

The opportunistic behaviour of a common predator in aquatic systems in Amazonia: predation on robber-frog *Pristimantis* cf. *fenestratus* by trahira *Hoplias malabaricus* (Bloch, 1794)

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Anurans are considered extremely important animals for the food web, since they act as predators and prey for several animal species (Duellman and Trueb, 1994). The Neotropical rainfrogs of the genus *Pristimantis* (Terrarana: Craugastoridae) are distributed from Honduras through Central America and through Colombia and Ecuador to Peru, Bolivia, northern Argentina, and Amazonian and Atlantic Forests of Brazil, and in the Guianas, Trinidad and Tobago, Grenada, and the Lesser Antilles (Frost, 2016). These frogs are commonly found on the forest floor and on vegetation, and possess direct development (Heinicke et al., 2007; Hedges et al., 2008; Duellman and Lehr, 2009), which makes them independent of water bodies for oviposition or larval development. They are commonly found throughout the year among the leaf-litter or perched

on shrubs up to two meters high, in habitats ranging from upland sites not subject to flooding to seasonally flooded areas (Duellman, 2005).

The trahira or wolf-fish, *Hoplias malabaricus* (Bloch, 1794) (Characiformes: Erythrinidae), is a species that can be found in several types of aquatic environments (Bialetzki et al., 2002). This freshwater fish is sedentary and may remain in the same territory throughout life (Bialetzki et al., 2002). They are found in Central and South America in most rivers basins (Froese and Pauly, 2016). This work reports the predation of *Pristimantis* cf. *fenestratus* by *Hoplias malabaricus*.

The predation event occurred on 01 September 2014, at 02:20 a.m., in a small stream (-10.719028°S, -63.613028°W) at the Parque Nacional dos Pacaás Novos, municipality of Campo Novo de Rondônia, Rondônia state, Brazil. The trahira was swallowing the frog by the hind portion of the body and carrying it underwater (Figure 1). The species of *Hoplias* are mainly fish-eaters including in its diet *Astyanax* spp., *Crenicichla lacustris*, *Cyphocharax gilberti*, *Leporinus steindachneri*, *Lycengraulis* sp.; *Oligosarcus solitarius* (Pompeu and Godinho, 2001; Gomiero and Braga, 2008), and sometimes are cannibalistic (Pompeu and Godinho, 2001), but also reported as opportunistic predators (Machado-Allison, 1994; Pompeu and Godinho, 2001). Food items for trahiras also include crustaceans, molluscs and insects (Gurgel and Canan, 1999; Pompeu and Godinho, 2001; Gomiero and Braga, 2008; Froese and Pauly, 2016). Andrade et al. (2012) published a case of predation of the leptodactylid frog *Leptodactylus macrosternum* by *Hoplias malabaricus* in Piauí state, Northeastern Brazil. Most leptodactylid frogs depends of water bodies for development of larval stages, unlike the Terrarana (see Hedges et al., 2008). Thus, the *Pristimantis* of our report probably fell into

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Figure 1. *Hoplias malabaricus* (Bloch, 1794) eating a *Pristimantis* cf. *fenestratus* in lentic water, in the Parque Nacional de Pacaás Novos, Rondônia state, Brazil. Photo by Kaynara Delaix Zaqueo.

the pool while it was choosing a calling site. This new report shows the importance of uncommon prey items in the diet of generalist aquatic predators and we suggest that this fact could occur more often than we know.

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