

Increased geographical distribution of *Potamorrhaphis guianensis* (Jardine, 1843) (Beloniformes: Belonidae) in the Brazilian Amazon Region

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Abstract. This study reports the first occurrence of *Potamorrhaphis guianensis* (Jardine, 1843) (Beloniformes: Belonidae) in the Praquiquara Igarapé, located in the Northeast Atlantic Basin of Brazil. As the distribution of this species was delimited in the Amazon, Orinoco and Paraná Basins, it is concluded that in recent years there has been an increase in the geographic distribution of *P. guianensis* in the Amazon Region.

Keywords: Teleostei; Needlefishes; Biogeography; New record.

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The Belontiidae Family, commonly known by needlefishes, has 10 genera and 48 species of fish that are distributed in the coastal region of the American continent (East Pacific and West Atlantic) and in freshwater basins of Central and South America (Lovejoy et al., 2001; Lovejoy and Collette, 2003). In the Neotropical Region there are three genera that live exclusively in fresh water (*Potamorrhaphis*, *Pseudotyllosurus* and *Belonion*) (Goulding and Carvalho, 1984; Collette, 2003; Lovejoy and Collette, 2003). Of these, currently the genus *Potamorrhaphis* presents more diverse, including four species (Sant'Anna et al., 2012). The morphological peculiarities of the genus *Potamorrhaphis* make their species distinguish themselves from other needlefishes (Collette, 1982). Such species are generally found in lakes and streams of the Amazon Basins, Orinoco, Paraná and coastal basins of the Guianas (Collette, 1982; Goulding and Carvalho, 1984).

In this, the first occurrence of *Potamorrhaphis guianensis* (Jardine, 1843) is recorded in the Praquiquara Igarapé, located in the Atlantic Northeast Atlantic Basin of Brazil.

The Praquiquara Igarapé, where *P. guianensis* was recorded, is located in the Castanhal Municipality, which belongs to the Brazilian Atlantic Northeast Hydrographic Region, which is constituted by the river basins that flow in the Atlantic (Northeast), being limited to the West by the Hydrographic Region of Tocantins/Araguaia, and to the East by the Hydrographic Region of Parnaíba (Pará, 2012).

The two *P. guianensis* were recorded in December 2014, being collected with a 10 mm mesh jar, morphometry was performed and a photograph was recorded to help identify taxonomy, based on the morphological characteristics proposed by Sant'Anna et al. (2012). After the morphometric measurement, the individuals were returned to the water body.

The two individuals of the species *P. guianensis* (Figure 1) found in the Praquiquara Igarapé had a very similar total body length (Table 1) with 25.96 cm and 25.70 cm, respectively. The individuals were found in an area of the stream where the water movement is almost imperceptible.



Figure 2. *Potamorrhaphis guianensis* (Jardine, 1843) recorded in the Praquiquara Igarapé. Scale = 5 cm.

Although *P. guianensis* is more widely distributed in the Amazon Region, the Amazon, Orinoco and Guyana Basins

were delimited (Collette, 2003; Sant'Anna et al., 2012). Since the occurrence in the Brazilian Northeast

Atlantic Hydrographic Region, it is evident the expansion of its geographic distribution in the Brazilian territory and, consequently, in the Amazon Region. It is noteworthy that in the Praquiquara Stream recently, the occurrence of

electric fish *Electrophorus electricus* (Linnaeus, 1766) was recorded, which also, consequently, shows the increase in its geographic distribution in the Amazon Region (Chagas et al., 2017).

Table 1. Biometric measurements (cm) of the specimen of *Potamorrhaphis guianensis* collected at the Praquiquara Igarapé, in December 2014.

Biometric parameters	Individual 1	Individual 2
Total length	25.96	25.70
Standard length	25.26	24.45
Maximum body height	1.77	1.42
Preorbital length	6.48	6.70
Head height	1.37	1.02
Eye height	0.60	0.52
Eye diameter	0.71	0.65
Pectoral to anal distance	9.32	9.47
Preal length	11.83	11.44
Dorsal to anal fin distance	1.48	1.30
Trunk length	9.78	9.17
Head length	8.87	8.74
Height of the caudal pendulum	0.59	0.62
Length of jaw	5.86	6.19

The ichthyofauna of the Amazon Region has been historically studied, however, the work mostly delimits the Amazon Basin and the Orinoco Basin. This fact makes many Amazonian species present their geographical distribution limited to these two regions. In this way, this work evidences a need for more studies aiming at the characterization of the ichthyofauna of the other hydrographic basins present in the Amazon Region.

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Conflicts of interest

Authors declare that they have no conflict of interests.

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