Notas de História Natural & Distribuição Geográfica

Filling gap on the distribution of *Dendropsophus sarayacuensis* (Shreve, 1935) (Amphibia: Anura: Hylidae) and geographic distribution map

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The captivating clown tree frogs of the *Dendropsophus leucophyllatus* group comprise a monophyletic lineage that includes 14 species that are widespread in rainforests in South and Central America (Caminer et al., 2017; Pirani et al., 2020; Orrico et al., 2021). One of the species of this group is *Dendropsophus sarayacuensis*, a small, nocturnal, arboreal frog, typically Amazonian, occurring in Mato Grosso and northern Brazil, Bolivia, Peru, Ecuador and Colombia (Frota & Vaz-Silva, 2013; Ávila et al., 2021). It differs from the other species in the group by its size [snout-vent length (SVL) in males 24.9–33 mm]; an interorbital "T-shaped" light mark; a light dorsolateral mark, extending from tympanic region to mid-body; light blotches in arms and legs, at least one on elbow, on knee and on heel (Shreve, 1935; Rivera-Correa & Orrico, 2013; Peloso et al., 2016). During field-

work in Estação Ecológica Rio Acre, in West Amazon Forest, we found an individual of *D. sarayacuensis* that filled a gap in its known distribution. Herein we provide a table with literature records of this species and a geographic distribution map.

On February 10th 2021 at 20:47h, in Estação Ecológica Rio Acre (hereafter ESEC Rio Acre; -11.038°, -70.220°), municipality of Assis Brasil, state of Acre, northern Brazil, we found a male of *Dendropsophus sarayacuensis* (SVL = 30.3 mm; Fig. 1) vocalizing on the upper surface of a leaf of Heliconiaceae, approximately 170 cm above ground, in an *igapó* area (seasonally flooded forest). When we approached the calling male, a distinct herbal odor was detected. The specimen was collected under SISBIO licence (SISBIO 81835-1), killed with lidocaine (5%), fixed in 10% formalin, preserved in 70% ethanol, and deposited in the Zoological Collection of the Universidade Federal de Mato Grosso do Sul (ZUFMS-AMP15377).

The herbal smell of the species was first noticed by Rodrigues and Duellman (1994) and this feature, along with the advertisement call, helped us to find the specimen. *Dendropsophus sarayacuensis* is frequently associated with lentic ecosystems, where males vocalize perched on branches and leaves of emergent herbaceous vegetation (see Bartlett & Bartlett, 2003; Rodrigues & Duellman, 1994). However, in this study the specimen was calling on a leaf approximately 170 cm above ground. This behavior may be due to the torrential rains that occurred during our sampling period, flooding the sites where the species is most often found in reproductive activity.

In this study, we report for the first time the presence of *D. sarayacuensis* in ESEC Rio Acre (Table 1). The species had never been previously recorded from the region (Freitas et al., 2020). Frota and Vaz-Silva (2013) indicated erroneously a study in Rondônia as a literature record for the species. In fact, this paper not only did not report finding the species, but also suggested that it does not occur there (Vanzolini, 1986). Peloso et al. (2016) later reported a record for the west of the state while analyzing collection material. Although the species has been reported from elevations between 20 m and 600 m, some locations were defined based on the centroid of the locality provided by the paper, as the record for Bolivia (Riva et al., 2000), reported from 3,694 m elevation, likely an erroneous record. This map updates the information about the distribution pattern of *D. sarayacuensis* in the Amazon basin and includes a new record in a Conservation Unit (ESEC Rio Acre) (Fig. 2), which reinforces the Amazonian distribution of this species.

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Figure 1. *Dendropsophus sarayacuensis* (ZUFMS-AMP15377) from Estação Ecológica Rio Acre, municipality of Assis Brasil, AC, Brazil. Photo by DGC.

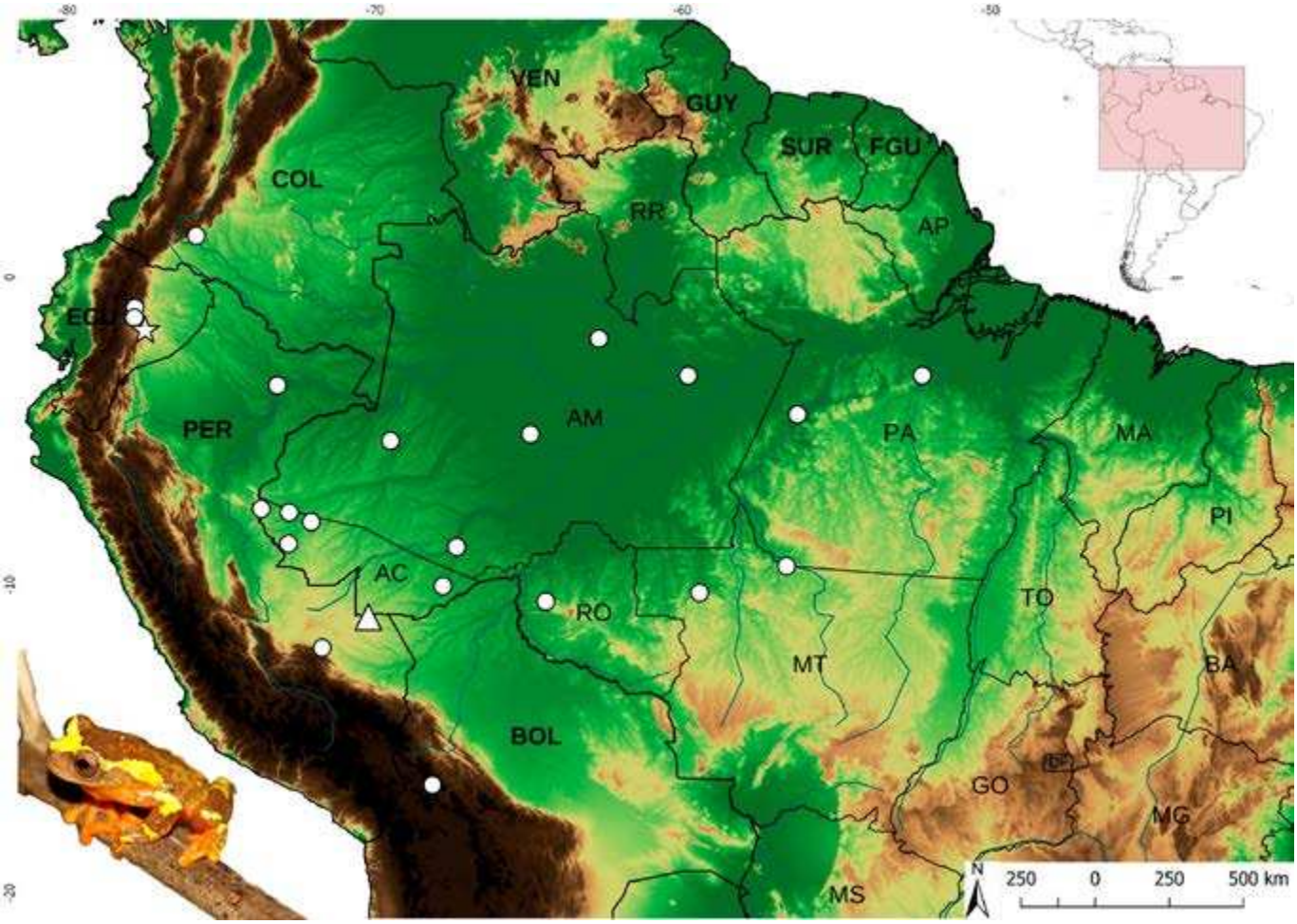

Figure 2. Distribution map based on records (see Tab. 1) of the clown-tree-frog, *Dendropsophus sarayacuensis*. Circles represent literature records; the triangle represents the new record, and the star represents the type locality. Abbreviations of the Brazilian states: AC = Acre; AM = Amazonas; MT = Mato Grosso; PA = Pará; RO = Rondônia.

Table 1. Literature records of localities where it occurs *Dendropsophus sarayacuensis*. Localities are referred to as locality, municipality, and state.

Locality	Country	Lat.	Long.	Altitude	Reference
Pando, La Paz, Beni	Bolivia	-16.491°	-68.140°	3,694 m	Riva et al., 2000
Vila Raiol, Itaituba, Pará	Brazil	-4.464°	-56.269°	23 m	Frota & Vaz-Silva, 2013
Jutaí, R.D.S. Cujubim, Rio Curuena, Amazonas	Brazil	-5.321°	-69.503°	117 m	Peloso et al., 2016
Careiro da Várzea, Manaus, Amazonas	Brazil	-3.197°	-59.825°	19 m	Peloso et al., 2016
Parque Estadual Guajará Mirim, Rondônia	Brazil	-10.537°	-64.454°	339 m	Peloso et al., 2016
Parque Nacional do Jaú, Amazonas	Brazil	-1.998°	-62.728°	49 m	Neckel-Oliveira & Gordo, 2004
Boca do Acre, Amazonas	Brazil	-8.770°	-67.346°	106 m	França & Venâncio, 2010
Altamira, Pará	Brazil	-3.194°	-52.217°	145 m	Knispel and Barros, 2009
Reserva Extrativista Riozinho da Liberdade, Acre	Brazil	-7.955°	-72.076°	195 m	Bernarde et al., 2011
Coari, Amazonas	Brazil	-5.099°	-64.954°	85 m	Prudente et al., 2013
Lower Moa River, Acre	Brazil	-7.639°	-72.795°	194 m	Miranda et al., 2015
Parque Ambiental Chico Mendes, Acre	Brazil	-10.036°	-67.795°	156 m	Venâncio & Souza, 2016
Parque Nacional da Serra do Divisor, Cruzeiro do Sul, Acre	Brazil	-7.529°	-73.703°	268 m	Souza, 2009
Estação Ecológica Rio Acre, Assis Brasil, Acre	**Brazil**	**-11.038°**	**-70.220°**	**326 m**	**This study**
Aripuanã, Mato Grosso	Brazil	-10.250°	-59.457°	240 m	Ávila et al., 2021
Paranaita, Mato Grosso	Brazil	-9.387°	-56.628°	285 m	Ávila et al., 2021
Caquetá, Belén de los Andaquíes, Agua Dulce	Colombia	1.338°	-75.813°	266 m	Navarro-Morales & Ruiz-Valderrama, 2019
Sarayacu, Pastaza (type locality)	Ecuador	-1.733°	-77.483°	407 m	Peloso et al., 2016
Napo	Ecuador	-0.995°	-77.813°	507 m	Peloso et al., 2016
Palta, Pastaza	Ecuador	-1.804°	-77.348°	377 m	Peloso et al., 2016
Santa Cruz Forest Reserve	Peru	-3.521°	-73.180°	115 m	Metcalf et al., 2020
Parque Nacional del Manu, Madre de Dios	Peru	-12.040°	-71.723°	633 m	López & Ruiz Santillán, 2016