



Range extension for Buff-fronted Owl *Aegolius harrisii* in north-east Brazil and a case of *Heterochromia iridis* in *Strigidae*

Authors: Ruiz-Esparza, Juan, Mendonça Costa, José Percílio, Santos, Caroline, Ruiz-Esparza, Daniela Pinheiro Bitencurti, Beltrão-Mendes, Raone, et al.

Source: Bulletin of the British Ornithologists' Club, 137(1) : 91-93

Published By: British Ornithologists' Club

URL: <https://doi.org/10.25226/bboc.v137i1.2017.a8>

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

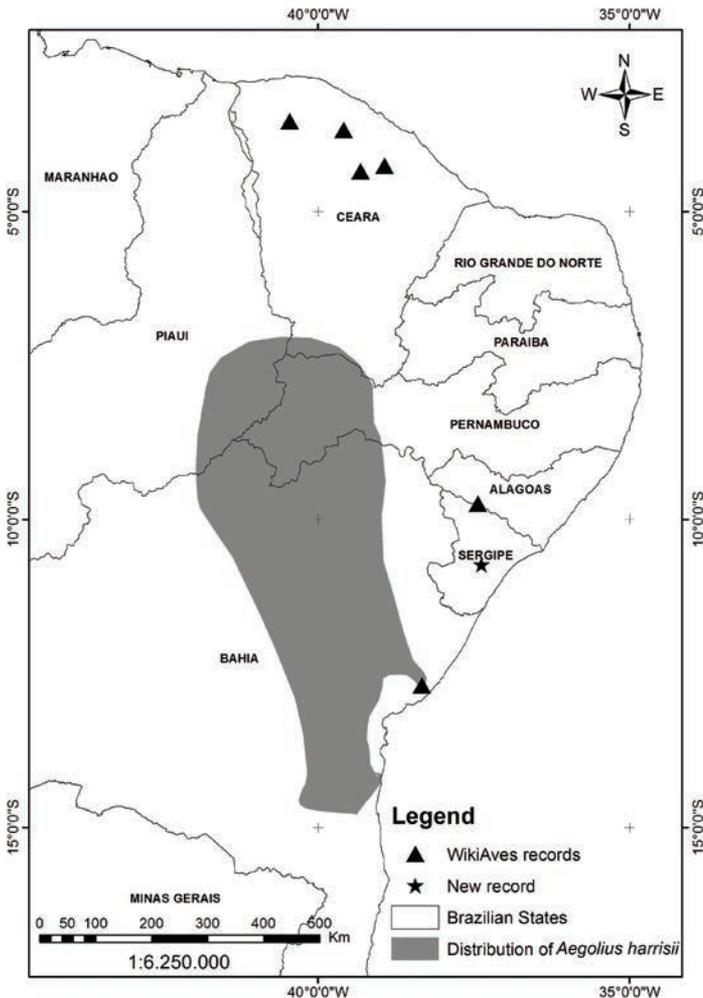
Range extension for Buff-fronted Owl *Aegolius harrisii* in north-east Brazil and a case of *Heterochromia iridis* in Strigidae

Juan Ruiz-Esparza, José Percílio Mendonça Costa, Caroline Santos, Daniela Pinheiro Bitencurti Ruiz-Esparza, Raone Beltrão-Mendes & Stephen F. Ferrari

Received 10 October 2016; revised 20 January 2017; published 13 March 2017

Buff-fronted Owl *Aegolius harrisii* is one of 22 species of Strigidae in Brazil (Sick 1997). The species has a circum-Amazon range (Barlow & Cuello 1964, Fjeldså & Krabbe 1990, König *et al.* 1999, Barrionuevo *et al.* 2008, Ubaid *et al.* 2012) and is found from sea level to 3,800 m (Lima & Castro 1994, Marks *et al.* 1999, Bravo & Barrio 2014). In Brazil, isolated records indicate that *A. harrisii* is distributed throughout most of the east of the country (Kaminski 2009, Santos 2009, Rebelato *et al.* 2011, Ubaid *et al.* 2012, Santos *et al.* 2014). Here

Figure 1. Present record (star) and isolated records (WikiAves 2016) of Buff-fronted Owl *Aegolius harrisii* from north-east Brazil and its current distributional polygon (in grey) following BirdLife International (2017).



we present the first record of *A. harrisii* in the state of Sergipe, extending the species' known distribution at least 100 km from the nearest localities in Alagoas and Bahia (WikiAves 2016; Fig. 1).

A Buff-fronted Owl was found near Parque dos Falcões, municipality of Itabaiana, Sergipe (10°44'S, 37°22'W) in November 2014. The local ecosystem is characteristic of the more open environments at the ecotone between Atlantic Forest and *Caatinga*. The bird was taken to the park, where it was examined and found to be in good health. We measured its wing (125 mm), total length (19.5 cm) and body mass (140 g). The owl was placed in a mobile enclosure, where it remains in quarantine, and has been registered with IBAMA, the Brazilian federal environment agency (ring no. 173).

In addition, we also observed that the individual possesses an uncommon condition in birds, *Heterochromia iridis*, or different-coloured irides. The right iris is pale yellowish, whereas the left is orange-yellow (Fig. 2). *Heterochromia iridis* can occur in more than 7% of individuals in some vertebrate species (e.g., horses, pigs and buffalo) (Gelatt *et al.* 1973, Misk *et al.* 1998), but few cases have been reported in birds and this appears to be the first pertaining to Strigidae. Given the lack of data for birds, it is unclear whether this condition relates to an inflammation, degeneration of the iris, or some other abnormality.

A. harrisii appears to be relatively rare, and is poorly known in museum collections (Studer & Teixeira 1994, Marks *et al.* 1999), which hampers systematic analysis of its biology or distribution. The available records do, however, suggest that the species is uncommon and patchily distributed (Stotz *et al.* 1996). While few records are available from north-east Brazil, mainly from Ceará (Table 1), they indicate that the species is perhaps adapted to the arid *Caatinga*, and may be a habitat generalist. The present record, together with other



Figure 2. *Heterochromia iridis* in Buff-fronted Owl *Aegolius harrisii* at Parque dos Falcões, Itabaiana, Sergipe, Brazil (Juan Ruiz-Esparza)

TABLE 1
Records of Buff-fronted Owl *Aegolius harrisii* in north-east Brazil.

Brazilian state	Municipality	No. of Records	Biome	Reference
Alagoas	Pão de Açúcar	8	<i>Caatinga</i>	WikiAves (2016)
Bahia	Camaçari	1	Atlantic Forest	WikiAves (2016)
Ceará	Canindé	1	<i>Caatinga</i>	WikiAves (2016)
	Guaramiranga	1		
	Itapagé	1		
	Meruoca	26		
Sergipe	Itabaiana	1	Atlantic Forest	Present study

recent records (WikiAves 2016), indicates a much more ample distribution than that given by BirdLife International (2017).

Acknowledgements

We are grateful to CNPq for research grants to JR-E (151121/2014-1, 402582/2015-2), RB-M (503372/2014-5) and SFF (303994/2011-8, 483220/2013-2), PNPd / CAPES-UFS for a research grant to DPBR-E (2141161), and CAPES for a postdoctoral grant to SFF (99999.001536/2015-00). We also thank the Mohamed bin Zayed Species Conservation Fund (12055114), Primate Action Fund (1001257) and Primate Conservation Inc. (1158) for supporting RB-M. Luis Fabio Silveira, Glauco Pereira and Jeff Marks provided essential comments on the submitted manuscript.

References:

- Barlow, J. C. & Cuello, J. 1964. New records of Uruguayan birds. *Condor* 66: 516–517.
- Barrionuevo, C., Ortiz, D. & Capllonch, P. 2008. Nuevas localidades de Lechucita canela *Aegolius harrisii dabbenei* (Strigidae) para la Argentina. *Nuestras Aves* 53: 45–47.
- BirdLife International. 2017. Species factsheet: *Aegolius harrisii*. <http://datazone.birdlife.org/species/factsheet/buff-fronted-owl-aegolius-harrisii> (accessed 20 January 2017).
- Bravo, A. G. & Barrio, J. 2014. New distribution records of the Buff-fronted Owl *Aegolius harrisii* Cassin, 1849 (Aves: Strigidae) in Peru. *Check List* 10: 156–159.
- Fjeldså, J. & Krabbe, N. 1990. *Birds of the high Andes*. Zool. Mus., Univ. of Copenhagen & Apollo Books, Svendborg.
- Gelatt, K. N., Rempel, W. K., Makamera, T. P. E. & Anderson, J. F. 1973. Heterochromia iridis in miniature swine. *J. Heredity* 64: 343–347.
- Kaminski, N. 2009. Primeiro registro documentado de *Aegolius harrisii* para o Estado de Santa Catarina, Brasil. *Cotinga* 31: 79.
- König, C., Weick, F. & Becking, J.-H. 1999. *Owls: a guide to the owls of the world*. Yale Univ. Press, New Haven, CT.
- Lima, P. C. & Castro, J. O. 1994. Ocorrência e reprodução de *Aegolius harrisi* na Bahia. P. 136 in *IV Congr. Bras. Orn.* Sociedade Brasileira de Ornitologia, Recife.
- Marks, J. S., Cannings, R. J. & Mikkola, H. 1999. Family Strigidae (typical owls). Pp. 76–151 in del Hoyo, J., Elliott, A. & Sargatal, J. (eds.) *Handbook of the birds of the world*, vol. 5. Lynx Edicions, Barcelona.
- Misk, N. A., Semieka, M. A. & Fathy, A. 1998. Heterochromia iridis in water buffaloes (*Bubalus bubalis*). *Veterinary Ophthalmology* 1: 195–201.
- Rebelato, M. M., Cunha, G. G., Machado, R. F. & Hartmann, P. A. 2011. Novo registro do caburé-acanelado (*Aegolius harrisii*) no Bioma Pampa, sul do Brasil. *Biotemas* 24: 105–107.
- Santos, K. K., Miguel, M. & Lombardi, V. T. 2014. Novos registros do caburé-acanelado *Aegolius harrisii* (Cassin, 1849) para o Estado de Minas Gerais e comentários sobre sua biogeografia. *Atualidades Orn.* 181: 7–11.
- Santos, R. E. F. 2009. Ampliação da distribuição de *Aegolius harrisii* a partir de coleta por atropelamento. *Atualidades Orn.* 147: 46–47.
- Sick, H. 1997 *Ornitologia brasileira*. Ed. Nova Fronteira, Rio de Janeiro.
- Stotz, D. F., Fitzpatrick, J. W., Parker, T. A. & Moskovits, D. K. 1996. *Neotropical birds: ecology and conservation*. Univ. of Chicago Press.
- Studer, A. & Teixeira, D. M. 1994. Notes on the Buff-fronted Owl *Aegolius harrisii* in Brazil. *Bull. Brit. Orn. Cl.* 114: 62–63.
- Ubaid, F. K., Maffei, F., Moya G. M. & Donatelli, R. J. 2012. Range extension for Buff-fronted Owl *Aegolius harrisii* in south-east Brazil. *Bull. Brit. Orn. Cl.* 132: 175–179.
- WikiAves. 2016. A Enciclopédia das Aves do Brasil. www.wikiaves.com.br/mapaRegistros_cabure-acanelado (accessed 6 October 2016).

Addresses: Juan Ruiz-Esparza, Graduate Program in Development and Environment PRODEMA, Universidade Federal de Sergipe, Av. Marechal Rondon s/n, 49100-000, São Cristóvão, Sergipe, Brazil; and Nucleus of Education in Agricultural and Earth Sciences, Universidade Federal de Sergipe, Campus do Sertão, Rodovia Engenheiro Jorge Neto, km 3, Silos, 49680-000, Nossa Senhora da Glória, Brazil, e-mail: juancolorado21@hotmail.com. José Percílio Mendonça Costa, Instituto Parque dos Falcões, Itabaiana, Sergipe, Brazil. Caroline Santos, Program in Ecology and Conservation, Universidade Federal de Sergipe, Av. Marechal Rondon s/n, 49100-000, São Cristóvão, Brazil. Daniela Pinheiro Bitencurti Ruiz-Esparza, Nucleus of Education in Agricultural and Earth Sciences, Universidade Federal de Sergipe, Campus do Sertão, Rodovia Engenheiro Jorge Neto, Km 3, Silos, 49680-000, Nossa Senhora da Glória, Brazil. Raone Beltrão-Mendes & Stephen F. Ferrari, Dept. of Ecology, Universidade Federal de Sergipe, Av. Marechal Rondon s/n, 49100-000, São Cristóvão, Brazil.