

First record of the Resplendent Frog *Allophryne resplendens* Castroviejo-Fisher et al., 2012 in Brazil (Anura: Allophrynidae)

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The treefrog family Allophrynidae Savage, 1973 was described to allocate *Allophryne ruthveni* Gaige, 1926, which was originally identified as a bufonid (Gaige, 1926). The family was considered to be monotypic for over four decades, until meristic, morphometric, and molecular data supported the description of *A. resplendens* by Castroviejo-Fisher et al. (2012) from the Peru-Brazil border. A discontinuously distributed third species, *Allophryne relict*a Caramaschi et al., 2013 was described the following year from the Atlantic Forest in northeastern Brazil, and it has been used as an evidence that Amazonia and Atlantic Forest were connected in the past (Caramaschi et al., 2013). While *A. ruthveni* is widely distributed throughout lowland rainforests in northern South America (Frost, 2017), the ranges of the other species do not seem to extend much beyond their type localities. However, our knowledge on the geographical range and ecological requirements of frogs in the family Allophrynidae has been severely limited by the species' rarity in frog samplings (Castroviejo-Fisher et al., 2012; Caramaschi et al., 2013).

Allophryne resplendens is known from two localities in Loreto, northeastern Amazonian Peru (type locality: Lago Preto, Río Yavarí, Provincia Ramon Castilla, ca. 4.4523°S, 71.7464°W). The species is mainly found in *várzea* seasonally-flooded forests (Castroviejo-Fisher et al., 2012), which suggests that its ecology may be influenced by seasonal flood pulse. Additionally, individuals have been found perched on tree leaves and branches below 2 m above ground, which suggests a low-strata arboreal lifestyle. However, habitat use and reproduction of *A. resplendens* are poorly known, probably because the species occurs at low densities and/or low detection probabilities (Castroviejo-Fisher et al., 2012). Here we present occurrence data of *A. resplendens*, which contribute to the general knowledge of the species by extending its known range into the rainforests of the Brazilian Amazon.

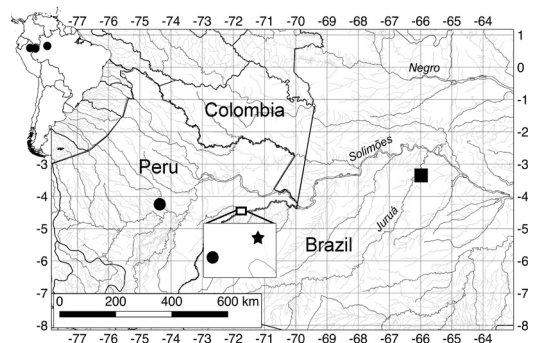


Figure 1. Geographical range of *Allophryne resplendens* in the Amazon lowlands. The type locality is identified by the star, and two other Peruvian localities are identified by circles. The square denotes the locality of the specimen described in this study. The rectangle presents a close-up of two localities in Peru adjacent to the Brazilian border (grey line in the rectangle). Italics identify the names of the main rivers in this area of the Brazilian Amazon.

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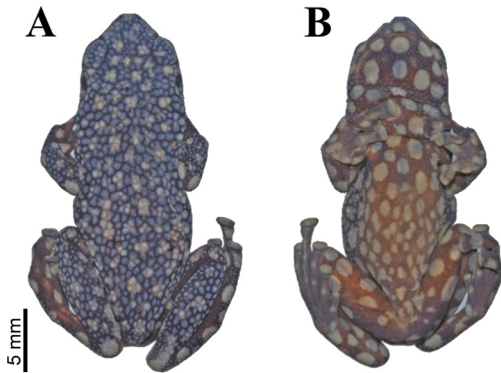


Figure 2. Preserved adult female *Allophryne resplendens* (SVL 28.2 mm; INPA–H 23098) from a *várzea* forest on the right bank of the Juruá River, Amazonas, Brazil. (A) Dorsal and (B) ventral views.

On 24 January 2006 we found an adult female *A. resplendens* (snout–vent length 28.2 mm; Instituto Nacional de Pesquisas da Amazônia Herpetology Collection, INPA–H 23098) in an extractive reserve (a reserve in which riverine people can live and explore natural resources for survival) situated on the right bank of the Juruá River (Reserva Extrativista do Baixo Juruá, Comunidade Antonina, Juruá Municipality, Amazonas, Brazil; 3.2694°S, 65.9919°W, WGS 84). This record extends the species' range by a straight-line distance of 660 km east from the previous easternmost record at the type locality (Fig. 1). The specimen was found perched on a tree leaf (1.60 m above the ground) in *várzea* forest. Species identification was based on the bright glossy spots covering the dorsal and ventral surfaces (Fig. 2), which form a pattern unlikely to be confused with its Amazonian congener, *A. ruthveni* (Castroviejo-Fisher *et al.*, 2012). This pattern is also useful for identifying specimens after preservation (*sensu* Castroviejo-Fisher *et al.*, 2012).

The high environmental complexity and biodiversity of tropical forests are a challenge for the natural sciences. For instance, although intense frog sampling efforts have been employed in different regions of the Brazilian Amazon (e.g. Ribeiro *et al.*, 2012; Rojas-Ahumada *et al.*, 2012; Ferrão *et al.*, 2016), the occurrence of *A. resplendens* in Brazil is reported here for the first time. The simple fact that the species occurs in Brazil is not very surprising because the type locality in Peru is very close to the Brazilian border (Castroviejo-Fisher

et al., 2012). However, the expansion of the known range by about 660 km into Brazil indicates that insufficient sampling may have biased geographical and environmental data for *A. resplendens*. This is an alert for conservation, because while science still lacks basic data on the tropical biodiversity, megadiverse forests such as the Amazon, continue to be threatened by human expansion and hydroelectric dams (Fearnside and Graça, 2006; Fearnside, 2014).

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