

SHORT COMMUNICATION

First record of the Yellowish Pipit in Acre with notes on other grassland birds in southwestern Amazônia

Primeiro registro do Caminheiro-zumbidor no Acre com notas sobre outras aves de ambientes campestres no sudoeste amazônico

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Abstract

This paper presents the first record of the Yellowish Pipit (*Anthus lutescens*) in the Brazilian state of Acre. This record represents the westernmost record of the species in Brazil and provides evidence of its expansion into the southwestern Amazon basin. We also present information on the occurrence of other bird species, typical of grasslands and other open habitats, e.g., the Burrowing Owl (*Athene cunicularia*), the White-tailed Hawk (*Geranoaetus albicaudatus*), the Southern Lapwing (*Vanellus chilensis*) and the Southern Caracara (*Caracara plancus*). These species have encroached southwestern Amazônia following environmental changes caused by human activities, such as the construction of highways and the conversion of the rainforest into cattle pasture.

Keywords: Aves, *Anthus lutescens*, Motacillidae, open habitats, range extension.

Resumo

Este trabalho divulga o primeiro registro do Caminheiro-zumbidor (*Anthus lutescens*) no estado brasileiro do Acre. Este registro é o mais ocidental da espécie em território brasileiro e marca a sua expansão em direção ao sudoeste amazônico. Apresenta também informações sobre algumas espécies de aves típicas de ambientes campestres, tais como a coruja-buraqueira (*Athene cunicularia*), o gavião-de-rabo-branco (*Geranoaetus albicaudatus*), o quero-quero (*Vanellus chilensis*) e o caracará (*Caracara plancus*), entre outras. Essas espécies vêm ocupando áreas na Amazônia após mudanças ambientais provocadas pelo homem, tais como a abertura de estradas e a conversão das florestas em pastagens para atividades agropastoris.

Palavras-chave: Aves, *Anthus lutescens*, Motacillidae, ambientes abertos, extensão de distribuição.

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The family Motacillidae comprises five genera and 65 species. The genus *Anthus* is the most diverse, with 43 species. Despite having a global distribution, only seven *Anthus* species occur in the Neotropical region (Tyler, 2004; Ridgely and Tudor, 2009). These species, known as Pipits, are insectivorous, terrestrial, with large legs and toes, and a well-developed claw on the hallux. Pipits inhabit open environments, such as prairies, grasslands, and cattle pasture (Tyler, 2004). The Yellowish Pipit (*Anthus lutescens* PUCHERAN, 1855) occurs in Panama and throughout most of South America, from Colombia to Argentina, with the exception of Ecuador and most of the central and southwestern Amazon basin (Tyler, 2004; Ridgely and Tudor, 1994). Three subspecies are recognized. The nominal form (*Anthus l. lutescens*) occurs in Brazil, while *Anthus l. peruvianus* is found on the Pacific coast of Peru (Tyler, 2004; Schulenberg *et al.*, 2010). The subspecies *A. l. parvus* occurs on the Pacific slope of western Panama. Of the five species of *Anthus* occurring in Brazil, the Yellowish Pipit is the most widely distributed. This species occurs in almost all regions, from the “campos sulinos”, or southern grasslands, to parts of the north and northeast of the country (Sick, 1997; Ridgely and Tudor, 1994). In the Amazon biome, the Yellowish Pipit was recorded in Pampas del Heath, a seasonally flooded lowland, which is a natural grassland formation, along the Heath River on the Peru-Bolivian border (Graham *et al.*, 1980). This species has also been recorded in an enclave of *Cerrado* (Brazilian savanna) in the southeastern portion of the Brazilian state of Amazonas (Aleixo and Poletto, 2007), and in cattle pasture in the municipality of Alta Floresta, in northern Mato Grosso (Lees *et al.*, 2013).

The environmental changes caused by human activities, have transformed ecosystems and, as a result, benefited the spread of many invasive plants and animals around the world (Dukes

and Mooney, 1999). In northern South America, the Amazon rainforest is being devastated at an alarming rate (Fearnside, 2005). Brazilian regions, such as the state of Rondônia and eastern Acre (Figure 1), have already lost much of their forest cover, leaving vast areas covered with exotic grasses for cattle grazing (Fearnside, 1993, 2005, 2008; Pfaff, 1999; Vieira *et al.*, 2008, Araújo *et al.*, 2011). This is preoccupying because different bird species show different degrees of sensitivity to deforestation (Lees and Peres, 2006). Deforestation and urbanization cause local extinction, and a decrease in avian species diversity that favors the dominance of a few bird species that are specialized for the colonization of open habitats (Beissinger and Osborne, 1982; Blair, 1996).

The Brazilian state of Acre has already lost about 12% of its original forest cover (Rodrigues and Ferreira, 2013). Most of the deforestation is concentrated in the east of the state, where urban centers, including the city of Rio Branco – the capital of the state (Figure 1), can be found. In addition, this part of the state was im-

pacted by major colonization projects established by the Brazilian military government during the 1970s and 1980s (Acre, 2000; Scarcello and Bidone, 2007).

This work reports on the first record of a bird species in the Brazilian state of Acre, as well as the occurrence of a number of grassland species in this state. The occurrence of such species was not previously reported in the southwestern extreme of the Brazilian Amazon.

Data on *Anthus lutescens* were obtained from sporadic observations conducted by REC, while the information on the occurrence of other grassland species in Acre is the result of a continuous review of the scientific literature conducted by EG over the past 11 years (Guilherme, 2009, 2012). We also used the data on the specimens collected by EG between 2004 and 2015, deposited in the ornithological collection of Museu Paraense Emílio Goeldi, in Belém (Pará State), and the Laboratório de Ornitologia of the Universidade Federal do Acre, in Rio Branco (Acre). Information was also obtained from the Wikiaves Brazilian

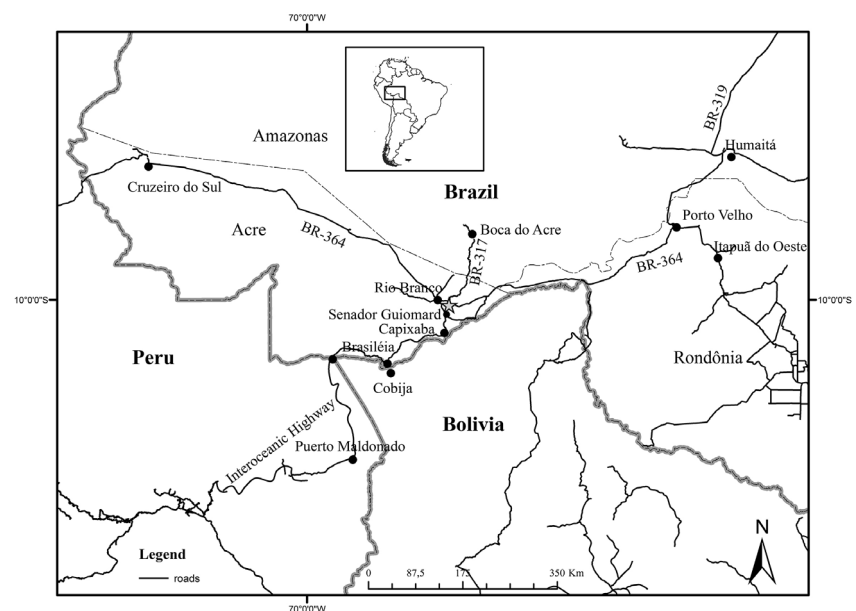


Figure 1. Southwestern Amazon showing the major highways and urban centers. The green star represents the site at which the Yellowish Pipit (*Anthus lutescens*) was recorded for the first time in the eastern portion of the Brazilian state of Acre, Brazil.

website (www.wikiaves.com.br) in order to identify the occurrence and range extensions of the grassland species in the municipalities located in the southwestern Brazilian Amazon. The scientific nomenclature used in this manuscript is that proposed by the CBRO (2014).

On 19 January 2015, at 09:01 h, REC heard a bird vocalizing in a pasture located at Km 84 of the Brazilian BR-317 interstate highway between the municipalities of Senador Guiomard, in the state of Acre, and Boca do Acre, in Amazonas (Figure 1). On recognizing the vocalization of *Anthus*, REC played back the song of the Yellowish Pipit (*A. lutescens*), and the bird responded. When it heard the playback, the bird walked across the ground to within a distance of 10m from the observer and then flew away and perched, but continued vocalizing. On this occasion, only one individual was observed and photographed (Figure 2).

On 12 March 2015, EG went to the same site and obtained the geographic coordinates (10°06'55.1" S, 67°41'20.6" W). Although the day was very rainy, EG played the song of the Yellowish Pipit and the bird responded. This record is approximately

340km (in a straight line) from Pampas del Heath on the Peruvian–Bolivian border (Graham *et al.*, 1980) and around 650Km from an enclave of *Cerrado* (Brazilian savanna) in the southeastern portion of the Brazilian state of Amazonas (Aleixo and Poletto, 2007). These are the two closest locations where the species was recorded previously in the Amazon biome.

The presence of the Yellowish Pipit in the state of Acre represents the westernmost known locality for the species in Brazil, and provides conclusive evidence of the expansion of the distribution of this species into the southwestern Amazon basin. The transformation of the original forest cover into open areas, combined with the high dispersal capacity of the members of the family Motacillidae (Voelker, 2002), would account for the recent occurrence of the Yellowish Pipit in Acre. These factors would also explain the presence of other open-habitat bird species that have arrived recently in the southwestern Amazon basin, particularly in the state of Acre (Guilherme, 2012), including the Cattle Egret (*Bubulcus ibis* (LINNAEUS, 1758)), the Burrowing Owl (*Athene cunicularia* (MOLINA, 1782)),

the White-tailed Hawk (*Geranoaetus albicaudatus* (VIEILLOT, 1816)), the Southern Lapwing (*Vanellus chilensis* (MOLINA, 1782)), and the Southern Caracara (*Caracara plancus* (MILLER, 1777)). The shift in environmental conditions may also support range extensions and an increase in abundance of the populations of some species that had previously had an intermittent distribution in the Amazon region, such as the Red-breasted Blackbird (*Sturnella militaris* (LINNAEUS, 1758)) and the Black-faced Tanager (*Schistochlamys melanopsis* (LATHAM, 1790)).

Species accounts of the principal open-habitat birds found in the southwestern Amazon

Burrowing Owl (*Athene cunicularia*, Figure 3) – Originally absent from forested Amazonian habitats (Holt *et al.*, 1999), the natural populations of this species were only found in enclaves of open vegetation in the northern and northwestern Amazon basin (Borges *et al.*, 2014; Santos and Silva, 2007). Recently, *Athene cunicularia* populations have expanded into areas that were once covered by tropical rainforest (Aleixo and Polleto, 2007; Gomes *et al.*, 2013). In the southwestern Amazon basin, populations of this species have expanded on an annual basis. On 3 January 2005, a specimen was found road-killed on the BR-364 highway, in the municipality of Itapuã do Oeste, in the state of Rondônia. This specimen was collected and deposited in the ornithological collection of the Universidade Federal do Acre (UFAC), in Rio Branco (AC-147♂). Over the subsequent years, five other specimens were collected at sites in Acre and deposited in the ornithological collection of the Museu Paraense Emílio Goeldi in Belém, registered under MPEG 60465♂, 61517♂, 63496♀, 64364♂, 64432♂, 64353♀ (Guilherme, 2009). Guilherme and



Figure 2. A Yellowish Pipit (*Anthus lutescens*) recorded on 19 January 2015 in a farm pasture in eastern Acre, Brazil (Photo: Robson Czaban).

Santos (2009) recorded this species in a farm pasture approximately 70km northwest of Rio Branco, the capital of Acre. The species is also present surrounding the town of Cruzeiro do Sul, in the western extreme of Acre (EG pers. obs.; Figure 1). The Burrowing Owl is now very common in pastures adjacent to the main highways in Rondônia and Acre. The species can be frequently seen on farms along the BR-317 highway between Senador Guiomard (Acre) and Boca do Acre in southern Amazonas state (Brazil). It also occurs on the Interoceanic highway between Puerto Maldonado in Peru and the Brazilian and Bolivian borders (Harvey *et al.*, 2014; Figure 1).

White-tailed Hawk (*Geranoaetus albicaudatus*, Figure 4) – the species is typical from open areas, with scattered records in the lowland Brazilian and Peruvian Amazon (Graham *et al.*, 1980; Aleixo and Polleto, 2007; Schulenberg *et al.*, 2010; Vasconcelos *et al.*, 2011). In 2006 and 2007, three specimens were collected in the municipalities of Plácido de Castro and Senador Guiomard, in eastern Acre, which were deposited in the Museu Paraense Emílio Goeldi under MPEG

60432♀; 64341♂; 64342♀ (Guilherme, 2009). On 12 March 2015, four individuals, perched on isolated trees, were observed on both sides of the BR-317 highway between Senador Guiomard and the junction with the BR-364 (Figure 1). The observed individuals were located at a distance of approximately 4km one from another. Photographs published on Wikiaves show that the species is present in a number of municipalities along the entire length of the Brazilian BR-364 highway between Mato Grosso and eastern Acre. The White-tailed Hawk has also been recorded in several areas along the Interoceanic highway between Capixaba (Acre) and Puerto Maldonado, in Peru (Figure 1).

Southern Lapwing (*Vanellus chilensis*, Figure 5) – This species occurs throughout most of South America, but was originally absent from much of the Amazon region (Piersma and Wiersma, 1996). This species has been observed in Acre since the early 2000s. Two individuals were collected in eastern Acre in 2006 and deposited in the Museu Paraense Emílio Goeldi under MPEG 61513? and MPEG 61225♀ (Guilherme, 2009). In addition to colonizing cattle ranches, this

species has dispersed to the central Amazon basin along the courses of its principal tributaries, such as the Purus River, in Acre (Guilherme and Dantas, 2011). The Southern Lapwing is also colonizing urban environments in southwestern Amazônia. It is already seen in Rio Branco, where it reproduces at a number of sites, including the UFAC campus. It also occurs in open habitats along the Interoceanic highway on both the Brazilian (EG pers. obs.) and the Peruvian sides of the border (Harvey *et al.*, 2014).

Southern Caracara (*Caracara plancus*, Figure 6) – Like most falcons, this species prefers open habitats over forested ones (White *et al.*, 1994). While very common in other biomes of central, northeastern, and southern South America (White *et al.*, 1994), the Southern Caracara was absent, until recently, from the westernmost Amazon basin (i.e., Acre). In 2007, a specimen was collected in the municipality of Senador Guiomard (MPEG 64343; Guilherme, 2009). The species was also photographed in the western extreme of the state, near the town of Cruzeiro do Sul (Wikiaves, 2015a; Figure 1). The presence of the Southern Caracara (*C. plancus*) in the southwestern Amazon basin, rather than the Crested Caracara (*Caracara cheriway*), is unexpected, given that *C. cheriway* is common in the northern Amazon region (Restall *et al.*, 2006) and on the coast of Peru (Schulenberg *et al.*, 2010). This evidence nevertheless supports the conclusion that *C. plancus* has dispersed to this region along the major highways in western Brazil. Similarly to the Southern Lapwing, the Southern Caracara has dispersed to the central Amazon basin following its principal tributaries. The Crested Caracara is very common throughout most of Brazil, where it is known as the “caracara” (CBRO, 2014; Willis and Oniki, 1991). Some local residents refer to this species as the “gavião preto” (black hawk), rather than its universal vernacular name. This reference made by local people



Figure 3. A Burrowing Owl (*Athene cunicularia*) recorded on 27 January 2015 near Km 82 of the Transacraea highway, in the municipality of Rio Branco, Acre, Brazil (Photo: Robson Czaban).



Figure 4. A White-tailed Hawk (*Geranoaetus albicaudatus*) recorded on 30 November 2011 in the municipality of Humaitá, southeastern Amazonas, Brazil (Photo: Robson Czaban).



Figure 5. A Southern Lapwing (*Vanellus chilensis*) recorded on 11 June 2014 on the UFAC campus, Rio Branco, Acre, Brazil (Photo: Edson Guilherme).

may reflect the recent arrival of the species in Acre, which has thus acquired a local vernacular. This species is now present throughout Rondônia and Acre, in Brazil, following the BR-364 and Interoceanic highways to Puerto Maldonado, in Peru (Mestre *et al.*, 2010; França *et al.*, 2011; Santos *et al.*, 2011; DeLuca, 2012; Harvey *et al.*, 2014). Black-faced Tanager (*Schistochlamys melanopis*, Figure 7) – This species is

widely distributed in South America (Hilty, 2011), but was originally almost totally absent in the Amazon rainforest (Ridgely and Tudor, 1994). Even in the recent past, the only records of Black-faced Tanager were scant and restricted to enclaves of savanna-like vegetation on sandy soils, known locally as *campina*, *campinarana* or *cerrado* (Borges *et al.*, 2001; Aleixo and Polleto, 2007;

Santos and Silva, 2007; Vasconcelos *et al.*, 2011; Borges *et al.*, 2014). On 10 March 2004, a road-killed Black-faced Tanager was found on the Interoceanic highway (BR-317) near the town of Brasília (Figure 1). This specimen was deposited in the UFAC ornithological collection (AC0067♂). Rasmussen *et al.* (2005) recorded the presence of the species in a pasture at the Catuaba Experimental Farm near the BR-364 highway, in the municipality of Senador Guiomard. There is no doubt that the geographical distribution of this species has been expanding in northern Brazil, following the highways and deforestation of the Amazon's agricultural frontier (Gomes *et al.*, 2010). However, the occurrence of this species in the Parque Estadual Chandless, in the interior of Acre, indicates that the dispersal capacity of this species is not restricted to the occupation of newly converted areas along the main highways. On 27 November 2010, two specimens (AC 0252♂, 0253♂) were collected in the vicinity of the base camp in Chandless State Park (09°21'31.2" S, 69°55'34.6" W), which is located in a remote region of Acre (see Freitas *et al.*, 2013; Mielke *et al.*, 2010) with no access by road and a low human density. There are practically no deforested sites or naturally open habitats in the area that might permit the dispersal of the species to the park, and this record was highly unexpected. Sneath (1910) explained that the birds which inhabit enclaves of open vegetation in the Amazon forest can reach these areas using the vegetation along river banks as corridors of dispersion. This would appear to account for the unexpected occurrence of Black-faced Tanager in this remote region of Acre. The conversion of the natural vegetation to an agricultural landscape has permitted the dispersal and establishment of bird populations originating from neighboring biomes, such as the Pantanal wetlands, the Cerrado and Chaco savannas. The paving of roads, such as the BR-364 interstate and the



Figure 6. A Southern Caracara (*Caracara plancus*) recorded on 27 February 2015 in “ramal do 13”, road near Brasília city, Acre, Brazil (Photo: Edson Guilherme).



Figure 7. A Black-faced Tanager (*Schistochlamys melanopis*) recorded on 31 January 2015 in the Humaitá Forest Reserve, in the municipality of Porto Acre, Acre, Brazil (Photo: Robson Czaban).

Interoceanic highway, which links Brazil and Peru (Figure 1), have further reinforced this phenomenon in the southwestern Amazon basin. Bird species previously unknown to local residents have begun to appear on farms and even in urban areas of the Amazon region. At the present time, 670 bird species are known to occur in the Brazilian state of Acre, includ-

ing the new record of the Yellowish Pipit presented herein (Guilherme, 2012; Marques and Guilherme, 2014; Melo *et al.*, 2015). In the southwestern Amazon basin (Rondônia, southern Amazonas, Acre, southeastern Peru and northwestern Bolivia), the ongoing conversion of forests into pastures will likely continue over the coming decades. This means that

populations of bird species adapted to open habitats will continue to encroach on the region. New grassland species, such as the Grassland Sparrow (*Ammodramus humeralis* (Bosc, 1792)) and the Guira Cuckoo (*Guira guira* (Gmelin, 1788)), may also reach this region. The Grassland Sparrow is already present in open habitats along the interoceanic highway in Peru (Harvey *et al.*, 2014) and is advancing along the BR364 highway, in Rondônia, and the BR-319 highway, in Amazonas. Similarly, the Guira Cuckoo has expanded across most of northern Mato Grosso, eastern Bolivia and Rondônia, following major highways (Lees *et al.*, 2013; Vidoz *et al.*, 2010; Wikiaves, 2015b). This evidence indicates that these species and probably other birds will colonize the region, including the state of Acre, in the near future.

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