



Nota

**Status of knowledge of the genus *Polytmus* (Aves: Trochilidae) in Bolivia:  
new records for the Amazon of La Paz and Pando**

Estado de conocimiento del género *Polytmus* (Aves: Trochilidae) en Bolivia:  
Nuevos registros para la Amazonia de La Paz y Pando

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The Trochilidae family is the most numerous of the non-passerine birds and exclusive of the New World, distributed from Alaska to Tierra del Fuego, reaching a diversity of 365 species (Schuchmann *et al.* 2020), of which 246 are typical of South America (Remsen *et al.* 2021). Three species of the genus *Polytmus* are known in South America (Remsen *et al.* 2021), from Venezuela, central and eastern Brazil to northeastern Argentina: one of them (*P. milleri*), with a very limited distribution, is endemic to tepuis in eastern Venezuela and Roraima (Brazil), while the others two (*P. guainumbi* and *P. theresiae*) are savannah and Amazonian humid forest species (Rodríguez-Mata *et al.* 2006, Schuchmann *et al.* 2020).

In Bolivia occur 79 species of hummingbirds, two of them of the genus *Polytmus* (*P. theresiae* and *P. guainumbi*) (Herzog *et al.* 2016), of which only *P. guainumbi* was known in the country until early 2000 (Hennessey *et al.* 2003). In the last decade the presence of *P. theresiae* was reported, mainly in northern Beni (Herzog *et al.* 2016) and Pampas del Heath, northern La Paz (Martínez *et al.* 2021). Here I report a new record of White-tailed Goldenthrout (*P. guainumbi*) for northern La Paz (Madidi National Park) and three records of Green-tailed Goldenthrout (*P. theresiae*), two for lowlands of the La Paz Department at adjacent areas to Madidi National Park and the first record for Pando Department, Bolivia.

**White-tailed Goldenthrout *Polytmus guainumbi thaumantias* (Linnaeus 1766)**

White-tailed Goldenthrout (*Polytmus guainumbi*) is a widespread Neotropical hummingbird ranging from the eastern Andes of Colombia, Venezuela, Guayanas, northeastern and central to eastern Brazil, eastern Bolivia (nominate *thaumantias*), eastern Paraguay and northeastern Argentina (Fig. 1, Rodríguez-Mata *et al.* 2006, Bodrati & Klavins 2014, Schuchmann *et al.* 2020). The species inhabits a wide variety of habitats including semi-arid to moderately humid scrub in Cerrado, open woodland, grassland and seasonally flooded savanna with scattered bushes in lowlands of Bolivia (Herzog *et al.* 2016). Only the subspecies *P. g. thaumantias* occurs in Bolivia (Hennessey *et al.* 2003), where it is widely distributed in the northeastern of the country in the Beni and Santa Cruz departments, while in northern La Paz it continues to be rare and uncommon with only four documented records (Fig. 1, Herzog *et al.* 2016).

On 13 August 2007, a solitary individual of *P. guainumbi* was captured in Arroyo Negro (13.705°S, 68.858°W, elevation 188 m), Río Heath, La Paz Department (Fig. 1, Table 1). This locality is inside Parque Nacional y Área Natural de Manejo Integrado (PN-ANMI) Madidi. This site is dominated by gallery forest and tall canopy with inundated fields and lagoons, alternating with alluvial terraces towards the banks of the Heath River. The vegetation in *terra firme* forest is dominated by Brazil nut (*Bertholletia excelsa*), palo santo (*Tachigali vazquezii*), bibosi (*Ficus* sp.), nui (*Pseudolmedia laevis*), with patches of patujú (*Heliconia* sp.) (Martínez *et al.* 2021). The *terra firme* forests in this region make up patches that run parallel to the Heath River and to the east (ca. 100 m) are

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extensive savannas or flooded grasslands known as Pampas del Heath. The captured individual was a juvenile because the plumage was bleached in most of the ventral part with a creamy tint and green dots on the throat and chest, as

well as the rounded tail with white tips, except for the two central feathers; decurved bill had a pink base to mandible (Fig. 2, Herzog *et al.* 2016).

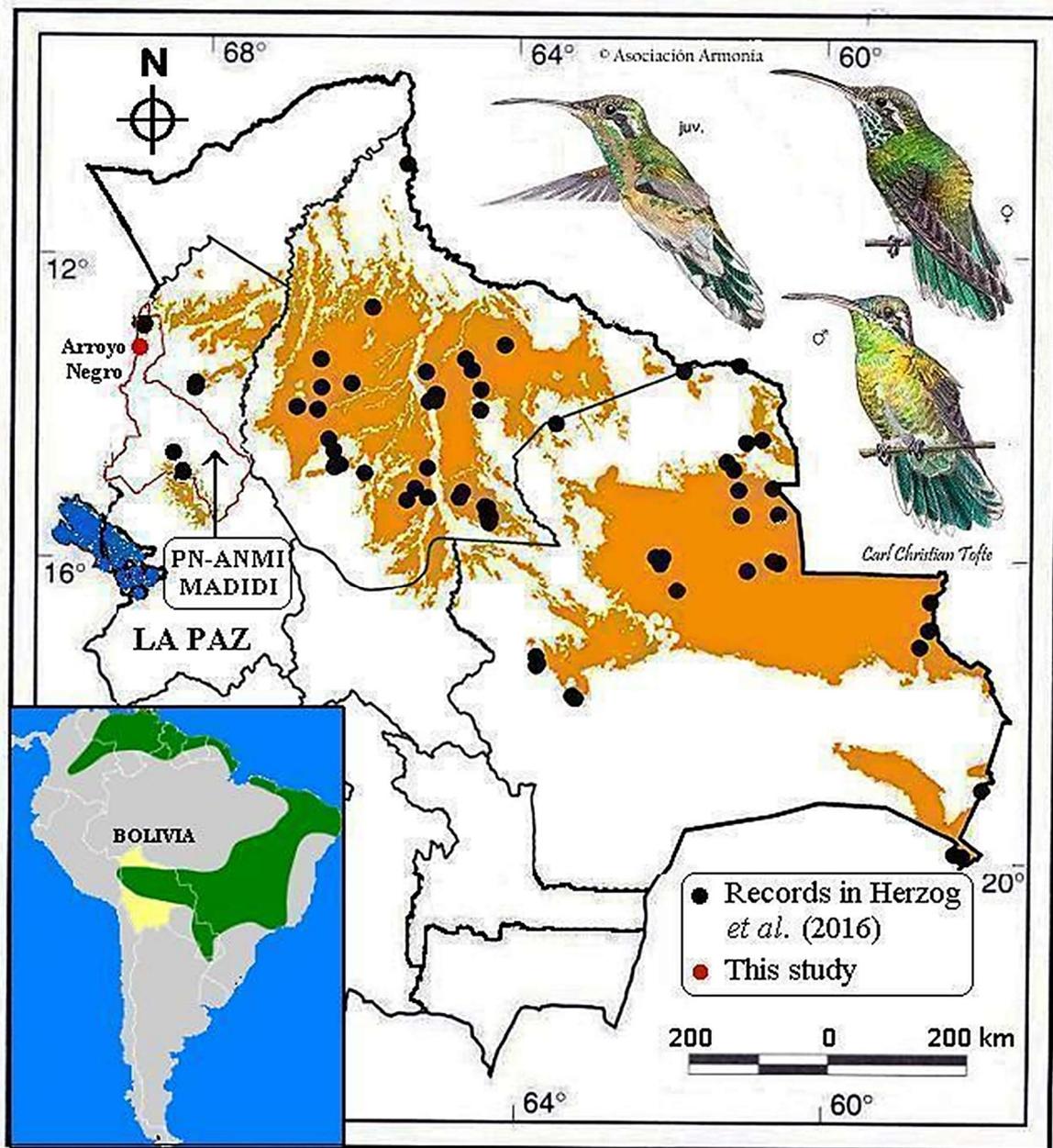


Figure 1. Range and records of the White-tailed Goldenthrout (*Polytmus guainumbi*) in Bolivia (modified from Herzog *et al.* 2016). Areas in other colour show the potential distribution of the species in Bolivia.

Table 1. Biometric data of individuals of the genus *Polytmus* captured in Bolivian Amazon. Legend: TB= total body length, WL = wing length, BL = bill length (culmen), WS = wingspan, TL = tail length.

#	Locality	Date	Sex	Biometric data (mm)					Mass (g)
				TB	WL	BL	WS	TL	
White-tailed Goldenthrout ( <i>Polytmus guainumbi</i> )									
1	Arroyo Negro, Río Heath, PN ANMI Madidi	13/08/2007	-	96	51	21	111	25	3.5
Green-tailed Goldenthrout ( <i>Polytmus theresiae</i> )									
1	Nueva Esperanza, Río Madera, Pando	30/10/2006	♀	85	55	22	125	32	5.5
2	Green Bolivia, Río Heath, Provincia Iturrealde, La Paz.	07/10/2007	♂	85	55	22	128	32	5.5
3	Toromonas, Provincia Iturrealde, La Paz.	28/06/2009	♀	85	56	21	125	32	5.0



Figure 2. Individual of White-tailed Goldentthroat (*Polytmus guainumbi*) captured in Arroyo Negro, Río Heath, La Paz Department. Photo: Omar Martínez.

There are only four documented records of *P. guainumbi* for the La Paz Department. One of them is nearly (c. 10 km north) to our site of Arroyo Negro, in Puerto Moscoso, Rio Heath (Parker *et al.* 1994, Stotz *et al.* 2002, Herzog *et al.* 2016). Another audio record is known for Ixiamas Locality area (Parker & Bailey 1991, Herzog *et al.* 2016). The other records are in artificial grasslands in Yungas montane forests of La Paz (1350–1550 m), in the Apolo area (Herzog *et al.* 2016). There are other seven sites reported on eBird (2021): Heath River Wildlife Center (2 records), Pampas del Heath (7), Ixiamas (1), Campamento Pasoperaca (1), Nogal (1), Atén (1) and Camino a Correo (1).

**Green-tailed Goldentthroat *Polytmus theresiae leucorrhous* (Sclater & Salvin 1867)**

The Green-tailed Goldentthroat (*Polytmus theresiae*) has a distribution mainly in the Amazonas river basin, ranging from the eastern Colombia, southern Venezuela, Guayanas, northern and central to south-west Brazil, and northern Bolivia (Fig. 3, Rodríguez-Mata 2006, Schuchmann *et al.* 2020). Only the subspecies *P. t. leucorrhous* occurs in northern Bolivia (Schuchmann *et al.* 2020). It is considered a white-sand vegetation specialist (Matos *et al.* 2016) and “near-restricted” to white-sand vegetation (Borges *et al.* 2016, Matos *et al.* 2016), uncommon to fairly common in Cerrado-like bushy grassland, humid secondary woodland, and understory of

stunted forest in northern La Paz and northern Beni between 150–200 m (Fig. 3, Herzog *et al.* 2016).

One individual was captured on 7 October 2007 at Green Bolivia (12.680°S 68.713°W, 210 m), Río Heath, La Paz Department (Fig. 3, Table 1), in a semi open transitional forest (ecotone) between savannas and stunted forest. On 28 June 2009, another individual was captured at Toromonas (12.591°S 68.298°W, 200 m), Río Toromonas, La Paz Department, in white-sand vegetation with *Mauritella armata* palms (Fig. 4). On two occasions, it was observed at Toromonas between 25–28 June 2009, using exposed perches in small trees (3–6 m) above a dense, low herbaceous understory between Cerrado-like bushy grassland and stunted forest (Martínez *et al.* 2021). This species is little-known in Bolivia, to date only two recorded in northern Beni Department, near Guayamerin (Tobias & Seddon 2007, Herzog *et al.* 2016), in habitats similar to that described on our site. Previously, a individual was captured on the Peruvian side of the Pampas del Heath (Pampas del Heath National Sanctuary), Rio Heath, Juliaca, Peru, in flooded grassland habitats (Parker *et al.* 1994, Stotz *et al.* 2002). There are two other sites reported on eBird (2021): Heath River Wildlife Center (six records) and Pampas del Heath (5), but most on the Peruvian side of the Heath River and a result of direct observations and some recorded songs, but not captured individuals.

Another individual was captured on 30 October 2006 in Nueva Esperanza, Bruno Racua Departmental Wildlife Reserve, Federico Román Province, Pando Department (Martínez 2021). The habitat was a semi-open low forest

(7–10 m). On 1 November 2006, another individual was observed in the area, using an exposed perch on small trees (5–8 m) in low forests in a savannah matrix. These records are the first for Pando Department (Martínez 2021).

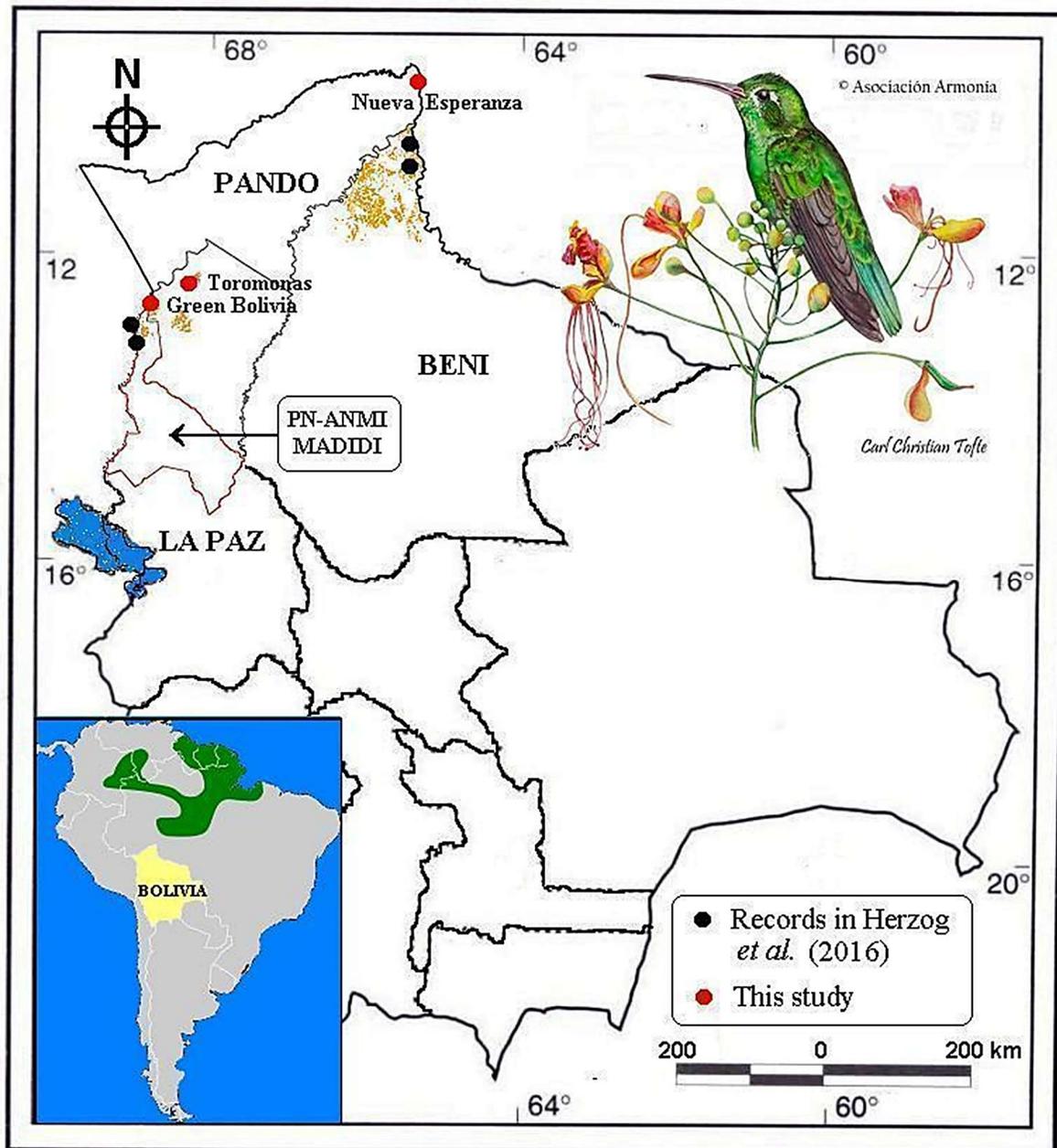


Figure 3. Range and records of the Green-tailed Goldenthrout (*Polytmus theresiae*) in Bolivia (modified from Herzog *et al.* 2016). Areas in ocher show the potential distribution of the species in Bolivia.

Moreover, eight individuals were collected in an enclave of open vegetation and borders of *terra firme* forests, between Porto Velho and Abunã, Madera River Basin, Rondônia (Brazil). It was locally common, but only in patches of Cerrado, *campina* and *campinarana* (Guilherme *et al.* 2018). Additionally, the species was photographed in the Cabixi Municipality and Vilhena in southern Rondônia

(Wikiaves 2018). It is also known an individual collected in Guajará-Mirim, on the border with Bolivia (Aleixo & Poletto 2007). In the light of the new data, its range appears to be more continuous throughout the Bolivian-Brazilian Cerrado, including the Cerrado of La Paz, according with Matos *et al.* (2016), whose lineage of *P. theresiae* show signs of recent population expansion.

### Final considerations

Both species are similar, but *P. theresiae* has all-green plumage and lacks white tips in the tail. In addition, *P. guainumbi* has a blackish post-ocular stain as a mask, which is very diffuse or lacking in *P. theresiae*. Other species similar to *P. guainumbi* that occur in the area include the Blue-tailed Emerald (*Chlorostilbon mellisugus*), of which the female is smaller with a short black bill and short blue tail, whilst some subspecies not present in Bolivia possess a partially red bill or red lower mandible and longer tail fork, but all these forms have blue tails (Schuchmann *et al.* 2020). Female Golden-tailed Sapphire (*Chrysuronia*

*oenone*) has a bill basally reddish, becoming dark brown distally, forehead, crown and upperparts slightly golden-green, bright white ear-coverts and blackish-grey cheeks, upper tail-coverts grass green, underparts whitish, becoming grey on the breast and belly, with some green spots on the flanks, and tail slightly forked, the rectrices basally green and distally blue, with pale grey tips (Herzog *et al.* 2016, Schuchmann *et al.* 2020). The female of *Chlorostilbon lucidus* has similar peak with slightly reddish jaw, post-ocular white bar and black mask in the eyes, also has tail with white tips but none of the three species named has a rounded tail like *P. guainumbi*.



Figure 4. Individual of Green-tailed Goldenthrroat (*Polytmus theresiae*) captured in northern La Paz. Photo: Omar Martínez.

The northern La Paz Department (Iturrealde Province) is an extensive Amazonian territory of 42.815 km<sup>2</sup> (INE 2015). At the extreme west of the Iturrealde territory is the Heath River, which forms part of the border between Peru and Bolivia. It also divides a cluster of seasonally-inundated savannas (Known locally as “pampas”), most of which are on the Bolivian side. These extensive territories are known as the Pampas del Heath and are part of the Cerrado in La Paz and are considered propitious area for the colonization of both congeners de *Polytmus*, where both species appear to be sympatric. Therefore, in both species their ranges are expanding into Amazonia of western La Paz Department due to deforestation between San Buenaventura-Ixiamas highways.

These extra-limit records is part of a study carried out at four sites in the north La Paz and the PN-ANMI Madidi area (Martínez *et al.* 2021) and four sites in the northeastern

Pando (Martínez 2021). The record of *P. theresiae* for Río Heath (Herzog *et al.* 2016) requires confirmation, because it was performed only on the Peruvian side of the river, at Pampas del Heath Sanctuary, Peru (Stotz *et al.* 2002). Our new documented record of *P. theresiae* for northern La Paz diluted the presence of the species in the Cerrado Paceño.

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