



First records of the Wing-barred Seedeater, *Sporophila americana* (Gmelin, 1789) (Thraupidae), for Acre and a revision of its distribution in the Brazilian Amazon

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Abstract: We present the first records of the Wing-barred Seedeater (*Sporophila americana*) in Acre, Brazil. These observations, together with the published records and the specimens housed in museum collections, indicate that *S. americana* occurs over a considerably larger geographical area than is currently presented in the relevant literature. The occurrence of *S. americana* in the region of São Paulo de Olivença, in the Brazilian state of Amazonas indicates the potential existence of a sympatric zone with the congener Caqueta Seedeater (*Sporophila murallae*) in the western Amazonia.

Key words: Aves; Amazonia; state of Acre; Caqueta Seedeater

The Wing-barred Seedeater, *Sporophila americana* (Gmelin, 1789), is a small granivorous bird of the family Thraupidae, in which the adult male is coloured black and white, and the female is brown (Stiles 1996; Jaramillo 2011). As the immature males and females of this genus present a uniform brown colouration, the taxonomy of the group is based on the characteristics of the adult male (Stiles 1996). Until the mid-20th century, many authors considered *S. americana* to be part of a polyspecific complex with two disjunct groups, including the Caqueta (*S. murallae* Chapman, 1915) and the Variable Seedeater (*S. corvina hicksii* (Lawrence, 1865) and *S. c. ophthalmica* (Sclater, 1860)) forms from northwestern South America (Colombia, Ecuador, and Peru), and the nominal form *S. a. americana* to the east, in Venezuela, the Guianas, and northern Brazil, in the states of Amapá and Pará (Ridgely and Tudor 1994).

Based on its geographic distribution and morphological differences, Stiles (1996) showed that the *S. murallae* form is distinct from the *S. americana* form, and should be considered to be a full species. Following this separation, the distribution of *S. americana* was limited to the coastal lowlands of Venezuela, Guyana, Suriname, French Guiana, and Brazil. In Brazil, the principal field guides have adopted the classification of Stiles (1996), limiting the distribution of *S. americana* to the coast of Amapá, the northern margin of the Amazon River as far west as Manaus, the lower Tapajós River, and the Negro River (Stiles 1996; Ridgely and Tudor 2009; Jaramillo 2011; IUCN 2014; Figure 1).

The plumage of *S. americana* is similar to that of *S. murallae*, the main difference being the wing of the adult male. In *S. americana*, there are two well-defined white bars, formed by the greater and lesser wing-coverts, while in *S. murallae* there is only one narrow white bar on the lesser wing-coverts, which is totally absent from the greater wing-coverts in some individuals (Jaramillo 2011). This difference in the external morphology of the two forms is considered to be a diagnostic taxonomic trait and by field guides to differentiate the species (Stiles 1996; Ridgely and Tudor 2009; Jaramillo 2011; Sigris 2014).

The Wing-barred Seedeater inhabits open areas, where it is commonly seen in pairs or mono- or poly-specific flocks feeding on grass seeds in pastures, plantations, roadsides, the vegetation on river banks, Amazonian grassland enclaves (white sand vegetations — campinas and campinaranas), and even urban areas (Hilty and Brown 1986; Restall et al. 2006; Jaramillo 2011).

After 19 years (1996–2015), the geographic distribu-

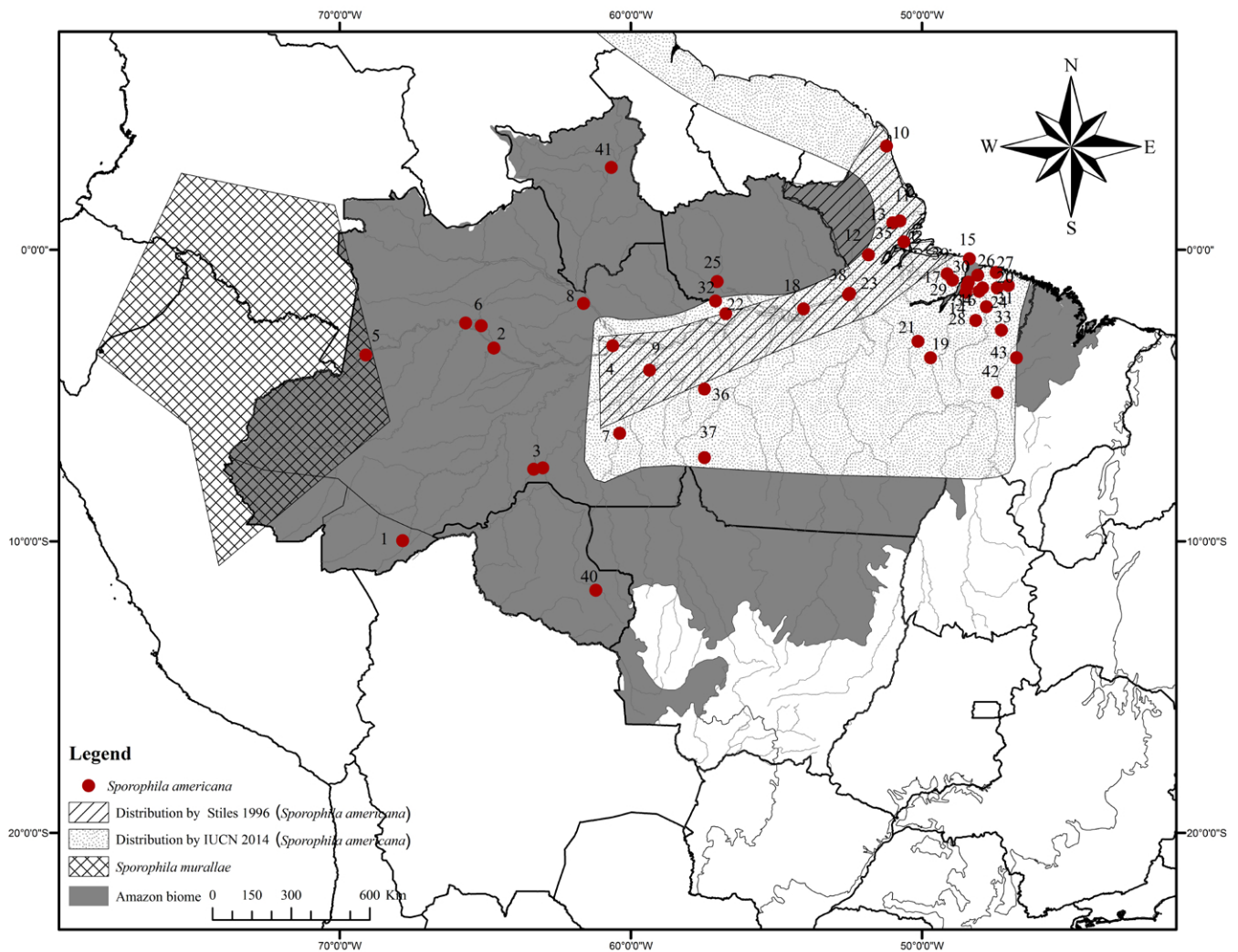


Figure 1. Geographic distribution of the Wing-barred Seedeater (*Sporophila americana*). The hatched area represents the distribution proposed by Stiles (1996), and the watermark, the area proposed by the IUCN (2014). The crosshatched area represents the distribution of the Caqueta Seedeater (*Sporophila murallae*). The red dots represent the localities recorded in the present study, published records, and from museum specimens, and are numbered as in Table 1.

tion of *S. americana* proposed by Stiles (1996) is still reproduced in identification guides and specialized sites (e.g., Birdlife International and International Union for Conservation of Nature). The present study aims to amend this situation through a review of the published records and specimens deposited in museums, as well as to present new records of occurrence of *S. americana* in the Brazilian Amazon basin, with the objective to refine the geographic distribution of this species in Brazil.

Historical records of the species in Brazil were obtained from a comprehensive search of the literature and the identification of specimens deposited in scientific collections. Data on the specimens deposited in North American museums were obtained from the Vertebrate database (Vertnet 2015). The data on the specimens deposited in the Goeldi Museum (Museu Paraense Emílio Goeldi: MPEG) in Belém were kindly provided by the curators in response to a formal request. The Brazilian WikiAves site (Wikiaves

2015) was also consulted with the aim of verifying the Brazilian municipalities in which *S. americana* has been photographed since 2007.

On 23 April 2015, an immature male was observed by EG near a female, assumed to be an adult, foraging in back gardens and cleared lots in the Jardim Europa neighbourhood (09°58'06.8" S, 067°50'48.6" W) of the city of Rio Branco, in the Brazilian state of Acre. On 17 May 2015, EG observed an adult male feeding on grass seeds in the same area (Figure 2). This individual was foraging together with a polyspecific flock formed by the Double-collared Seedeater (*Sporophila caerulea* Vieillot, 1823), Lined Seedeater (*Sporophila lineola* (Linnaeus, 1758)), Chestnut-bellied Seedeater (*Sporophila castaneiventris* Cabanis, 1849), and Blue-black Grassquit (*Volatinia jacarina* (Linnaeus, 1766)). On 24 August 2015, an adult male was observed and photographed in the same neighbourhood, where it was foraging together with other species of seedeaters. These observations



Figures 2 and 3. The Wing-barred Seedeater (*Sporophila americana*), photographed in Rio Branco, Acre (2), and Tefé, Amazonas, Brazil (3).

represent the first records of *S. americana* in Acre, and the southwestern limit of the occurrence of the species in Brazil (Figure 1; Table 1).

As in Acre, *S. americana* has been observed frequently by DP, DPG, and ACGL in the area surrounding the town of Tefé, in the Brazilian state of Amazonas (03°22'44.40"S, 064°42'39.96"W). On 11 July 2015, a solitary male (Figure 3) was observed at 5:30 pm feeding on grass seeds on the outskirts of the town. On the following day, a male was observed foraging together with a female, and a third record was obtained on 19 July 2015 at 08:20 am near the location of the first two sightings. These sightings were all obtained within a 300 m radius at the outskirts of the town's urban area. These observations confirm the occurrence of the species approximately 470 km west of Manacapuru, also in Amazonas (Figure 1, number 4), the western extreme of the distribution of the species, as defined by Stiles (1996).

The literature search provided evidence of the occurrence of *S. americana* within the area predicted by Stiles

(1996) and the IUCN (2014), but also indicated that the species can be found outside the range limits proposed by current field guides (Table 1). Vasconcelos (2004) first recorded *S. americana* in the Brazilian state of Maranhão, in the municipality of Açailândia, where two males were observed by audio recording. In the western extreme of the state of Pará, Guilherme (2014) recorded and collected a number of *S. americana* specimens along the margin of an alluvial forest, and in an enclave of white sand vegetation, at São Pedro, a locality located within the Amana National Forest, in the municipality of Itaituba. In the state of Amazonas, Borges et al. (2001) and Borges and Almeida (2011) recorded the species in the Jaú National Park (e.g., Seringalzinho). During a survey of the biodiversity of the middle Madeira River, Cohn-Haft et al. (2007) recorded *S. americana* in both the Madeira–Aripuanã interfluvium and on floodplain islands of the Madeira River itself. Pacheco (1993) also recorded *S. americana* in anthropogenic environments, e.g., plantations, and pastures as well as islands and swamps in the Mamirauá Sustainable Development Reserve, on the northern margin of the middle Solimões River (Figure 1; Table 1).

The survey of the specimens deposited in American museums and the Brazilian Goeldi Museum (Table 1) also showed that the Wing-barred Seedeater occurs in a much larger area of the Brazilian Amazon basin than was previously thought. In 1923, S. M. Klages collected a male *S. americana* in São Paulo de Olivença, Amazonas (Table 1). This specimen (YPM ORN 031498) deposited in the Peabody Museum of Natural History (Connecticut, USA), indicates that the species was originally found in the western extreme of the state of Amazonas, approximately 1,000 km due west of the western limit of the geographic distribution of the species, as proposed by Stiles (1996) and the IUCN (2014) (Figure 1, number 5). In addition, the specimens collected in southern Amazonas (Humaitá) and in Pimenta Bueno (Rondonia), to the south, and Boa Vista (Roraima), to the north, extend considerably the known distribution of *S. americana* in Brazil (Figure 1; Table 1). Based on photographs published on WikiAves (2015), it is possible to confirm the presence of *S. americana* in several cities from northern Tocantins state (Couto Magalhães, Santa Fé do Araguaia and São Miguel do Tocantins).

The compilation of all the available data permits the redefinition of the distribution of *S. americana* in Brazil and confirms its occurrence in all states of the country's northern region (Figure 1; WikiAves 2015). The presence of the species in São Paulo de Olivença indicates that *S. americana* may occur in sympatry with *S. murallae* in the western extreme of Amazonas state (Figure 1). The evidence suggests that *S. americana* has always been present along both sides of the Solimões/Amazon river

Table 1. Records of the Wing-barred Seedeater (*Sporophila americana*) obtained from the present study, published literature, and museum specimens. AMNH: American Museum of Natural History; CM: Carnegie Museum of Natural History; LACM: Natural History Museum of Los Angeles; MCZ: Museum of Comparative Zoology, Harvard University; MPEG: Museu Paraense Emílio Goeldi (Goeldi Museum), Belém, Pará (Brazil); YPM: Peabody Museum of Natural History, Yale University. The site codes correspond to those in Figure 1.

Brazilian state/ site code (see map)	Locality	Date	Source	Type of record or catalog number	Coordinates
Acre					
1	Rio Branco	17/5/2015	Present study	Visual record	09°58'06.8" S, 067°50'48.6" W
Amazonas					
2	Tefé	20/5/1906	AMNH	AMNH Birds Skin-514728	—
2	Tefé	11/7/2015	Present study	Visual record	03°22'44.4" S, 064°42'39.9" W
2	Tefé	12/7/2015	Present study	Visual record	03°22'47.5" S, 064°42'32.2" W
2	Tefé	19/7/2015	Present study	Visual record	03°22'39.9" S, 064°42'48.2" W
3	Humaitá	21/9/1906	AMNH	AMNH birds Skin-514727	07°28'51.6" S, 063°01'57.3" W
4	Manacapuru	9/10/1925	CM	CM Birds P105684	03°17'60" S, 060°37'00.12" W
5	São Paulo de Olivença	14/3/1923	YPM	YPM ORN 031498	03°36'49.5" S, 069°06'39.4" W
	Maraã	10/10/1988	Goeldi Museum	MPEG 43370	02°30' S, 065°40' W
6	Mamirauá Sustainable Development Reserve	1993	Pacheco, 1993	Visual record	02°36'53.2" S, 065°08'28.6" W
7	Nascente do Igarapé Arauazinho	2007	Cohn-Haft et al. (2007)	Specimen collected	06°17'26.1" S, 060°23'22.9" W
3	Humaitá	03/11/2010	Goeldi Museum	MPEG 71315	07°31'06" S, 063°20'16" W
8	Jaú-Seringalzinho National Park	2011	Borges and Almeida (2011)	Specimen collected	01°50'49" S, 061°37'19" W
9	Borba	13/9/2011	Goeldi Museum	MPEG 73762	04°07'42.0" S, 059°21'55.4" W
Amapá					
10	Oiapoque	19/4/1952	Goeldi Museum	MPEG 23580	03°34' N, 051°13' W
11	Ferreira Gomes	21/7/1955	Goeldi Museum	MPEG 23579	01°00' N, 050°45' W
12	Mazagão	17/1/1959	Goeldi Museum	MPEG 16220	00°10' S, 051°50' W
13	Rio Tracajutuba	11/7/1969	Goeldi Museum	MPEG 29016	00°56' N, 051°00' W
Pará					
14	Belém	04/03/1896	Goeldi Museum	MPEG 845	01°27' S, 048°29' W
15	Soure	19/08/1896	Goeldi Museum	MPEG 1098	00°18' S, 048°22' W
16	São Domingos do Capim	18/06/1897	Goeldi Museum	MPEG 1328	01°57' S, 047°47' W
17	Cachoeira do Arari	14/12/1905	Goeldi Museum	MPEG 4203	00°49' S, 049°08' W
18	Monte Alegre	16/02/1906	Goeldi Museum	MPEG 4691	02°01' S, 054°04' W
19	Tucuruí	03/05/1907	Goeldi Museum	MPEG 5394	03°42' S, 049°42' W
20	Rio Quatipuru	13/06/1908	Goeldi Museum	MPEG 5671	01°18' S, 047°25' W
21	Baião	09/12/1910	Goeldi Museum	MPEG 7561	03°08' S, 050°08' W
22	Faro	23/01/1912	Goeldi Museum	MPEG 9137	02°11' S, 056°44' W
23	Arumanduba	03/12/1912	Goeldi Museum	MPEG 10363	01°29' S, 052°29' W
24	Igarapé-açu	21/02/1918	Goeldi Museum	MPEG 13789	01°25'56.9" S, 048°02'08.2" W
25	Rio Mapuera	15/07/1937	Goeldi Museum	MPEG 23576	01°05' S, 057°02' W
26	Castanhal	09/04/1965	Goeldi Museum	MPEG 24353	01°18' S, 047°55' W
27	Maracanã	08/06/1965	Goeldi Museum	MPEG 25195	00°46' S, 047°27' W
28	Tomé-açu	21/09/1965	Goeldi Museum	MPEG 26340	02°25' S, 048°09' W
29	Outeiro	21/09/1968	Goeldi Museum	MPEG 29826	01°15' S, 048°27' W
30	Vigia	08/04/1973	Goeldi Museum	MPEG 30642	00°52' S, 048°05' W
31	Capitão Poço	20/10/1974	Goeldi Museum	MPEG 31909	01°13' S, 047°02' W
32	Oriximiná	08/09/1979	Goeldi Museum	MPEG 34361	01°45' S, 057°05' W
33	Paragominas	25/02/1985	Goeldi Museum	MPEG 36997	02°45' S, 047°16' W
34	Ilha do Mosqueiro	03/12/1988	Goeldi Museum	MPEG 43811	01°06' S, 048°24' W
35	Chaves	04/02/1992	Goeldi Museum	MPEG 47633	00°17' N, 050°37' W
36	Itaituba, FLONA Amana	05/05/2008	Goeldi Museum	MPEG 65167/Guilherme, 2014	04°46' S, 057°28' W
37	Novo Progresso	14/12/2009	Goeldi Museum	MPEG 69676	07°07'46.4" S, 055°43'02.7" W
38	Almeirim	25/09/2014	Goeldi Museum	MPEG 79309	01°32'15.2" S, 052°31'25.9" W
39	Marajó Island	26/10/2014	Goeldi Museum	MPEG 80283	01°02'08" S, 048°57'10.3" W
Rondônia					
40	Pimenta Bueno	6/6/1964	MCZ	MCZ Orn 262774	11°40'01.2" S, 061°12'11.4" W
Roraima					
41	Boa Vista	15/3/1963	Los Angeles	LACM Birds 45424	02°50'05.7" N, 060°40'15.6" W
Maranhão					
42	Açailândia	16/3/2004	Vasconcelos (2004)	Visual record	04°53' S, 047°25' W
43	Centro Novo Maranhão	15/7/2013	Goeldi Museum	MPEG 77012	03°42'12.8" S, 46°45'44" W

in Amazonas and Pará states and has expanded its area of occurrence by dispersing along the main highways (e.g., the Transamazônica [BR-230], BR-364, BR-319, and BR-174) that crisscross northern Brazil.

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