

# Revision of the range of the Rio de Janeiro Antbird *Cercomacra brasiliana* Hellmayr, 1905 (Aves: Passeriformes: Thamnophilidae)

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**ABSTRACT:** We present a review on the range of the endemic and near-threatened Rio de Janeiro Antbird *Cercomacra brasiliana*, based on new field records and extensive search in literature, museums and bird sound databases. Our records extend the species' known range over 200 km westwards to the hinterlands of Minas Gerais state. Nevertheless, no records were done within federal or state reserves, and the conservation of the remaining forest fragments where the species was recorded is urgent.

The Rio de Janeiro Antbird *Cercomacra brasiliana* Hellmayr, 1905 is a near-threatened Atlantic forest endemic (Brooks *et al.* 1999; Machado *et al.* 2005; BirdLife International 2012), known from a few localities within its restricted range (Ridgely and Tudor 1994; Ridgely *et al.* 2007; BirdLife International 2012). It is also considered a rare species with high conservation and research priorities (Stotz *et al.* 1996). The known range of the Rio de Janeiro Antbird encompasses a small area of southeastern Brazil, including the states of Rio de Janeiro, Espírito Santo, eastern Minas Gerais and southeastern Bahia (Pacheco and Fonseca 1992; Ridgely and Tudor 1994; Sick 1997; Zimmer and Isler 2003; Ridgely *et al.* 2007). Little is known about its natural history, but it seems to be very patchily distributed, but locally common (Zimmer and Isler 2003; BirdLife International 2012).

The aim of this paper is to review the range of *C. brasiliana*, based on new field records and extensive search in literature, museums and bird sound databases. New field records were obtained during bird surveys conducted by the authors in the state of Minas Gerais, southeastern Brazil, between 2007 and 2011. Whenever possible, records were documented through photographs, voucher specimens or tape recordings. Vocalizations were recorded using Sony PCM-M10 and Sony TCM-5000EV tape-recorders and Sony ECM-674 and Sennheiser ME66 microphones. Copies of these recordings have been deposited in the Arquivo Sonoro Prof. Elias Coelho (ASEC), Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil, and in the Xeno-Canto online database (XC - <http://www.xeno-canto.org>). Collected specimens were deposited in the Museu de Ciências Naturais, Pontifícia Universidade

Católica de Minas Gerais, Belo Horizonte, Brazil (MCNA). We also searched for recording localities of the species in the ASEC and Xeno-Canto collections and for specimens housed in the following institutions: Museu de Zoologia João Moojen de Oliveira (MZUFV), Minas Gerais, Brazil; Museu Nacional do Rio de Janeiro (MNRJ), Rio de Janeiro, Brazil; Departamento de Zoologia da Universidade Federal de Minas Gerais (DZUFMG), Minas Gerais, Brazil; Museu de Zoologia da Universidade de São Paulo (MZUSP) São Paulo, Brazil; American Museum of Natural History (AMNH), New York, United States, Los Angeles County Museum of Natural History (LACMNH), Los Angeles, United States, and Museum of Comparative Zoology (MCZ), Massachusetts, United States. These three foreign institutions were searched online through Ornismet (<http://www.ornismet.org>). A brief description of our new recording localities, as well as geographic coordinates (datum WGS 84) and altitude can be found in the accounts below (numbers in parenthesis correspond to localities in Figure 1). A summary of all *C. brasiliana* records is presented in Table 1 and Figure 1. Taxonomic nomenclature follows Comitê Brasileiro de Registros Ornitológicos (CBRO 2011) and the classification of the forests was based upon Oliveira-Filho and Fontes (2000).

**Passa-Vinte (1):** Bird surveys were conducted by LGM and EJM in this municipality in three different dates: February, September and October 2009. The species was recorded only in one site, on 4 October 2009. One adult male was seen and tape-recorded in a dense entanglement of vines and lianas, in a small trail within a forest fragment of c. 500 ha. This fragment is located at the left bank of the Rio Preto (22°14'45" S, 44°12'40" W - 530 m),

and represents one of the few remaining submontane rainforests of the region (Lombardi *et al.* 2012).

**Santana do Deserto (2):** This municipality was surveyed by LGM, RM and AP in September 2009 and June 2010 and the species was found in four different sites. In the first one (21°56'05" S, 43°16'11" W - 580 m), a couple was heard and tape-recorded at a closed border of a submontane rainforest fragment. In the second area (21°55'57" S, 43°14'26" W - 520 m), only one individual was observed foraging in the understory of a forest fragment dominated by lianas close to a dirt road (Figure 2A). In the third location (21°56'27" S, 43°13'39" W - 550 m) a couple was observed and tape-recorded (XC39619) at the border of a forest fragment dominated by bamboo stands (*Merostachys* sp.), whereas in the last recording site (21°59'04" S, 43°11'50" W - 450 m) four individuals were heard and tape-recorded from dense second-growth thickets next to a small paved road. In this last area we also recorded other Atlantic Forest endemic or typical species such as the Spot-breasted Antwreio *Dysithamnus stictothorax* (Temminck, 1823) and the Long-billed Wren *Cantorchilus longirostris* (Vieillot, 1819). There is also a male specimen from this locality, collected at Fazenda Furtado, and currently housed at MNRJ (MNRJ 44441).

**Além Paraíba (4):** On 4 September 2011, FIG, MFV and LGM collected two individuals at Fazenda da Prata (21°54'39" S, 42°52'35" W - 674 m), foraging in small clumps of an exotic bamboo in the border of a submontane semideciduous forest fragment of c. 1,000 ha. One bird was an adult male (MCNA 1933), which weighted 12 g and measured 150 mm. The other bird was an adult female (MCNA 1934), which weighted 11.5 g and measured 148 mm. On 23 September 2011, FIG collected another adult male (MCNA 1935) at the same site, which weighted 12 g and measured 141 mm. There is another specimen from this locality housed at MZUSP (MZUSP 92330).

**Muriaé (6):** In this municipality, the Rio de Janeiro Antbird was heard by CERTB and HJCP in a forest patch (21°04'01" S, 42°30'46" W - 680 m) on two different dates: 2 September 2009 and 14 January 2010. This forest fragment is in secondary successional stage and the understory is dominated by dense bamboo stands.

**Eugenópolis (7):** The species was detected by CERTB and HJCP on September 2009 and January 2010. On 1 September 2009 two individuals were heard and tape-recorded in a forest fragment (21°02'01" S, 42°15'57" W - 540 m) with the understory dominated by bamboo stands. On 13 January 2010 the species was recorded in another forest fragment (21°02'47" S, 42°15'40" W - 540 m), in which the understory was mainly dominated by small trees. Bamboo stands were absent.

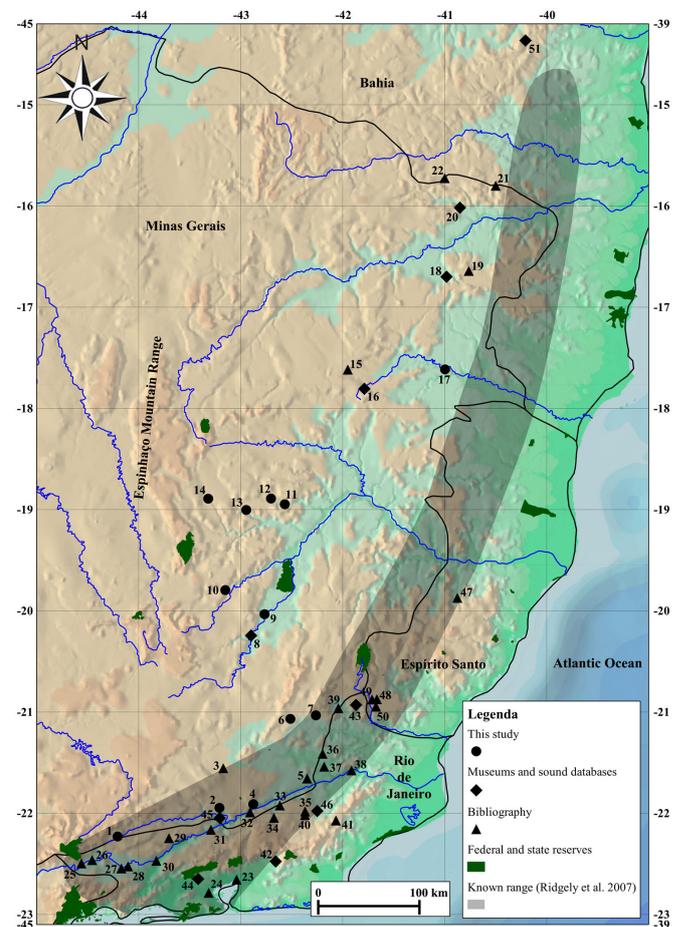
**Rio Casca (9):** The species was detected by CERTB on three different dates, always in the same submontane semideciduous forest patch (20°01'57" S, 42°45'54" W - 370 m). This fragment is situated about 500 m from the left bank of the Rio Doce, and its borders are characterized by the presence of pioneer vegetation. *Cercomacra brasiliiana* was tape-recorded in all occasions and sometimes seen along with Plumbeous Antwreio *Dysithamnus plumbeus* (Wied, 1831), Black-cheeked Gnateater *Conopophaga melanops* (Vieillot, 1818) and White-flanked Antwren

*Myrmotherula axillaris* (Vieillot, 1817).

**Bela Vista de Minas (10):** On 20 July 2009, a single individual was heard and tape-recorded by LGM and AP from the border of a lower montane semideciduous forest fragment of about 15 ha (19°47'30" S, 43°08'53" W - 840 m). Bird surveys conducted in the same area in December 2009 failed to find the species.

**Açucena (11):** In this municipality the species was recorded by HJCP and TOA in three distinct dates: 7 December 2008, 10 February 2009 and 6 October 2009. One adult male was recorded in December 2008, whereas in the other dates two individuals were observed. In all encounters the individuals responded to playback by approaching the emitter of the sound. The submontane semideciduous forest fragment of the area (18°56'39" S, 42°33'25" W - 537 m) is in secondary successional stage with significant presence of lianas.

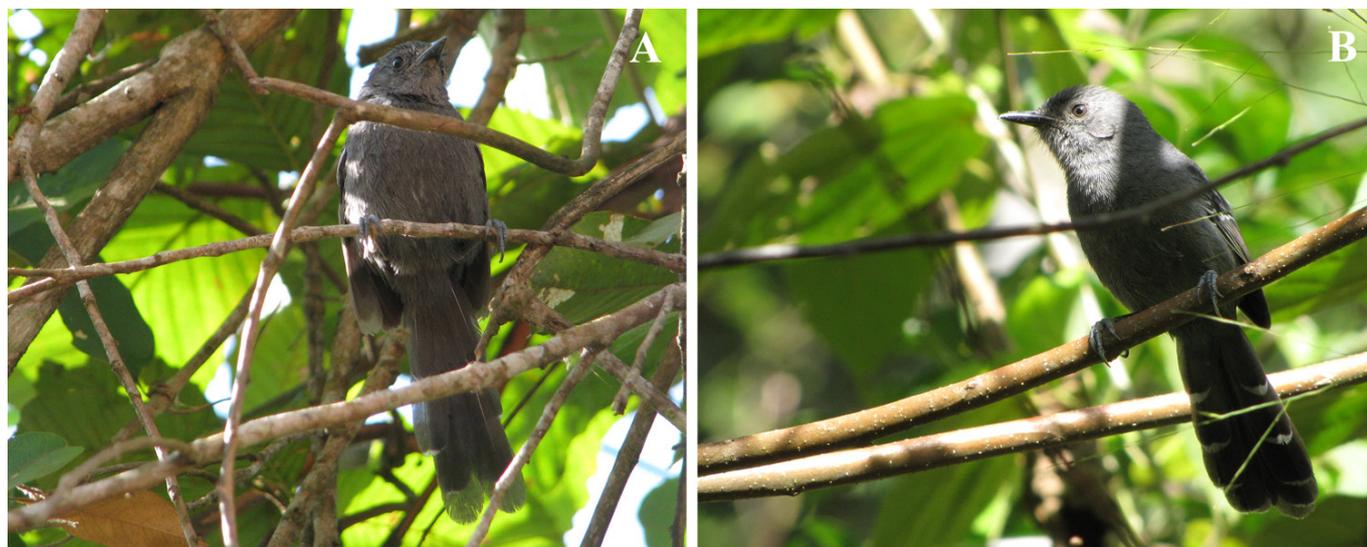
**Virginópolis (12):** On 14 January 2010, a couple was seen and tape-recorded by LGM in the right bank of the Rio Corrente Grande (18°53'21" S, 42°42'03" W - 660 m) in the understory of dense bamboo stands (*Merostachys* sp.). Other species associated with bamboo vegetation seen in this area were White-collared Foliage-gleaner *Anabazenops fuscus* (Vieillot, 1816), Blue Ground-Dove *Claravis pretiosa* (Ferrari-Perez, 1886) and Spot-breasted Antwreio *Dysithamnus stictothorax*. On the following day, another couple was tape-recorded in the left bank of the same river, foraging along riparian thickets dominated by bamboo. In both occasions the individuals responded aggressively to playback.



**FIGURE 1.** Map of the known range and new recording localities of the Rio de Janeiro Antbird *Cercomacra brasiliiana* in southeastern Brazil. Localities are numbered according to Table 1.

**TABLE 1.** List of the recording localities of the Rio de Janeiro Antbird *Cercomacra brasiliana* in southeastern Brazil. Sources: 1 - This study; a - Specimen housed at MCNA; 2 - Specimen housed at MNRJ; 3 - Specimen housed at MZUFV; 4 - Specimen housed at AMNH; 5 - Specimen housed at MZUSP; 6 - Tape-recording available at ASEC; 7 - Tape-recording available at Xeno-Canto; 8 - Ribon et al. (2004); 9 - Pacheco and Fonseca (1992); 10 - Sick (1997); 11 - Ribon et al. (2006); 12 - Venturini et al. (2000); 13 - Mallet-Rodrigues et al. (2007); 14 - Gonzaga et al. (1995); 15 - Bauer (1999); NP = Not provided.

LOCALITY ON MAP	MUNICIPALITY	COORDINATES	ALTITUDE (M)	SOURCES
1	Passa-Vinte, MG	22°14'45" S, 44°12'40" W	530	1
2	Santana do Deserto, MG	21°56'25" S, 43°13'42" W	450-580	1, 2
3	Goianá, MG	21°33'35" S, 43°10'16" W	NP	8
4	Além Paraíba, MG	21°54'39" S, 42°52'35" W	674	1a, 5
5	Pirapetinga, MG	21°39' S, 42°20' W	NP	9
6	Muriaé, MG	21°04'01" S, 42°30'46" W	680	1, 2, 9, 10
7	Eugenópolis, MG	21°02'01" S, 42°15'57" W	540	1
8	Rio Doce, MG	20°14' S, 42°54' W	NP	6
9	Rio Casca, MG	20°01'57" S, 42°45'54" W	370	1
10	Bela Vista de Minas, MG	19°47'30" S, 43°08'53" W	840	1
11	Açucena, MG	18°56'39" S, 42°33'25" W	537	1
12	Virginópolis, MG	18°53'16" S, 42°42'08" W	645	1
13	Dores de Guanhões, MG	19°01'36" S, 42°55'32" W	590	1
14	Dom Joaquim, MG	18°53'31" S, 43°19'37" W	670	1a
15	Ladainha, MG	17°37' S, 41°57' W	600-900	11
16	Poté, MG	17°48' S, 41°47' W	NP	3, 11
17	Carlos Chagas, MG	17°36'54" S, 40°59'42" W	245	1
18	Joáima, MG	16°42' S, 40°49' W	NP	2
19	Felisburgo, MG	16°38' S, 40°45' W	NP	10
20	Almenara, MG	16°01' S, 40°51' W	NP	6, 11
21	Bandeira / Jordânia, MG	15°48' S, 40°30' W	600-900	7, 11
22	Divisópolis, MG	15°43' S, 41°00' W	NP	10
23	Magé, RJ	22°39' S, 43°02' W	NP	9
24	Duque de Caxias, RJ	22°47' S, 43°18' W	NP	9
25	Itatiaia, RJ	22°29' S, 44°33' W	NP	9
26	Resende, RJ	22°27' S, 44°27' W	NP	9
27	Barra Mansa, RJ	22°32' S, 44°10' W	NP	9
28	Volta Redonda, RJ	22°31' S, 44°06' W	NP	9
29	Valença, RJ	22°14' S, 43°42' W	NP	9
30	Barra do Piraí, RJ	22°28' S, 43°49' W	NP	9
31	Paraíba do Sul, RJ	22°09' S, 43°17' W	NP	9
32	Sapucaia, RJ	21°59' S, 42°54' W	NP	9
33	Carmo, RJ	21°55' S, 42°36' W	NP	9
34	Sumidouro, RJ	22°02' S, 42°40' W	NP	9
35	Cantagalo, RJ	21°58' S, 42°22' W	NP	9
36	Miracema, RJ	21°24' S, 42°11' W	NP	9
37	Santo Antônio de Pádua, RJ	21°32' S, 42°10' W	NP	9
38	Cambuci, RJ	21°34' S, 41°54' W	NP	6, 9
39	Porciúncula, RJ	20°57' S, 42°02' W	NP	9
40	Cordeiro, RJ	22°01' S, 42°22' W	NP	9
41	Trajano de Moraes, RJ	22°04' S, 42°03' W	NP	9
42	Cachoeiras de Macacu, RJ	22° 27' S, 42°39' W	NP	4, 13
43	Varre Sai, RJ	20°55' S, 41°52' W	NP	6
44	Estação Atura, Nova Iguaçu, RJ	22°39' S, 43°25' W	NP	2
45	Comendador Levy Gasparian, RJ	22°02' S, 43°12' W	NP	2
46	Faz. Ribeirão Dourado, Macuco, RJ	21°58' S, 42°14' W	NP	2
47	Itarana, ES	19°52' S, 40°52' W	NP	12
48	Serra das Cangalhas, Guaçuí, ES	20°52' S, 41°39' W	815	15
49	Faz. do Castelo, Guaçuí, ES	20°52' S, 41°42' W	590	15
50	Faz. Perobas, São José do Calçado, ES	20°56' S, 41°40' W	NP	15
51	Boa Nova, BA	14°21' S, 40°12' W	700 - 900	6, 14



**FIGURE 2.** Photographic records of the Rio de Janeiro Antbird *Cercomacra brasiliana* in the state of Minas Gerais, southeastern Brazil. A: *C. brasiliana* at Santana do Deserto; B: *C. brasiliana* at Dolores de Guanhanes. Photos: Luiz Gabriel Mazzoni.

**Dolores de Guanhanes (13):** *Cercomacra brasiliana* was recorded in two different areas in this municipality. In the first one (19°00'17" S, 42°56'31" W - 575 m) a couple was observed and tape-recorded by AP, LGM and RM at the border of a submontane semideciduous forest fragment dominated by dense vine tangles (Figure 2B). In the second area (19°01'34" S, 42°55'34" W - 577 m), only one individual was recorded by LGM at the border of a forest fragment with dense understory. Each area was visited on January and July of 2010 and 2011 and the species was recorded on every visit.

**Dom Joaquim (14):** On 1 March 2010, a male was heard and tape-recorded by LGM and MFV at Fazenda Estiva (18°53'31" S, 43°19'37" W - 670 m). It was attracted to playback and climbed a dense tangle of *Guadua* sp. bamboo while vocalizing. This specimen was collected (MCNA 1303). It was an adult male by plumage (testes destroyed by shot). It weighed 12.5 g and measured 176 mm.

**Carlos Chagas (17):** The species was tape-recorded by EJJ (XC67395) in a lowland rainforest fragment of c. 200 ha (17°36'54" S, 40°59'42" W - 245 m) on December 2010. On March 2011 a couple was observed again in the same area. This fragment is close to the left bank of the Rio Mucuri.

Our most inland record (municipality of Dom Joaquim) extends the Rio de Janeiro Antbird's known range over 200 km westwards (Ridgely *et al.* 2007), and only 30 km away from the eastern border of the Espinhaço Mountain Range (Figure 1). The record obtained in Carlos Chagas also expands the known altitudinal limit of the species, proposed by Stotz *et al.* (1996) between 600 and 1,000 m. Our results shows that *C. brasiliana* is a little more widespread than previously thought; although in many areas it was very uncommon and patchily distributed, in agreement with previous information (Stotz *et al.* 1996, Zimmer and Isler 2003, BirdLife International 2012). Currently, *C. brasiliana* is known only from the states of Minas Gerais, Rio de Janeiro, Bahia and Espírito Santo. Due to the lack of documented records, the species was not included in the checklist of birds from the state of São Paulo (Silveira and Uezu 2011). According to Rego *et al.*

(2013) the record presented for this state by Pacheco and Fonseca (1992) is erroneous, as well as possible skins collected by Friedrich Sellow, which were more probably collected in the state of Rio de Janeiro.

It is also important to stress that none of our records were done within federal or state reserves, although the record obtained in Rio Casca is only about 20 km away from the boundaries of Rio Doce State Park, and the occurrence of the species in this reserve is, thus, expected. Therefore, playback surveys in conservation units that could harbor the species are strongly recommended. The protection of the remaining Atlantic Forest fragments where the species was recorded in southeastern Brazil is urgent.

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