




First record of Hauxwell's Thrush (*Turdus hauxwelli* Lawrence, 1869) (Passeriformes, Turdidae) from Goiás state, Brazil

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Abstract. We report the first record of *Turdus hauxwelli* Lawrence, 1869, Hauxwell's Thrush, from the state of Goiás, central Brazil, based on photographic and vocal records obtained at Taquaral de Goiás. This new record substantially expands the species' distribution beyond the Amazonian domain and marks its new easternmost geographical limit. The new record extends this species' distribution by 650 km from the nearest recent record. We also discuss the importance of this record in understanding the biogeographical affinities of the seasonal forests of central-western Brazil.

Keywords. Biogeography, Cerrado, central Brazil, ornithology, range extension, seasonal forests.

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Introduction

Turdus hauxwelli Lawrence, 1869, Hauxwell's Thrush, is a medium-sized passerine of the family Turdidae. It is visually similar to the slightly larger Cocoa Thrush, *Turdus fumigatus* Lichtenstein, 1823 (Collar 2020). Recent studies, based on plumage, ecological, and molecular data, have shown that they are sister species (Snow 1985; Voelker et al. 2007; O'Neill et al. 2011; Collar 2020), yet their geographic limits and contact zones are poorly known, hampering our understanding of geographical variations in their voice and plumage.

Hauxwell's Thrush is especially distributed in the Amazon humid lowlands of central South America, living both on várzea (seasonal floodplain forest inundated by whitewater rivers) and terra firme (unflooded upland) forests below 800 m (Collar 2020). In Brazil, its range includes upper Amazonia from extreme western Pará, Amazonas, Acre, and Rondônia to southwestern Mato Grosso, and new records have been recently reported from Corguinho and Aquidauana in the Serra de Maracaju, western Mato Grosso do Sul, (Buainain et

al. 2017; De Luca 2018: WA5287539). Here, we present the first record of *T. hauxwelli* from the state of Goiás, central Brazil, and the easternmost known record in the species' range.

Methods

The record was obtained during a two-day ornithological survey at Fazenda Poção, which is between the municipalities of Taquaral de Goiás and Itaberaí, Goiás state, Brazil. We sampled part of a 560 ha forest patch that has been visited monthly by EFS and JAO since October 2021. ACL and EFS covered a c. 1 km transect at the southern edge of the area, while JAO made stationary observations at the northern edge, totalling 12.5 hours of sampling. We used 10 × 42 and 8 × 42 binoculars, cameras, and sound recording devices to identify and record the species. The map (Fig. 2) was produced from a Google Earth Pro image; point data were obtained from WikiAves (<https://wikiaves.com>) and eBird (<https://ebird.org>) records, and the distribution limits were based on Collar (2020) and Birdlife

International (2023) maps. We obtained the spectrogram profile (Fig. 1C) from Audacity® software.

Results

Turdus hauxwelli (Lawrence, 1869)

Figure 1, 2

New record. BRAZIL – Goiás • Taquaral de Goiás; 16°00'40"S, 049°39'01"W; 780 m elev.; 19.I.2023; Jayrson A. Oliveira, Estevão F. Santos, André C. De Luca obs.

Two individuals of *T. hauxwelli* were observed, sound-recorded, and photographed around a swampy creek at the edge of a semideciduous forest patch (Fig. 1A, B).

Identification. We identified the birds principally by vocal and morphologic features. They could be readily vocally distinguished from the only other species of thrush present in the area, *Turdus leucomelas* Vieillot, 1818, Pale-breasted Thrush, by their distinctive calls and alarm calls, namely a squeaking sound described by Collar (2020) as a “querulous up slurred “kwiiiow” (Fig. 1C). None of the other thrushes present in Goiás state produce this type of call. The individuals of *T. hauxwelli* could be also visually separated from *T. leucomelas* by their much more rufous plumage, especially on the breast and wings, and the clear white marks on the underparts (Fig. 1A, B), while the latter is pale olive-brown above and with a grayish head (Collar and Garcia 2020). Both individuals showed the species’

regular color pattern, with rufous-brown above and fawn below, a brown-streaked white throat, and white lower belly and crissum; these are diagnostic features mentioned by Buainain et al. (2017) and Collar (2020). One of the individuals, however, had slightly less white on the underparts and a throat not well marked by streaks (Fig. 1A).

Discussion

The geographic distribution of *Turdus hauxwelli* is centered in western Amazonia, reaching its southernmost limit in the gallery forests of central-west Brazil, southern Mato Grosso, and Mato Grosso do Sul (Ridgely and Tudor 1989, 2009; Buainain et al. 2017; Collar 2020). Despite the historical efforts of some collectors and ornithologists to catalogue birds in central Goiás (e.g. Snethlage 1928; Pinto 1936; Hidasi 1983), our record of *T. hauxwelli* is the first from the state.

Our record expands the species’ distributional limits by approximately 700 km northeast of Corguinho and roughly 800 km northeast of Aquidauana in Mato Grosso do Sul (Buainain et al. 2017), and about 650 km east of Chapada dos Guimarães, Mato Grosso, the closest location with recent records (e.g. Valente 2011: WA478843). Historically, a specimen has been collected in Jacaré, Alto Xingu, eastern Mato Grosso (MN 33607; Buainain et al. 2017), which is approximately 500 km northwest of the new record. Considering this evidence, our record marks the new easternmost limit of the species’ range.

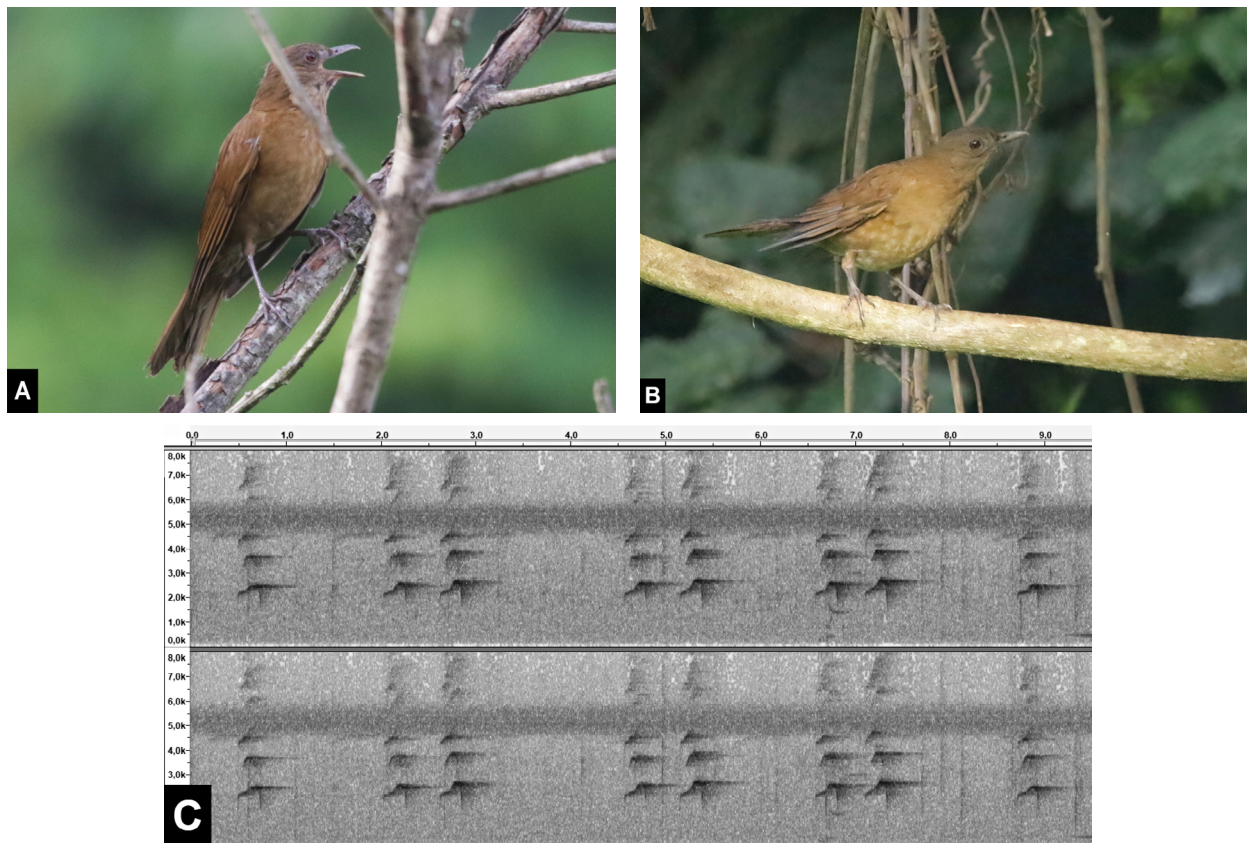


Figure 1. *Turdus hauxwelli*. **A, B.** Individual photographed at Fazenda Poção, Taquaral de Goiás, Goiás, Brazil. **C.** Spectrogram of the vocalization of the same individual.

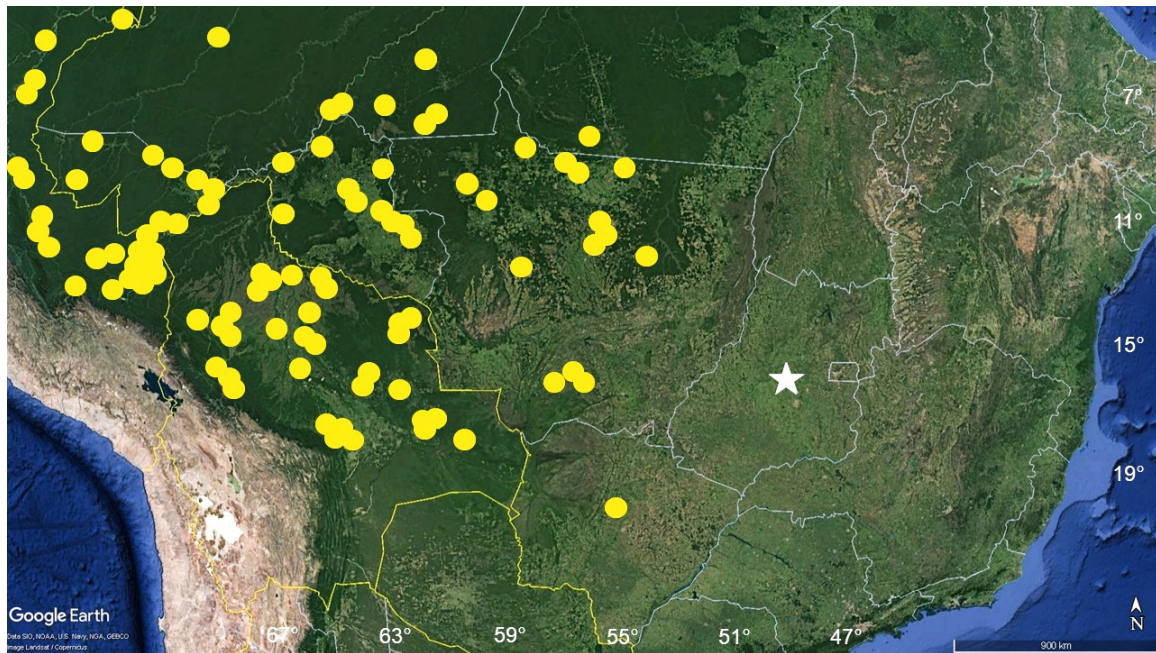


Figure 2. Map showing the geographical distribution (as point data) of *Turdus hauxwelli* in South America. Yellow dots = previous records; star = new record and easternmost limit of the species.

Despite being far beyond the Amazonia domain, the region where we recorded the species in Goiás shows close floristic and faunistic affinities with Amazonian and Atlantic forests (Oliveira-Filho and Ratter 1995; Silva 1996; Oliveira-Filho et al. 2006; Fiaschi and Pirani 2008; Werneck et al. 2011; Neves et al. 2017). Until about 50 years ago, before extensive deforestation, some parts of the state were still covered with continuous semideciduous tropical forests in a large area that comprised over 40,000 km², known as “Mato Grosso de Goiás” (Waibel 1948; Faissol 1952; Oliveira-Filho and Ratter 1995; Oliveira-Filho et al. 2006; Giustina et al. 2018). A study on floristic communities of this region led Oliveira-Filho et al. (2006) to include this forested area in their Atlantic Forest “Sensu Latissimo” domain, which considerably expands the limits of this region by incorporating some seasonal forests of central Brazil.

Although its avifauna has almost vanished before being systematically investigated, some authors pointed out that the “Mato Grosso de Goiás” often harbored Atlantic birds and plants, and could also have been an important pathway for some Amazonian birds, mammals, and plants into central Brazil (Silva 1989; Willis 1992; Oliveira-Filho and Ratter 1995; Patton et al. 2015). Indeed, other typical Amazonian taxa are present in the area where we found *T. hauxwelli*—e.g. Spot-throated Woodpecker *Piculus laemostictus* Todd, 1937; Fiery-capped Manakin *Machaeropterus pyrocephalus* (Sclater, 1892); and Flame-crested Tanager *Loriotus cristatus* (Linnaeus, 1766) (EFS and JAO pers. obs.). The presence of such fauna in this location could be an indicator of more extensive affinities of the seasonal forests with rainforests and of a richer forest biota in the past, as pointed out by Vanzolini and Willians (1970), Silva (1989), Willis (1992), Sick (1997), and Patton et al. (2015).

Previous studies have suggested that *T. hauxwelli* might not be restricted only to humid, dense Amazonian rainforests, and that it could potentially occupy different environmental conditions in the seasonal forests of central Brazil, especially in areas influenced by neighboring floristic provinces (Buainain et al. 2017). In fact, our record shows that the geographical distribution of *T. hauxwelli* might be much more extensive than previously expected, incorporating the western part of the Cerrado domain where suitable habitat (i.e. tropical seasonal forests and gallery-forests) are still extant.

The “Mato Grosso de Goiás” forests had been altered for several decades and were almost completely devastated by the beginning of the first 21st century (James 1953; Dutra e Silva 2017; Giustina et al. 2018). However, our record of Hawxell's Thrush in this degraded landscape suggests that further ornithological exploration in the few remaining woodlots may yet reveal more surprises, and additional data could help in the understanding of the biogeographical affinities of this unique area in central Brazil.

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Author Contributions

Conceptualization: EFS, ACL, JAO. Data curation: EFS, ACL, JAO. Investigation: EFS, ACL, JAO. Methodology: EFS, JAO. Visualization: EFS, ACL, JAO. Writing

– original draft: EFS, ACL. Writing – review and editing: EFS, JAO.

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