

## First record of *Pimelodella taenioptera* Miranda Ribeiro, 1914 (Siluriformes, Heptapteridae) from the río Paraná above río Paraguay confluence, Argentina.

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### Abstract

*Pimelodella taenioptera* is registered for the first time from the Argentinean bank of the río Paraná above its confluence with the río Paraguay. The specimens were captured close to Yahapé (27°22'12.1"S - 57°39'14.6"W) and Itá-Ibaté (27°25'49.7"S - 57°21'59.9"W) towns below Yaciretá dam. *Pimelodella taenioptera* is sympatric with *P. gracilis* and *P. laticeps*.

### Resumen

*Pimelodella taenioptera* es registrada por primera vez para la margen argentina del río Paraná por encima con su confluencia con el río Paraguay. Los especímenes fueron colectados cerca de la ciudades de Yahapé (27°22'12.1"S - 57°39'14.6"W) y de Itá-Ibaté (27°25'49.7"S - 57°21'59.9"W) debajo de la represa de Yaciretá. *Pimelodella taenioptera* vive en simpatria con *P. gracilis* y *P. laticeps*.

### Introduction

The genus *Pimelodella* is widely distributed in South America and it includes about seventy species (Bockmann & Guazzelli, 2003; Ferraris, 2007). In freshwaters of Argentina only *P. cristata*, *P. griffini*, *P. howesi*, *P. gracilis* and *P. laticeps* were registered. The first three species have only one or few records and the other two are very common and widespread distributed in the central-north of the country (Liotta, 2005).

The aim of this paper is to register for the first time the presence of *Pimelodella taenioptera* from the río Paraná in Argentina. *Pimelodella taenioptera* Miranda Ribeiro, 1914 was described from upper río Paraguay basin at State of Mato Grosso. Later Graça & Pavanelli (2007) mentioned this species from the upper río Paraná above Itaipu dam.

The río Paraná/Río de la Plata basin covers 3,100,000 km<sup>2</sup> and is the second largest basin of South America. During the last 40 years, the río Paraná and several of its main tributaries were interrupted and modified by about 30 large reservoirs for hydropower generation (Agostinho & Gomes, 2002). This cumulative effect of dams generates habitat fragmentation which may threaten biodiversity (Agostinho et al., 2004). One of largest reservoirs is the Yaciretá Dam, located in the río Paraná between Paraguay and Argentina.

During several collecting trips as part of intensive studies to assess the effects of Yaciretá Dam on lotic ecosystems, several specimens of *Pimelodella taenioptera* were caught in the area close to Yahapé and Itá-Ibaté towns. The samples were taken with gill nets and electrofishing. To describe the main habitat traits of the species, analyses of some physical and water quality parameters in the netting area were performed, including temperature, pH, conductivity (Hanna Instruments, USA) and dissolved oxygen (Yellow Spring Instruments, USA). Alkalinity and hardness were measured in-situ by titration and colorimetric methods (Hach kit Model FF-2, USA).

### *Pimelodella taenioptera* Miranda Ribeiro, 1914

#### Material examined

*Pimelodella taenioptera*: AI 243 1 ex., 130.0 mm SL, Argentina, Corrientes province, río Paraná at Yahapé 27°22'12.1"S - 57°39'14.6"W. coll: A. Gonzalez et al., November, 2006. AI 244 1 ex., 152.8 mm SL, Argentina, Corrientes province, río Paraná at Itá-Ibaté (27°25'49.7"S - 57°21'59.9"W). coll: A.

Gonzalez et al., November, 2007. AI 245 1 ex., 177.5 mm SL, Argentina, Corrientes province, río Paraná at Itá-Ibaté (27°25'49.7"S - 57°21'59.9"W). coll: A. Gonzalez et al., February, 2007.



Fig.1. Lateral view of *Pimelodella taenioptera* upon capture.

### Description

This species can reach 180 mm. Morphometry of *Pimelodella taenioptera* are provided in table 2. Body elongate and slender (five or six times in SL). Head short and large eyes. Maxillary barbels surpassing the anal fin origin, mental ones reaching the pectoral fin and the post mental ones reaching the dorsal fin origin. Dorsal fin origin nearer snout tip than caudal fin base. Adipose fin long, 2.0-2.3 times in standard length. Pectoral spine shorter than head length, serrated on anterior and posterior border. Caudal fin deeply forked, upper lobe much longer than lower one.

### Colour in life

Ground colour silvery grey (Fig. 1). Head and flanks and caudal fin with a dark stripe. Middorsal body with a black stripe from the rear part of head to the end of adipose fin. Dorsal and pectoral fin smoky.



Fig. 2. Río Paraná at Yahapé, where *Pimelodella taenioptera* was collected.

### Habitat

The specimens of *Pimelodella taenioptera* were collected in February and November of 2006 and 2007 in coastal areas of a narrowed reach of the Río Paraná main channel, downstream a prominent sandstone outcrop (Fig. 2). The main environmental variables of the habitat are presented in table 1. Depth varied between 1.5-2.5 m and the bottom was composed mostly by large boulders of sandstone with patches of sand and pebbles.

The species was found in well oxygenated waters having moderate to high current speed.

### Distribution:

*Pimelodella taenioptera* was captured in the río Paraná close to Yahapé (27°22'12.1"S - 57°39'14.6"W) and Itá-Ibaté (27°25'49.7"S - 57°21'59.9"W) towns (Fig. 3).

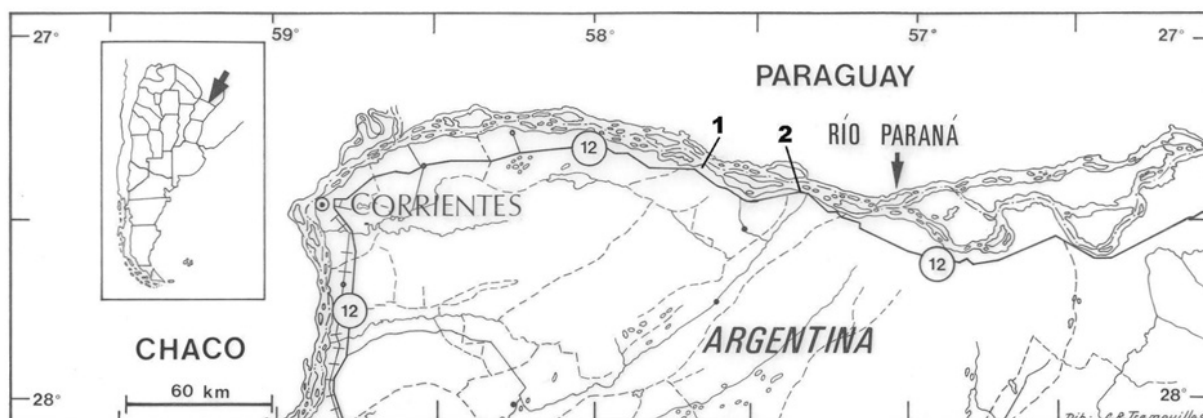


Fig. 3. Map showing the collecting sites of *Pimelodella taenioptera* in the río Paraná: 1. Yahapé. 2. Itá-Ibaté

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**Table 1**

Description of some environmental variables of the habitats where *Pimelodella taenioptera* was captured.

	Itá-Ibaté		Yahapé
	2007 November	2007 February	2006 November
Water Temp. (°C)	26.2	27.1	24.3
pH	6.85	6.91	7.06
Conductivity (µS cm <sup>-1</sup> ).	55.7	59.6	50.9
Dissolved Oxygen (mg l <sup>-1</sup> )	7.38	7.37	7.9
D.O. (% saturation)	89.9	92.9	95
Alkalinity (mg l <sup>-1</sup> )	13	21	22
Hardness (mg l <sup>-1</sup> )	-	16	18

**Table 2**  
Morphometry of *Pimelodella taenioptera*.

	Range	Mean	SD
Standard length (SL)	130.0-177.5		
<b>% of SL</b>			
Body depth	4.9-6.1	5.3	0.51
Head depth	6.5-8.5	7.4	0.83
Caudal Peduncle length	4.1-4.8	4.5	0.30
Caudal peduncle depth	12.0-13.1	12.5	0.52
Head length	4.3-4.8	4.6	0.18
Anal fin base	8.2-8.7	8.5	0.21
Adipose fin base	2.2-2.3	2.3	0.04
Maxillary barbells	1.2-1.6	1.4	0.15
<b>% of HL</b>			
Snout length	2.0-2.3	2.2	0.10
Orbital diameter	4.8-5.7	5.1	0.36
Interorbital width	3.5-3.7	3.6	0.13
Orbital diameter / snout length	2.1-2.8	2.4	0.26
Orbital diameter / interorbital width	1.3-1.5	1.4	0.09

## References

- Agostinho, A.A. & L.C. Gomes (2002): Biodiversity and fisheries management in the Paraná River basin: successes and failures. Blue Millennium–World Fisheries Trust CRDI-UNEP. Universidade Estadual de Maringá, Maringá, Brasil, 29 p.
- Agostinho, A.A., L.C. Gomes & J.D. Latini (2004): Fisheries management in Brazilian reservoirs: Lessons from/for South America. *Interciencia* 29 (6): 334-338
- Bockmann, F.A. & G.M. Guazzelli (2003): Family Heptapteridae. pp. 406-431. In: Reis, R.E., S.O. Kullander & C.J. Ferraris (eds.): Check list of the freshwater fishes of South and Central America. PUCRS. Porto Alegre, Brazil. 742 p.
- Ferraris C.J. (2007): Checklist of catfishes, recent and fossil (Osteichthyes: Siluriformes), and catalogue of siluriform primary types. *Zootaxa* 1418: 1–628.
- Graça, W.J da & C.S. Pavanelli (2007): Peixes da planície de inundação do alto rio Paraná e áreas adjacentes. Maringá: EDUEM, 2007. 241 p.
- Liotta, J. (2005): Distribución geográfica de los peces de aguas continentales de la República Argentina. *ProBiotá* - Serie Documentos 3. 701 p.

### to be cited as:

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