brazil and Paraguay. Proceedings of the Biological Society of Washington 103 (2): 380-426
- Menezes, N.A. & S.H. Weitzman (2011): A systematic review of *Diapoma* (Teleostei: Characiformes: Characidae: Stevardiinae: Diapomini) with descriptions of two new species from Southern Brazil. Papéis Avulsos de Zoologia 51 (5): 59-82
- Thomaz A.T., D. Arcila, G. Ortí & L.R. Malabarba (2015a): Molecular phylogeny of the subfamily Stevardiinae Gill, 1858 (Characiformes: Characidae): classification and the evolution of reproductive traits. Evolutionary Biology 15 (146): 1-25
- Thomaz, A.T., D. Arcila, G. Ortí & L.R. Malabarba (2015b): Additional file 5 - New Stevardiinae classification. 9 unnumbered pages. Supplement to Thomaz et al. (2015a)
- Weitzman, S.H. & N.A. Menezes (1998): Relationships of the tribes and genera of the Glandulocaudinae (Ostariophysy: Characiformes: Characidae) with a description of a new genus, *Chrysobrycon*. p. 171-192. In: Malabarba, L.R., R.E. Reis, R.P. Vari, Z.M.S Lucena & C.A.S.Lucena (eds.): Phylogeny and classification of neotropical fishes. EdiPucrs, Porto Alegre. 603 p.

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Almirón, A., J. Casciotta, Š. Říčanová, K. Dragová, L. Piálek & O. Říčan (2016): First record of *Diapoma pyrrhoptynx* Menezes & Weitzman, 2011 (Characiformes: Characidae) from freshwaters of Argentina. Ichthyological Contributions of PecesCriollos 40: 1-3 available as pdf-file at www.pecescriollos.de since 13.Mar.2016