



AN UNUSUAL RECORD OF AN ANDEAN PASSERINE, THE BLACK-BACKED GROSBEAK, IN SOUTHEASTERN BRAZIL

El registro poco común de un ave paseriforme andina, el Picogrueso Dorsinegro, en el sureste de Brasil

Victor R. Antonelli¹ & Vagner Cavarzere²

¹Universidade Estadual Paulista. Departamento de Ciência Florestal, Solos e Ambiente, Botucatu, Brazil

²Universidade Estadual Paulista. Departamento de Biodiversidade e Bioestatística, Botucatu, Brazil

*victor.r.antonelli@unesp.br

ABSTRACT: The Black-backed Grosbeak (*Pheucticus aureoventris*) is common on eastern Andean slopes from Venezuela to Argentina. In Brazil, it is a regular non-breeding visitor in the west, using large rivers of the Paraná basin as movement routes, especially during the austral winter, when most records in the country are concentrated. We present a novel observation of the species from the mid-central region of São Paulo state, southeastern Brazil, approximately 400 km east of its known range. Considering the uncertain migratory routes of the Black-backed Grosbeak to Brazil, we gathered additional rare sightings from the country that, when combined with our own, suggest the species' propensity for extensive dispersal.

KEYWORDS: *Black-backed Grosbeak, Cerrado, geographical distribution, migrant birds, São Paulo*

RESUMEN: El Picogrueso Dorsinegro (*Pheucticus aureoventris*) es común en las vertientes andinas orientales, desde Venezuela hasta Argentina. En Brasil es un visitante no reproductor en su territorio occidental, utilizando como rutas de movimiento grandes cursos de agua de la cuenca del Paraná durante el invierno austral, cuando se concentran la mayoría de los registros en el país. Presentamos una observación novedosa en la región centro-sur del estado de São Paulo, en el sureste de Brasil, aproximadamente a 400 km al este de su rango conocido. Considerando los patrones migratorios inciertos del picogrueso dorsinegro hacia Brasil, recopilamos avistamientos raros adicionales en el país que, combinados con el nuestro, sugieren su propensión a una dispersión extensa.

KEYWORDS: *aves migratorias, Cerrado, distribución geográfica, Picogrueso Dorsinegro, São Paulo*

The Black-backed Grosbeak *Pheucticus aureoventris* (d'Orbigny & Lafresnaye 1837) is a cardinalid common to the eastern Andean slopes of Venezuela south to Argentina, occurring up to 3700 m; it inhabits a variety of habitats from arid intermontane valleys to forest edges and the Chaco (Brewer & Juana 2020). Most populations are apparently sedentary, although there is some evidence of migratory movements at the limits of its range, in northwestern Argentina and adjacent areas, as well as in the tropical and humid savannas of northern Paraguay and western Brazil

(Somenzari et al. 2018, Brewer & Juana 2020).

In Brazil, the species was primarily reported from western states, such as Mato Grosso (Pelzeln 1871, Naumburg et al. 1930, Willis & Oniki 1990) and Mato Grosso do Sul (Pinto 1944, Donatelli 2005, Melo 2005, Faxina 2010), during the austral winter (Nunes 2008, Somenzari et al. 2018, Wikiaves 2024). It was also recorded in the states of Goiás, southern Amazonas (Manicoré) and Rondônia, between July and August (Serpa et al. 2014). Recently it has been detected in the wes-

tern state of Acre, but also in southern states, such as Rio Grande do Sul, Paraná, and São Paulo (eBird 2024, Wikiaves 2024), suggesting the high dispersive nature of the species. Here we report and discuss an unusual new site of occurrence for the Black-backed grosbeak in central São Paulo state, southeastern Brazil.

MATERIALS AND METHODS

Study area

The Edgárdia Experimental Farm is located at the northeast portion of the municipality of Botucatu, central south region of the state of São Paulo, between 22°47' to 22°50'S and 48°26' to 48°22'W (Jorge & Sartori 2002) with a total area of 1200 hectares, owned by the Universidade Estadual Paulista (UNESP). The relief has a rugged topography, and the complex occupies the front and peripheral depression of the basaltic *cuesta*, with an altitudinal gradient between 464 and 775 m. The climate for the region is classified as tropical savanna with dry winters (Aw), with average temperatures of 21.34°C and average annual precipitation of 1500 mm (Franco et al. 2023). Natural vegetation of the areas is classified as Semideciduous Seasonal Tropical Forest, physiognomy of the Atlantic Forest (IBGE 2012) and secondary ecotonal forest, or *cerradão*, a feature belonging to the Cerrado (Eiten 1972).

Bird surveys

While conducting surveys due to a project focusing on the influence of regeneration on the bird community, we used ad libitum observations and transect counts to survey distinct environments within the farm. Such habitats were censused monthly during the mornings (05:30 h to 10:00 h) and afternoons (15:00 h to 19:00 h). Visits occurred from May 2018 – April 2019, for a total of 108 transect hours and approximately 3.6 km. Birds were recorded visually with the help of binoculars, and aurally. On a few occasions, we used previously recorded vocalizations to attract birds closer as to document every species occurring in the farm.

Literature review and ornithological platforms

We searched for *Pheucticus aureoventris* records from the state of São Paulo, southeastern Brazil, in Scopus (<https://www.scopus.com/>), Google Scholar (<https://scholar.google.com/>) and Web of Science (<https://www.webofscience.com/wos>) by using the combination of keywords with the species scientific name and the Boolean operator AND, followed by the term São Paulo. For the Google Scholar site, which provides hundreds of results, we evaluated studies within the first 10 pages.

We also searched for the species' records in São Paulo state in eBird (<https://ebird.org/home>) and Wi-

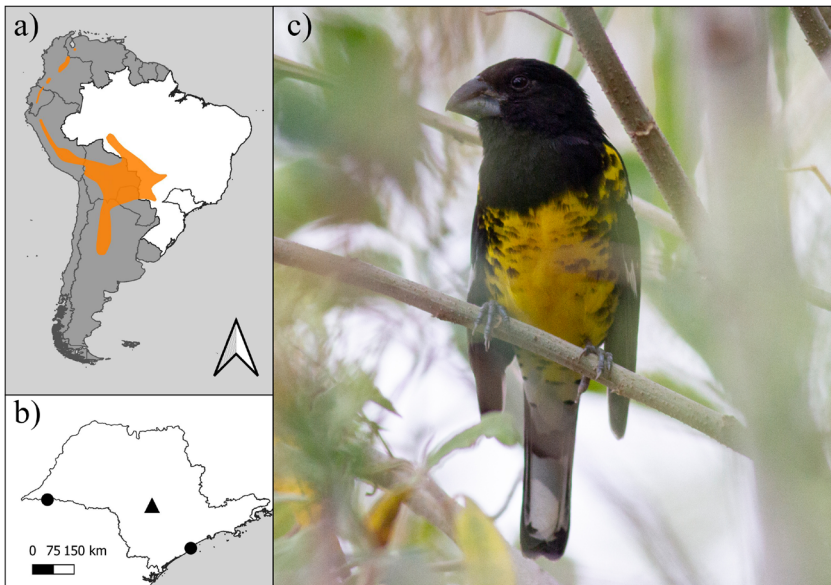


Figure 1. (a) Distribution of the Black-backed Grosbeak in orange according to IUCN (2024). South America is represented in grey, except Brazil (white), in which the state of São Paulo is highlighted. (b) Records of the Black-backed Grosbeak in São Paulo, southeastern Brazil. Circles are records from ornithological platforms. The triangle represents the record from Botucatu. (c) Male Black-backed Grosbeak photographed at Edgárdia Experimental Farm, municipality of Botucatu, state of São Paulo, southeastern Brazil, on 6 June 2018. Photo by José Carlos Tonon.

kiaves (<https://www.wikiaves.com.br/>), the most used ornithological online platforms in Brazil.

RESULTS

Our observation was made in the municipality of Botucatu, approximately 400 km east from its known range, in the mid-central portion of the state, on 6 June 2018. The individual corresponded to an adult male spotted at the Edgárdia Experimental Farm (Fig. 1; 22°49'S, 48°25'W), on early-stage succession secondary Semideciduous Forest border at 730 m. The canopy reaches 15 m, and is surrounded by the same vegetation type. It presumably attended to the Fawn-breasted Tanager *Pipraeidea melanonota* playback, which was also present. This male was readily identified given its black upperparts, its yellow shoulder patch and the black upperwing with primaries featuring prominent white bars when the wings were closed. The rectrices were blackish, with the outermost feathers displaying large white tail tips. Its bill had thick maxillae and its head and breast were black, while the lower breast and the abdomen were yellow. The flanks and sides of the upper abdomen showed black flecks. The only evident plumage diagnosis between subspecies is the yellow throat of *P. a. crissalis* (from Colombia and Ecuador), while the remainder allopatric populations are virtually identical, making it difficult to suggest subspecific identification. Based on the species range, the male we observed may correspond to the nominotypic subspecies. It has not been detected since, although monthly visits were conducted in the same location until April 2024.

From 460 results using the words “*Pheucticus aureoventris*”, 7 were about the species distribution in Brazil, including: Mato Grosso (Willis & Oniki 1990) and Mato Grosso do Sul (Donatelli 2005, Melo 2005, Nunes 2008, Faxina et al. 2010, Somenzari et al. 2018), Goiás, southern Amazonas (Manicoré) and Rondônia (Serpa et al. 2014). We also found 19 608 registers from ornithological bird platforms. From them 117 were from Brazil, and included all previous states mentioned, except for Amazonas, and added Acre (1), Paraná (2) and Rio Grande do Sul (1) as new.

We found that in both eBird (64 records from three localities) and Wikiaves (86 records from the same three localities), the species was reported in the municipality of Teodoro Sampaio (westernmost São Paulo) on 14 September 2019 and in the coastal municipality of Peruíbe from 5 June – 6 July 2022.

DISCUSSION

Even though the migratory nature of the Black-backed Grosbeak remains not fully understood, it is plausible the species has west-to-east longitudinal-altitudinal displacements (Willis 1979, Magalhães 1999, Schunck et al. 2023). Emerging records from southernmost Brazil, far dislocated from its easternmost range, suggest a broader coverage during migration. Such records, however, may be biased since they might result from releases or escapes of cage birds, as reported by the press (<https://www.novohamburgo.rs.gov.br/noticia/passaros-contrabandeados-estados-apreendidos-operacao-conjunta>). However, the species represented 0.2% of the 1491 apprehended individuals by the Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (IBAMA) between 2008 – 2010 in the Brazilian southern state of Rio Grande do Sul (Leite 2012). Civilian maintenance and transactions are allowed but, due to the low demand as a pet, it is not being reproduced (IBAMA 2011). The species has been observed in an easternmost locality, in the Brazilian coastal municipality of Peruíbe, where an individual was photographed over a span of two roughly months within an urban setting equipped with a bird feeder (e.g., WA4882872 and WA4911829 in Wikiaves). Several photographs also show the individuals next to a banana, most probably deliberately provided by the observers. This particular observation is suggestive of potential escape from captivity. In contrast, our recorded sighting involved a solitary individual within a natural habitat, with no subsequent detections in the ensuing days. Thus, our observation may signify a noteworthy extension of the species' occurrence. In addition, three other eBird and Wikiaves records of the species come from the southern state of Paraná. These include one male (August 2023) and one female (May 2020) from Foz do Iguaçu, and another female (23 September 2020) from Marilena, some 60 km west of Teodoro Sampaio. These latter records were documented over a period of nine days.

Despite that, increasing deforestation of the Brazilian Cerrado and Amazonia may be driving the species arrival to more artificially open areas (Serpa et al. 2014). Recent records from the Paraná River basin and the Brazilian central plateau (Faxina et al. 2010) support such suggestion; corroborating the occurrence of *P. aureoventris* in portions of the state of São Paulo far from the species' known migratory range. Long-distance movements may also be plausible, as evidenced by the intercontinental migration routes observed in other congeneric species, such as

P. ludovicianus and *P. melanocephalus* (Billerman et al. 2022). The records of the species uploaded in online platforms and the study of the natural history as well as annual monitoring by citizen scientists throughout South America can help elucidate the nature of the species' movements.

ACKNOWLEDGEMENTS

We thank José Carlos Tonon, who provided the photograph of the individual recorded in Botucatu. The reviewers and editors made substantial contributions to the previous version of the manuscript

CITE BIBLIOGRAPHY

- Billerman SM, Keeney BK, Rodewald PG, Schulenberg TS (2022) *Birds of the World*, Cornell Laboratory of Ornithology, Ithaca
- Brewer D, Juana E (2020) Black-backed Grosbeak (*Pheucticus aureoventris*), version 1.0. En *Birds of the World*. Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bow.blbgro2.01>
- d'Orbigny A, Lafresnaye NFAA (1837) Synopsis Avium, ab Alcide d'Orbigny, in ejus per Americam meridionalem itinere, collectarum et ab ipso viatore necnon. *Magasin de Zoologie* 7:1-88
- Donatelli RJ (2005) Bird observations in the Pantanal of Mato Grosso do Sul. *Pantanal conservation research initiative: annual report*:39-45
- eBird (2024) *eBird: An online database of bird distribution and abundance (web application)*. eBird, Cornell Lab of Ornithology, Ithaca (URL: <http://www.ebird.org>)
- Eiten G (1972) The cerrado vegetation of Brazil. *The Botanical Review* 38:201-341
- Faxina C, Fischer E, Benites M (2010) O rei-do-bosque vai além do Pantanal: registros de *Pheucticus aureoventris* (Cardinalidae) na bacia do Paraná. *Revista Brasileira de Ornitologia* 18:349-351
- IBAMA (2011) Instrução Normativa nº 10, de 19 de setembro de 2011
- IBGE (2012) Instituto Brasileiro de Geografia e Estatística. *Manual técnico da vegetação brasileira*. 2ª Ed. Rio de Janeiro: IBGE
- Jorge LAB, Sartori MS (2002) Uso do solo e análise temporal da ocorrência de vegetação natural na fazenda experimental Edgardia, em Botucatu-SP. *Revista Arvore* 26:585-592. <https://doi.org/10.1590/S0100-67622002000500009>
- Leite TO (2012) *Uma descrição sobre a problemática da captura ilegal de aves no estado do Rio Grande do Sul, Brasil*. Tesis de Magister, Universidade Federal do Rio Grande do Sul, Porto Alegre
- Magalhães JCR (1999) *As aves na fazenda Barreiro Rico*. São Paulo: Plêiade
- Melo FP (2005) Refúgio Ecológico Caiman (Pantanal, Brasil): listas de fauna e flora. Miranda: Pousada Caiman
- Naumburg E, Cherrie GK, Smith HH (1930) The birds of Matto Grosso, Brazil: a report on the birds secured by the Roosevelt-Rondon Expedition. *Bulletin of the AMNH*; v. 60
- Nunes AP (2008) Distribuição de rei-do-bosque (*Pheucticus aureoventris*, Cardinalidae) no Brasil: revisão dos registros históricos e recentes. *Atualidades Ornitológicas* 142:38-40
- Pelzeln A (1871) *Zur Ornithologie brasiliens: Resultate von Johann Nattersers reisen in den Jahren 1817 bis 1835*. Wien: A. Pichler's Witwe Y Sohn
- Pinto OMDO (1944) *Catálogo das aves do Brasil e lista dos exemplares existentes na coleção do Departamento de Zoologia*. Volúmen. 2. São Paulo: Departamento de Zoologia
- Schunck F, Silveira LF, Candia-Gallardo C (2023) Seasonal altitudinal movements of birds in Brazil: a review. *Zoologia (Curitiba)* 40: e22037. <https://doi.org/10.1590/S1984-4689.v40.e22037>
- Serpa GA, Malacco GB, Alexio A, Darski-Silva B, Madeira S (2014) Range extension of the known distribution of the Black-backed Grosbeak, *Pheucticus aureoventris* (Passeriformes: Cardinalidae) in Brazil, with the first records for the states of Rondônia, Amazonas and Goiás. *Revista Brasileira de Ornitologia* 22:38-41
- Somenzari M, Amaral PPD, Cueto VR, Guaraldo ADC, Jahn AE, Lima DM, Lima PC, Lugarini C, Machado GC, Martinez J, Nascimento JLXD (2018) An overview of migratory birds in Brazil. *Papéis Avulsos de Zoologia* 58: e20185803. <https://doi.org/10.11606/1807-0205/2018.58.03>
- Sullivan BL, Aycrigg JL, Barry JH, Bonney RE, Bruns N, Cooper CB, Damoulas T, Dhondt AA, Dietterich T, Farnsworth A, Fink D (2014) The eBird enterprise: An integrated approach to development and application of citizen science. *Biological Conservation* 169:31-40. <https://doi.org/10.1016/j.biocon.2013.11.003>
- IUCN. 2024. The IUCN Red List of Threatened Species. Version 2024-1. <https://www.iucnredlist.org>. Accessed on [24/07/2024]
- Wikiaves (2024) WikiAves, a Enciclopédia das Aves do Brasil. (URL: <http://www.wikiaves.com.br>)
- Willis EO (1979) *The composition of avian communities in remanescent woodlots in southern Brazil*. São Paulo: Departamento de Zoologia
- Willis EO, Oniki Y (1990) Levantamento preliminar das aves de inverno em dez áreas do sudoeste de Mato Grosso, Brasil. *Ararajuba* 1:19-38