

Nota

First record and distribution range extension of Large-billed Antwren, *Herpsilochmus longirostris* (Birds: Thamnophilidae) for the Pando department and new record for La Paz (Bolivia)

Primer registro y extensión de rango de distribución del Tiluchi Piquilargo, *Herpsilochmus longirostris* (Aves: Thamnophilidae) para el departamento de Pando y nuevo registro para La Paz (Bolivia)

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The antbirds (Thamnophilidae) are distributed from southern Mexico to northern Argentina (Zimmer & Isler 2003), reaching its greatest diversity in the Amazon with 224 species (Remsen *et al.* 2016). The Large-billed Antwren (*Herpsilochmus longirostris*) is mainly found in northeastern and south-central Brazil (Zimmer & Isler 2003), in the states of Tocantins (Dornas 2009), eastern Goiás (Scaramuzza *et al.* 2005), southern to western Paraná (Zimmer & Isler 2003), western São Paulo (Almeida 1979, Cavarzere & Arantes 2017), Brasília (Cavalcanti & Abs-Bianchi 2012), Maranhão (Carvalho *et al.* 2017), as well as Pernambuco, Piauí and Ceará (Nascimento *et al.* 2000). In Brazil, *H. longirostris* is considered endemic to the Cerrado (Leite 2006, Dornas 2009, Tufi 2011, Posso *et al.* 2013, Cavarzere & Arantes 2017), the second largest Brazilian biome with 1.8 million km² (Silva 1996, Tufi 2011) and is a species of conservation concern in the state of Goiás (Scaramuzza *et al.* 2005).

In Bolivia, 82 species of antbirds occur (Herzog *et al.* 2016). Here, *H. longirostris* is only found in gallery forests and flooded savannas of the Beni Department and the Cerrado in the Serranía de Huanchaca in the Parque Nacional Noel (PNN) Kempff-Mercado, north of Santa Cruz (Hennessey *et al.* 2003, Herzog *et al.* 2016). The state of knowledge of the species in the La Paz Department is poor. The presence of the species in the department needs to be confirmed, and there is only one historical record made between 1996-1997 in Puerto Moscoso, on the Heath River (Stotz *et al.* 2002, Hennessey *et al.* 2003,

Herzog *et al.* 2016). This paper documents the first record of *H. longirostris* for the Pando department and another new record of the species in the La Paz department, and also describes the habitat of the species and aspects of range extension.

Between 30 October and 25 November 2006, an ornithological study was conducted in the Reserva de Vida Silvestre (RVS) Bruno Racua (Martínez, unpublished), Pando department (Bolivia) (Fig. 1), using five mist nets (12 m-long) and covering five sites (Las Piedritas, Arroyo Yatorana, Arroyo Tambaquicito, Nueva Esperanza and Puerto Abuná). On 17 November 2006, two females of *H. longirostris* were captured in the Arroyo Tambaquicito (09°55.47'S, 65°20.18'W, 110 m), Federico Román Province (Fig. 2a, Table 1), in a *terra firme* forest transitional to *várzea* forest in a seasonally flooded plain with *Lueheopsis*, *Ocotea* and *Tachigali* plants and *Symphonia* marshes (Alverson *et al.* 2003). In *terra firme* forest trees, with diameters of 1.5 m, reach heights up to 45 m, whereas in the *várzea* forests surveyed the canopy varies between 20 and 30 m in height.

Between July 2007 and May 2010, a biodiversity study was conducted in areas of production of Brazilian-nut (*Bertholletia excelsa*; Martínez *et al.* in prep.). Four expeditions were carried out in the Pampas del Heath and Toromonas, La Paz Department (Bolivia), covering four sites (Arroyo Negro, Tacuaral, Green Bolivia and Toromonas) using 10 mist nets (12 m-long) (Fig. 3). On 27 September 2007, a female of *H. longirostris* was

captured in Green Bolivia (12°40'48.46"S, 68°42'45.41"W, 210 m), located on the Heath River, La Paz Department, Bolivia. (Fig. 2b, Table 1), in the understory of *terra firme* forest with an abundance of "patujú" palms (*Heliconia* sp.). This site is in a transition to the Pampas del Heath with savannas. In Brazil, *H. longirostris* is found in gallery forests, humid forests and Cerrado, and it is exclusively dependent on these environments for foraging and reproduction (Silva 1997, Tufi 2011). Other habitats also used by this species

include dry forests (tropical subdeciduous rainforest) of the domain of "caatingas", plant formations at the edges of the wet bush and the arboreal *caatinga* (e.g. *Anadenanthera carpa*, *Astronium urundeuva* and *Thiloua glaucocarpa*) (Nascimento *et al.* 2000). In eastern Bolivia, it has been recorded from the Chiquitano dry forest (Vides-Almonacid *et al.* 2007). In the PNN Kempff-Mercado it was found in only one (Huanchaca II) of 15 locations studied, where it was recorded in gallery forest and was considered rare (Bates & Parker 1998).

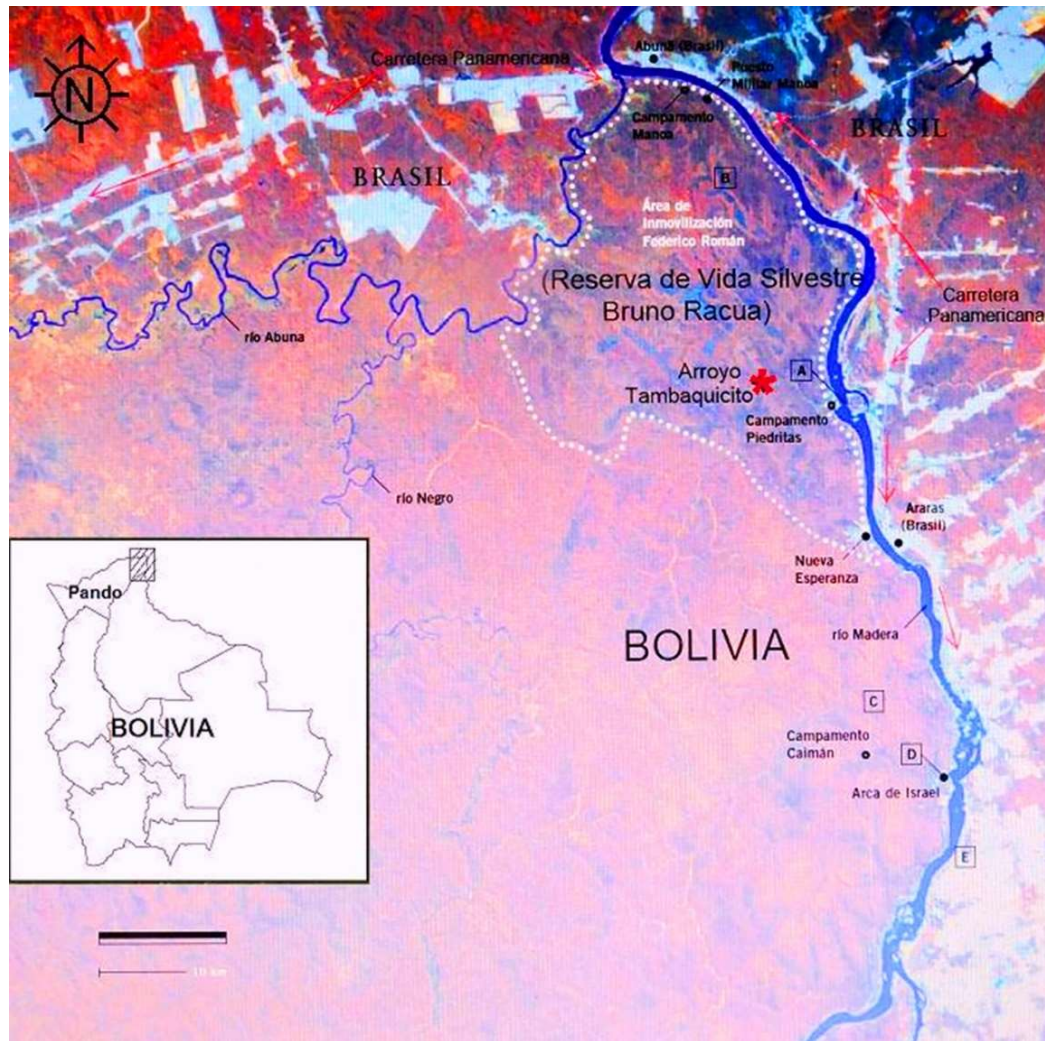


Figure 1. Map of the Reserva de Vida Silvestre Bruno Racua, Federico Román Province (Bolivia) and our study site on Arroyo Tambaquicito (red asterisk). A, B, C, D and E were the study sites of the Rapid Biological Inventories (RBI) 06: Bolivia: Pando, Federico Román (modified from Stotz *et al.* 2003).

Table 1. Biometric data of three females of the Large-billed Antwren (*Herpsilochmus longirostris*) captured at two sites in the Bolivian Amazon. Legend: Biometric data: TL = total length, WL = wing length, BL = bill length, WS = wing span, TA = tail length, and TS = tarsus length. ¹ = First record for the Department of Pando (Bolivia) and * = new record for the La Paz Department (Hennessey *et al.* 2003, Herzog *et al.* 2016).

#	Site	Date	Sex	Biometric data (cm)						Mass (g)
				TL	WL	BL	WS	TA	TS	
1	Arroyo Tambaquicito, Pando ¹	17/11/2006	♀	13.0	7.0	1.75	17.0	5.0	2.0	23.0
2	Arroyo Tambaquicito, Pando ¹	17/11/2006	♀	14.0	6.9	1.70	-	6.5	2.0	23.5
3	Green Bolivia, La Paz*	27/09/2007	♀	13.0	6.8	2.3	16.0	5.0	1.9	24.0



Figure 2. Females of the Large-billed Antwren (*Herpsilochmus longirostris*) captured in A. Pando Department and B. La Paz Department. Photos: Omar Martínez.

Using the GARP program, a potential distribution map of *H. longirostris* was generated for the Cerrado biome, where the species has a higher probability of occurrence in the western areas, spreading into the state of Rondônia and north-northeast Bolivia (Leite 2006). The Cerrado includes the central Brazil, with small extensions into northeastern Paraguay and eastern Bolivia (Silva 1996, Silva & Bates 2002), where 759 species of birds (30 endemic) occur. Of those, only 14% of them, including *H. longirostris*, have distributions of more than 1000 km² within this region (Silva & Bates 2002). Therefore, the presence of the species in the Pando Department was to be expected, although in an ornithological survey conducted in the RVS Bruno Racua (Stotz *et al.* 2003) the species was not recorded, even in areas adjacent to the eastern part of the reserve and on the Madera River, in the

state of Rondônia, Brazil (Olmos *et al.* 2011). This may be because Rondônia, at least in riparian areas adjacent to the Madera River, is highly impacted by the Pan-American Highway around Bolivia and by the conversion of forests into open grazing areas (see Fig. 1). This suggests that the species is expanding its range across Bolivian territory to the northeastern of Pando through a corridor between the Serranía de Huanchaca and the Beni plain, as previously proposed by birds associated with the Cerrado savannas, whose movements are influenced by broad savanna corridors in the central Amazon (Silva & Bates 2002). In the center of the RVS Bruno Racua there are extensive pampas and leafy savannas with palms and low forests that can be colonized by the species and communities of birds specialists from the Cerrado.

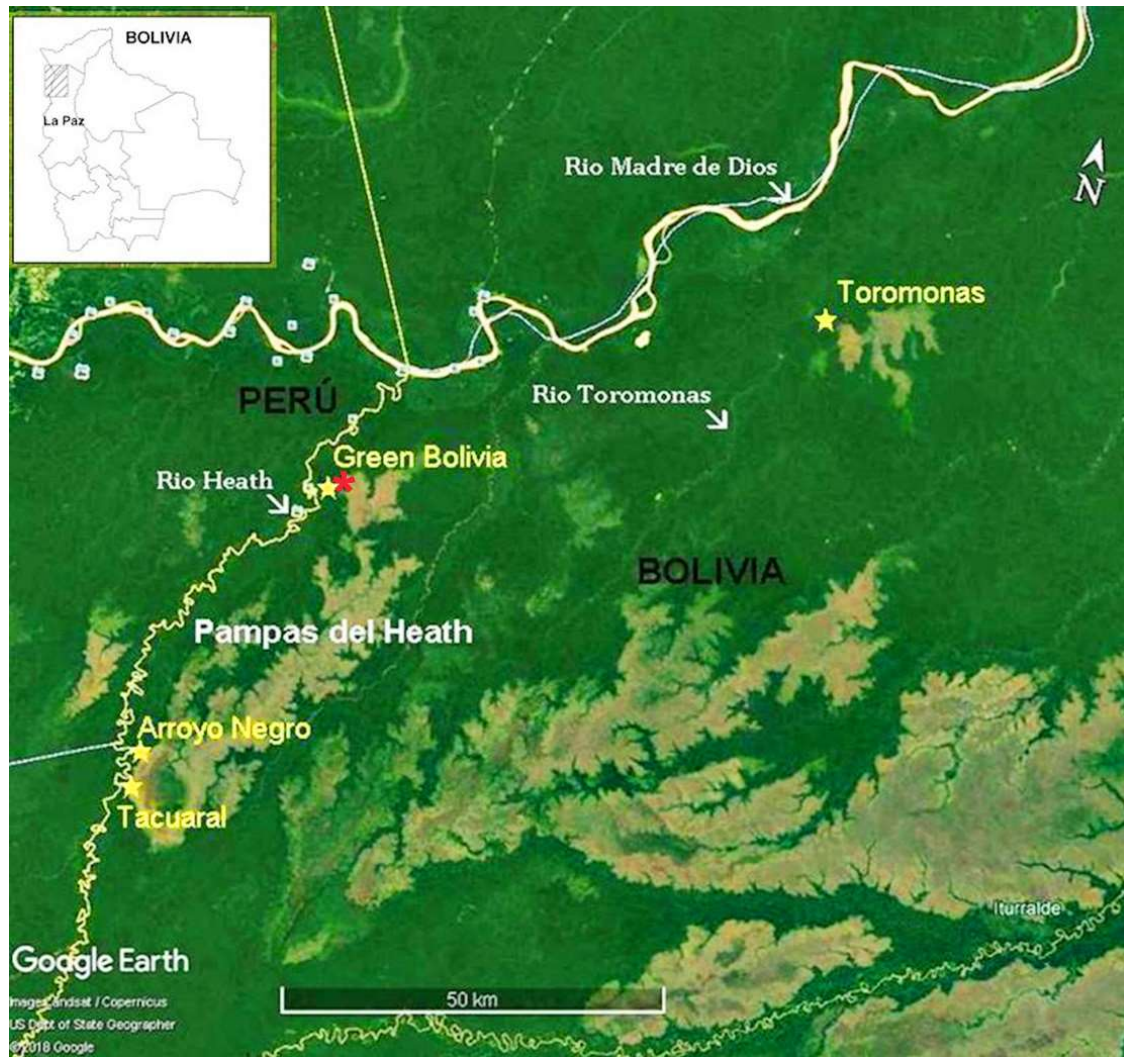


Figure 3. Map of the study sites in the Pampas del Heath and Toromonas. Large-billed Antwren was recorded in Green Bolivia (red asterisk), Iturrealde Province, La Paz department, Bolivia.

For La Paz Department, the RAP ornithological survey of 1996-1997 (Stotz *et al.* 2002) reported 13 new bird species for the department, including *H. longirostris*, which was considered uncommon in Puerto Moscoso, on the Heath River, Iturrealde Province (Bolivia). This site is characterized by a narrow strip of forest about 100 m between the banks of the Heath River and the Pampas del Heath, with extensive wooded savannas. Here, the species was recorded in forest patches on a matrix of savanna or pampas grasslands (Stotz *et al.* 2002). The present record from Green Bolivia confirms the presence of the species in what is known as the Cerrado Paceño, which is a continuity of the vegetation of the Brazilian Cerrado where the largest populations of the species are located. The present extralimital record is the first for the Pando Department and marks an extension of the species' distribution to extreme northeastern Bolivia, approximately 230 km from its most northern records in the Beni plain.

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