

Birds from Cáceres, Mato Grosso: the highest species richness ever recorded in a Brazilian non-forest region

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ABSTRACT: The municipality of Cáceres. Mato Grosso state, Brazil, lies in a contact zone between three semi-arid to arid ecoregions: the Chiquitano Dry Forests, the Cerrado and the Pantanal. In spite of being one of the best sampled non-forest sites for birds in Brazil, with thousands of specimens collected, no paper to date has ever compiled the information available for the region. In this paper, we present a checklist of the avifauna of Cáceres, gathering the historical data available together with our own unpublished observations during a series of expeditions to the region. During our fieldwork we recorded 374 species to the region. The analysis of literature data and museum specimens rises to 446 the number of species ever recorded in the municipality, 362 (81.2%) of which were documented with specimens. This is by far the highest bird species richness recorded for a non-forest site in Brazil.

KEY-WORDS: bird inventory, Cerrado, Chiquitano Dry Forest, Neotropics, Pantanal.

INTRODUCTION

A corridor of seasonally dry and predominantly non-forested areas extends from northwestern Argentina to northeastern Brazil, the so-called “diagonal of open formations” (Vanzolini 1976, Werneck 2011). This region is poorly sampled for birds (Silva 1995, Tubelis & Tomas 2003) and includes the Chaco, Pantanal, Cerrado and Caatinga biogeographic domains. Historical bird surveys in this region are scarce, because large portions of it were difficult to access during the 19th Century or even in the first half of the 20th Century. Therefore, much of what is known about the avifauna of these non-forested domains, especially in the Brazilian territory, results from modern bird surveys. An exception to this rule is the municipality of Cáceres, Mato Grosso state, which has been explored by several expeditions devoted to natural history studies. Nevertheless, in spite of being one of the best sampled sites of central-western Brazil, the extensive historical collections performed in Cáceres

have never been subject to revision and critical analysis. In this paper, we present a checklist of the avifauna of Cáceres, gathering the historical data available together with our own unpublished observations during a series of expeditions to the region. We also present comments on the noteworthy species recorded.

METHODS

Study area

The study area was defined as the political boundaries of the municipality of Cáceres, adopting the political division in effect since 2008. Founded on the 18th Century with the name of “Villa Maria do Paraguay”, Cáceres was once an enormous municipality that encompassed extensive areas in western Mato Grosso. Cáceres was subsequently subdivided in other municipalities (Ferreira 1997), until reaching the present day extension of about

24,350 km² and almost 88,000 inhabitants (IBGE 2015). Extensive cattle ranching has been the most traditional economic activity in the municipality, with historical records indicating that large farms, one of them with about 60,000 cattle heads, were present as early as 1827 (Florence 1977). Nowadays, cattle raising is still one of the most important economic activities in Cáceres, which harbors almost one million heads of stock. Agriculture (*e.g.*, cassava, sugar cane, soybean, corn, rubber tree and banana), aquaculture (indigenous fishes) and recreational fishing are also important economic activities (Ferreira 1997, IBGE 2015).

The climate is tropical with dry winter, Aw according to the Köppen climate classification system, with well-marked dry and rainy seasons (Alvares *et al.* 2014). The mean annual rainfall is 1250 mm, with rains falling from October to May, and the dry period lasts four months, from June to September (Nimer 1979). Mean annual temperature is 24°C, and September is the hottest month (maximal mean is 34°C), but with maximum temperatures often over 40°C (Nimer 1979). June and July are the coldest months, with minimal mean temperature below 20°C (Nimer 1979), but strong cold waves (“friagens”) can eventually drop temperatures as low as 0°C (Willis 1976).

The southern half of Cáceres is located in the Pantanal region, the world's largest wetland, and is subject to seasonal flooding (Por 1995). Flooding starts

on January and water level quickly reaches a peak from February to April, slowly decreasing (runoff) from May to August (Hamilton *et al.* 1996). From September to December, water level is relatively constant at their lowest value, exposing sand beaches used for nesting birds and freshwater turtles along the Rio Paraguai (Hamilton *et al.* 1996). Note that the dry season (June to September) does not agree with the low-water period (September to December) (Alho 2008).

Cáceres is a very interesting region from the biogeographic point of view, because it lies in a contact zone between three semi-arid to arid ecoregions: the Chiquitano Dry Forests, the Cerrado and the Pantanal (Olson *et al.* 2001). A marked Amazonian influence is observed in the forests along the Rio Paraguai, Rio Jauru and Rio Sepotuba (von Pelzeln 1868–1870, Willis 1976), and a slight Chacoan influence is also noted along the Brazilian border with Bolivia (IBGE 2004). The southwestern portion of Cáceres is an Important Bird and Biodiversity Area - IBA MT-09 (Luca *et al.* 2009).

Fieldwork in the study area was conducted in six sites, which are described below, all of them in the Pantanal. LEL also briefly visited the city of Cáceres on the morning of 28 August 2009, conducting limited fieldwork on the riparian forests along the Rio Paraguai.

Fazenda Baía de Pedra (16°28'S; 58°08'W, 110 m a.s.l.): an early 20th Century farm with disturbed semideciduous to deciduous forests, seasonally flooded

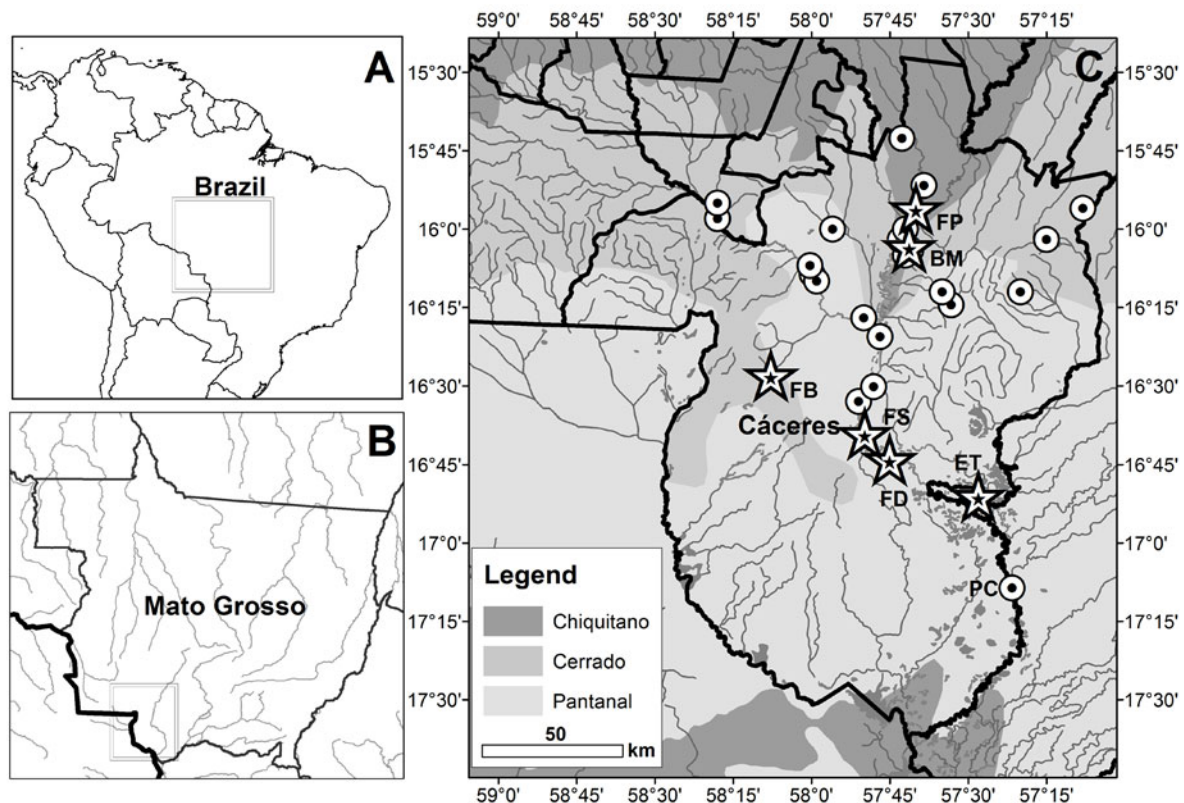


FIGURE 1. Map of the study area in Cáceres, Mato Grosso state, Brazil. Localities sampled for the current study are indicated by a star and localities sampled by others are indicated by circles. See Table 2 for a gazetteer of the localities sampled in Cáceres and the collectors who visited them. Two letters code near the stars indicate the name of the localities sampled by us (see Table 2). Vegetation map follows Olson *et al.* (2001).

savannas and grasslands, planted pastures, permanent marshes and small ponds. Extensive bamboo thickets (*Guadua* sp.) are found along roadsides and other disturbed areas. Gallery forests are absent. Data on the floristic composition of a cerrado patch in this site was presented by Lima-Jr. *et al.* (2008), and notes on the aquatic macrophytes found in Porto Limão, a nearby site, were presented by Silva & Carniello (2007). Visited by JBP, LEL, AO, and field assistants from 17–25 February 2008 (when the area was flooded) and from 22–30 August 2008 (beginning of the low-water period).

Fazenda Descalvados (16°44'S; 57°45'W, 110 m a.s.l.): a 19th Century farm on the right bank of the Rio Paraguai, with deciduous forests, artificial pastures, cultures, marshes and gallery forests. This farm was one of the biggest farms in Brazil, with more than 800,000 ha and a livestock of 300,000 heads of stock (Arruda 1938). Visited by LFS and FS from 1–9 September 2007, with some few noteworthy records published elsewhere (Vasconcelos *et al.* 2008). This locality has been previously visited by several other collectors in historical times (see below).

Fazenda Santo Antônio das Lendas (16°39'S; 57°50'W, 145 m a.s.l.): most part of the original semi-deciduous dry forest in this site was replaced by artificial pastures for cattle raising. The seasonally flooded lowlands are still preserved with patches of flooded forests and grasslands with Caranda Palms (*Copernicia alba*). Complementary surveys were carried out in the gallery forest of Rio Paraguai. Visited by PD from 17 to 28 November 1997, with some few opportunistic observations in the city of Cáceres published elsewhere (Tubelis & Tomas 2003).

Estação Ecológica de Taiamã (16°52'S; 57°28'W, 100 m a.s.l.): this conservation unit is located in an island in the Rio Paraguai, with an area of about 11,200 ha. Visited by MME on 19 and 20 August 2008.

Baía dos Malheiros (16°03'20"S; 57°41'16"W, 120 m a.s.l.): a small patch of riparian forest on the left bank of the Rio Paraguai. The area was visited weekly by MME from January to November 2002 and during one week in June 2008.

Fazenda Paraguatatuba (15°56'S; 57°40'W, 135 m a.s.l.): located along the road BR-174, km 14, at the confluence between Rio Sepotuba and Rio Paraguai. This farm is about 2500 ha, half of these covered by native vegetation and the other half covered by exotic Teak Tree (*Tectona grandis*) plantation. Sampled habitats included temporary lakes, marshes, seasonally flooded riparian forest, semideciduous forests, savannas and grasslands. Fieldwork was performed by MME during field trips to the area, each one lasting three days. The area was visited on January, February and March 2006/2007, April and May 2006/2007 and July, August and September 2006.

Sampling

Fieldwork took place during a series of expeditions with different purposes, what explain the lack of standardization of field methods. Observations with binoculars and recorders were conducted in all expeditions. Bird vocalizations were recorded with shotgun microphones Sennheiser ME-66 and ME-67, and a K7 recorder Sony TCM-5000 or a Mini Disc recorder Sony MZ-NH1.

In Fazenda Baía de Pedra, we conducted mist-net captures along five mist net lines (25 nets per line) settled 1 km apart one from another. Each mist net line was sampled once in each field campaign. Nets (10 m length × 2.5 m tall, mesh 32 mm) were opened from 06: h to 10:00 h, in a total netting effort of about 37,500 m².h. Habitats sampled covered all the main phytophysionomies found in the area. We also conducted point count censuses along the same lines used for mist net captures. Three points per line, 125 m apart one from another, were censused once during 10 min in each field campaign, in a total effort of 450 min. All birds heard or seen were recorded. Point censuses and mist net captures were not conducted simultaneously in the same line. Specimens were collected using mist nets, airguns and shotguns, taxidermized and their carcasses preserved in 70% ethanol, being deposited in DZUFMG and UFMT (see Table 1 for the full name and location of the institutions cited along the text).

In Fazenda Santo Antônio das Lendas we conducted *ad libitum* observations and recording the vocalization of most species in the area. Mist nets (12.8 × 2.1 m, mesh size 32 mm) were also used, in a total netting effort of about 5200 m².h.

In Fazenda Descalvado, we conducted observations, recording of vocalizations, collection with shotguns and capture with mist-nets (20 nets, 12 × 2.75 m, mesh size 32 mm), opened from 06:00 h to 11:00 h, in a total netting effort of about 6000 m².h. All netted birds were photographed and all voucher material (specimens, photographs and recordings) was deposited in MZUSP.

In Estação Ecológica Taiamã, the entire length of the island was surveyed by boat on the morning of the first day of fieldwork. On the following day, riparian forests, marshes and two small lakes were surveyed. Total sampling effort in this area was 11 h.

In Baía dos Malheiros, in addition to observations with binoculars and recordings (575 h of observation), mist net captures (10 nets, 12 × 2.75 m, mesh size 36 mm) were conducted during a brief campaign on June 2008, in a total netting effort of about 5300 m².h.

In Fazenda Paraguatatuba, visual censuses were conducted in all habitat types, in a total effort of 80 h of observation. This method was complemented with mist net captures (9 nets, 12 × 2.75 m, mesh size 36 mm), in a total netting effort of about 3200 m².h.

TABLE 1. Institutions cited in the text and their acronyms.

Acronym	Institution
AMNH	American Museum of Natural History, New York, USA
ANSP	Academy of Natural Sciences of Philadelphia, Philadelphia, USA
BMNH	The Natural History Museum, Tring, UK
CG	Coleção Rolf Grantsau, São Bernardo do Campo, Brazil
DMNS	Denver Museum of Nature and Science, Denver, USA
DZUFMG	Centro de Coleções Taxonômicas, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil
FMNH	Field Museum of Natural History, Chicago, USA
MBML	Museu de Biologia Professor Mello Leitão, Santa Teresa, Brazil
MNHN	Muséum National d'Histoire Naturelle, Paris, France
MNRJ	Museu Nacional, Rio de Janeiro, Brazil
MZSUP	Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil
NMW	Naturhistorisches Museum, Vienna, Austria
ROM	Royal Ontario Museum, Toronto, Canada
SMF	Senckenberg Museum, Frankfurt am Main, Germany
UFMT	Universidade Federal de Mato Grosso, Cuiabá, Brazil
UMMZ	University of Michigan Museum of Zoology, Ann Arbor, USA
USNM	National Museum of Natural History, Washington DC, USA
YPM	Yale University Peabody Museum, New Haven, USA
ZUEC	Museu de Zoologia Professor Adão José Cardoso, Universidade de Campinas, Campinas, Brazil

The history of scientific exploration in Cáceres was reviewed by means of consultation to the literature and museum collections. The ornithological gazetteer of Brazil (Paynter-Jr. & Traylor-Jr. 1991) was particularly helpful on the identification of key references and collections harboring specimens from Cáceres. An earlier compilation of the birds of Mato Grosso (Naumburg 1930) and a review on the itinerary of the Natterer's expedition (Vanzolini 1993) were also useful. We visited the following institutions while preparing this paper: AMNH, ANSP, BMNH, CG, DZUFMG, FMNH, MNRJ, MNW, MZUSP, UFMT, USNM and SMF. Nevertheless, our visits have other purposes, and we were not able to personally examine the majority of the specimens cited in this paper.

We checked for specimens collected in Cáceres in the Ornis (<http://www.ornisnet.org>, accessed on December 2014) and SpeciesLink (<http://splink.cria.org.br>, accessed on February 2015), two data portal that congregates information about museum specimens. We also checked for records obtained in Cáceres in the WikiAves (<http://www.wikiaves.com.br>, accessed on 25 August 2016), a website dedicated to birdwatchers that provides tools for the online publication of images and sounds of the Brazilian birds.

All species with published records or with specimens housed in museums or photo archives were included in this paper, but records were not accepted without a critical scrutiny. Species with available records to the area were allocated in one of three lists. The Main List

includes those species with documental evidence or well known to occur in the region. The Secondary List includes those species that probably occur in the study area, but for which we are not sure about the reliability of the records available. The Tertiary List includes species with published records for the study area, but whose documental evidence is invalid or its occurrence in the area is unlikely. We inferred the probability of occurrence of a species in the area based on its known range, habitat used, and on more than 20 years of field work in Mato Grosso state.

RESULTS

Brief history of ornithological exploration

Several naturalists and collectors visited the municipality of Cáceres during the 19th and 20th Centuries, gathering a huge number of skins in the area. Although part of this material has been studied by previous authors (*e.g.*, von Pelzeln 1868–1870, Ménégaux 1917, Naumburg 1930, Stone & Roberts 1934), many specimens are still waiting for study in the drawers of natural history museums. Here we present a brief summary of the collectors who visited Cáceres, the collection stations sampled, and the period worked in the area, as well as the destination of the material collected. Geographical coordinates and elevation for each of these localities are presented in a gazetteer (Table 2).

TABLE 2. Gazetteer of the localities sampled for the current study and earlier collectors in the municipality of Cáceres. Some geographical coordinates differ slightly from that presented by traditional sources (e.g. Paynter-Jr. & Traylor-Jr. 1991), but the coordinates presented here are more accurate. All geographical coordinates are south of the Ecuador and western of Greenwich. Elevations are in meters above sea level.

Code	Locality	Geographical coordinates and elevation a.s.l.	Alternative names	Collectors
AR	Access road to Cáceres	Many		Mello & Santos Filho
BM	Baía dos Malheiros	16°03'20"; 57°41'16", 120 m		This study
CA	Cambará	16°33'; 57°51', 110 m	Cambará, Xarayes Swamp	Garlepp, Mocquerys
CC	City of Cáceres	16°04'; 57°41', 125 m	Villa Maria, São Luiz de Cáceres	Natterer, Ruschi
ET	Estação Ecológica de Taiamã	16°52'; 57°28', 100 m	Reserva Taiamã, Fazenda Taiamã	Mattos
FB	Fazenda Baía de Pedra	16°28'S; 58°08', 110 m		This study
FC	Fazenda Caiçara	16°05'; 57°42', 115 m	Caissara, Cahyssara, Fazenda do Rey, Fazenda Nacional da Caiçara	Natterer
FD	Fazenda Descalvados	16°44'00"; 57°45'00", 110 m	Água Verde de Descalvados, Capão de Onça de Descalvados, Bocaina de Descalvados, Santa Rosa de Descalvados, Tamanduá de Descalvados and Xarqueada de Descalvados	Cherrie, Miller, this study
FF	Fazenda Flechas, Rio das Flechas	16°02'; 57°15', 150 m	Flexas, Frechas, Ribeirão Flechas	Natterer
FG	Fazenda Sangradouro, Rio Sangradouro ¹	15°56'; 57°08', 150 m	Fazenda do Sangrador, Ribeirão Sangrador	Natterer
FJ	Fazenda Jacobina	16°14'30"; 57°33'17", 280 m	Sítio do S. João Pereira Leite, Fazenda do Coronel Jao Pereira Leite	Natterer, Comissão Rondon
FP	Fazenda Paraguatutuba	15°56'; 57°40', 135 m		This study
FS	Fazenda Santo Antônio das Lendas	16°39'; 57°50', 145 m		This study
FU	Fumaça	15°58', 58°18', 140 m	Bandidos da Fumaça	Comissão Rondon
HF	Hotel Fazenda Barranquinho	16°17'; 57°50', 115 m	Barranquinho	Forrester
LC	Lagoa de Chacororé ²	16°02'; 57°43', 120 m	Chacururé	Natterer
MC	Municipality of Cáceres	Many		
MT	Mata do Toscano	Not located, but certainly very close to the city of Cáceres	Matto do Tonam	Comissão Rondon
PC	Porto Conceição ³	17°08'36"; 57°21'35", 100 m	Conceição, Rio Paraguai	Cherrie
PD	Pouso dos Dois Irmãos, Campina	16°12'; 57°20', 160 m	Pouzo dos irmaos	Natterer
PL	Porto Limão	16°08'35"; 57°59'55", 130 m		Willis & Oniki
PP	Porto do Campo ³	15°42'38"; 57°42'41", 125 m	Porto Campo	Comissão Rondon
PS	Pau Seco	16°00'; 57°56', 125 m	Pansecco, Pau-Seco	Natterer
QU	Quilombo	16°12'; 57°35', 350 m		Comissão Rondon
RC	Rio Cabaçal	16°00' 57°42', 120 m	Rio do Cabacal	Natterer
RE	Retiro	16°10' 57°59', 130 m	Retiro da Barra	Natterer
RJ	Rio Jauru, near mouth	16°20'38"; 57°46'55", 120 m	Barra do Rio Jauru	Natterer, Forrester
RS	Rio Sepotuba	15°51'40"; 57°38'30", 125 m	Rio do Sipotuba, Rio Tenente Lira	Natterer
SA	Salto Alegre, Rio Jauru	16°07'; 58°03', 125 m	Rio Jaurú - Salto	Comissão Rondon
TU	Tucum	16°30'10"; 57°48'08", 110 m		Comissão Rondon
XA	Xavier ³	15°55'; 58°18', 155 m		Natterer

1. This is not the homonymous "Sangrador" visited by Natterer on December 1823 (15°39'S; 53°54'W) and where he collected, among others, the syntypes of *Syndactyla dimidiata* (Lopes & Gonzaga 2014).

2. This is not the homonymous "Baía de Chacororé" (16°16'S; 55°53'W) in Rio Cuiabá, which is much larger.

3. These three historical localities are not in the municipality of Cáceres, but at their very border, which is demarcated by narrow rivers. Given that past collectors frequently used boats to collect along rivers, frequently crossing them, as well as to the fact that these rivers certainly do not represent a geographical or ecological barrier to birds, we decided to include records obtained in these localities in the main list.

In addition to the expeditions listed below, the extreme northern portion of the municipality of Cáceres was sampled, to an unknown extent, by those ornithologists who surveyed the Estação Ecológica Serra das Araras (Silva & Oniki 1988, Willis & Oniki 1990, Oniki & Oliveira 2002, Valadão 2012). This conservation unit, with about 28,700 ha of cerrado vegetation, is almost entirely located in the municipality of Porto Estrela, but its extreme southern portion extends to Cáceres (Valadão 2012). Given that fieldwork conducted by the above cited authors was almost exclusively restricted to the limits of Porto Estrela, as well as to the impossibility to precise which records were obtained in Cáceres, we did not include in this paper records obtained in Serra das Araras. We also did not include in our checklist the records presented by Scalon & Sigrist (2013) for the Estação Ecológica de Taiamã. This because the list presented by those authors apparently included records obtained in other parts of the Pantanal or in the adjacent Cerrado, also including some apparent identification mistakes. It is also not possible to ascertain if the photographs presented were taken in the Estação Ecológica de Taiamã or somewhere else.

“Viagem Philosophica” Expedition: led by Alexandre Rodrigues Ferreira, who spent 29 months in Mato Grosso, including brief visits to Cáceres region on 1790–1791 (Rodrigues-Ferreira 1933, Vanzolini 1996). Ferreira collected few bird specimens in Mato Grosso, which were formerly housed in the Real Museu da Ajuda, Lisbon, Portugal. These specimens were taken as war loot during the French invasion of Portugal by Napoleon's army in 1808 (Vanzolini 1996). Although there is some evidence that this material were labelled, such labels were inadvertently removed or replaced in Portugal (Vanzolini 1996, Soares & Ferrão 2005), which makes impossible to accurately precise the origin of these specimens (Vanzolini 1996).

Johann Natterer: this collector visited several localities in Cáceres from 15 July 1825 to 24 June 1826, when he fixed residence in the area. Natterer also briefly visited the municipality in two other occasions during his travels: from 8–21 October 1827 and from 14–23 July 1828 (Vanzolini 1993). Localities visited are as follows: Fazenda Sangradouro (15 July 1825, 20–21 October 1827), Fazenda Flechas (15–20 July 1825 and 19–20 October 1827), Pouso dos Dois Irmãos (23 July 1825), Fazenda Jacobina (24 July 1825, 17 October 1827, and 14 March to 3 April 1828), city of Cáceres (28 July to 28 September 1825, 16 October 1827, and 10–17 April 1828), Rio Cabaçal (17 August 1825), Rio Sepotuba (17 August 1825), Fazenda Caiçara (29 September 1825 to 18 June 1826, 9–16 October 1827 and 19–23 April 1828, with brief visits during this period to Lagoa dos Barreirinhos and Lagoa da Campina that, although

not located, are probably inside this farm), Lagoa de Chacororé (19 June 1825), Pau Seco (20–24 June 1825, 8 October 1827), Retiro (4–5 October 1825) and Barra do Rio Jauru (8–10 October 1825 and 10–12 December 1825). Natterer collected hundreds of specimens that are housed in the NMW, with some skins exchanged with several other museums across the world. The BMNH received several exchanges, the majority of them cited elsewhere (British Museum 1874–1898).

Langsdorff Expedition: this expedition was led by the Baron Georg Heinrich von Langsdorff, and included, among others, the painter Hercule Florence and the astronomer Nester Rubtsov. Members of this expedition travelled through Cáceres territory from August to September 1827. Florence (1977) presented good descriptions of the region, including some localities visited by Natterer, such as the Rio das Flechas, Fazenda Jacobina, city of Cáceres and Barra do Rio Jauru. The botanist Ludwig Riedel and the painter Adrien Taunay, in his way to Vila Bela da Santíssima Trindade, also crossed Cáceres territory, visiting a Bororo Indian native village, named Pau Seco, on the beginning of December 1827 (Manizer 1967). Florence and Taunay left fascinating paintings, drawings and descriptions of the habits of local farmers and indigenous people. Nevertheless, given that none of these explorers was particularly interested in ornithology, apparently no bird specimen was collected in Cáceres.

Francis de Castelnau: the expedition led by Castelnau entered Cáceres region through Rio Paraguai, coming from Corumbá. They were on Barra do Rio Jauru on 14 May 1845 (Castelnau 1851). Four days later the expedition reached Cáceres and, soon after, on the end of May, they visited Fazenda Caiçara, Pau Seco and Rio Jauru (Castelnau 1851). During the brief period spent on Cáceres, some few specimens were collected and deposited in the MNHN, some of them studied elsewhere (des Murs 1855).

Gustav Garlepp: although this collector is well known by the large collection amassed by him and his brother Otto in Bolivia (Niethammer 1953), almost nothing is known about his activities in western Mato Grosso. Garlepp, in his journey to Bolivia, reached Cáceres region coming from Argentina, starting his collecting activities in Cambará, where he worked from the end of November to the beginning of December 1888. Subsequently, Garlepp collected in the Fazenda Descalvados from mid-December 1888 to at least January 1889, but possibly his activity extended until April–May 1889, because the first Bolivian specimens were collected by him only on the first days of June 1889 (Niethammer 1953). The Garlepp's collection was first deposited in the personal collection of Hans Graf von Berlepsch, but is now housed in the SMF (Naumburg 1931). Some of

these skins are now housed in the AMNH and the ROM, probably exchanged. The collection gathered by Garlepp in Brazil has never been studied in details, and only few specimens were studied elsewhere (von Berlepsch 1911).

Comissão Rondon: a series of expeditions to Mato Grosso during the first two decades of the 20th Century and led by the Marshal Cândido Mariano da Silva Rondon is known under that name (Gonzaga 1989). A detailed itinerary of the expedition and results achieved are difficult to appreciate, because the information available is scattered in a myriad of hard-to-find publications. Material collected during these expeditions is of great interest, but its appreciation would require the detailed revision of a voluminous literature and the examination of hundreds of specimens in the MNRJ, what is out of the scope of the current study. The Comissão Rondon explored Cáceres from 1908 to at least 1914, and the main participants were Alípio de Miranda Ribeiro, Frederico Carlos Hoehne, Henrique Reinisch, Arnaldo Blake de Sant'Anna, João Geraldo Kuhlmann and Hermano Kuhlmann. Additional information about these expeditions can be found elsewhere (Miranda-Ribeiro 1914, 1916a, b, Gonzaga 1989, Sá *et al.* 2008).

M. Mocquerys: collected in Cáceres from March to September 1909, and from December 1909 to January 1910 (Simon 1912, Ménégaux 1917). Mocquerys also collected in Cambará on October 1908 and October 1909 (Simon 1912), sampling at least 90 specimens, which are deposited in the MNHN.

Roosevelt-Rondon Expedition: this expedition briefly visited the Fazenda Descalvados on 4 January, the city of Cáceres on 5–6 January, and Porto do Campo on 7–13 January 1914, when travelling to northern Mato Grosso (Naumburg 1930, Vasconcelos *et al.* 2014). Apparently no bird specimen was collected in the study area during this year, because members of the expedition, especially Theodore Roosevelt, former President of USA, were more concerned with the collection of large game mammals, such as jaguars and tapirs (Roosevelt 1914). George K. Cherrie, the ornithologist of the expedition, returned to Fazenda Descalvados in a supplementary expedition on 1916, where he worked from 17 November to 27 December, including brief visits to nearby stations, all of them inside the farm area or on its immediate environs (Água Verde de Descalvados, Capão de Onça de Descalvados, Bocaina de Descalvados, Santa Rosa de Descalvados, and Tamanduá de Descalvados). Fieldwork in the area resulted in the collection of 152 specimens which were deposited in the AMNH (Naumburg 1930). At least one bird was exchanged with the YPM.

Ernst Garbe: visited Cáceres from November to December 1917 (Pinto 1945), collecting about 80 specimens now housed in MZUSP. Lima (1920), in a confusing paper, cited some of those specimens, but it

is not always possible to know if the specimens were collected in Cáceres or in Corumbá, another locality visited by Garbe. A complete list of specimens collected was published elsewhere (Pinto 1938, 1944). Pinto (1938) erroneously cited some specimens collected on November 1917 as being collected on February 1917. This is a misinterpretation of the handwriting labels of Garbe, who sometimes wrote the month in Roman numbers "XI" and sometimes in Arabic numbers "11", this last one misread as "II".

Colorado Museum Expedition: the former Colorado Museum of Natural History, nowadays DMNS, sent two expeditions to the Fazenda Descalvados. F. G. Brandenburg and F. E. D'Amour were the bird collectors in the first expedition, which explored the area from at least September 1925 to January 1926. A second expedition was conducted by F. G. Brandenburg and J. D. Figgins, who collected from at least April 1928 to July 1928. These two expeditions collected about 520 specimens, which are housed in the DMNS. This collection has never been published, and only some few specimens were studied by Oberholser (1931).

Marshall Field Expedition: the Field Museum of Natural History sent an expedition to Brazil in 1926–27 with grants from the Captain Marshall Field (Davies 1927). The chief of the expedition was the ornithologist G. K. Cherrie, who had hunted with Roosevelt during his expedition to Mato Grosso in 1914 (Roosevelt 1914, Davies 1927). Colin Sanborn and Mrs. Marshall Field were also members of the expedition (Davies 1927). The party sailed up the Rio Paraguai from Corumbá to Fazenda Descalvados, where they collected from August 1926, also briefly visiting Porto Conceição on 29 July. Sanborn returned to Fazenda Descalvados on the following year, when he collected from June to August 1927 (Paynter-Jr. & Traylor-Jr. 1991). The collection obtained in Cáceres summed almost 100 specimens, but have never been studied in full. Some specimens were occasionally cited by Naumburg (1930), but the majority was studied by Hellmayr (1918–1949).

J. A. G. Rehn: explored the Fazenda Descalvados from 16 June to 19 September 1931, during an expedition from the ANSP, collecting almost 500 specimens that were studied in details elsewhere (Stone & Roberts 1934). Some specimens were subsequently exchanged with the UMMZ.

Gabriel Pinto de Arruda: in a book describing many aspects of the municipality of Cáceres, Arruda (1938) presented a brief overview on its biological aspects. On the "ornithological" section, no scientific names are presented, but birds were tentatively grouped in taxonomic groups (*e.g.* "Gralatores"). Vernacular names, sometimes accompanied by a brief description of species, generally allow a safe identification of the species

referred, and at least 70 species could be identified with certainty. Nevertheless, this book has a major drawback, because it was written 80 years ago, when Cáceres municipality encompassed several other municipalities now emancipated. Consequently, several species found only in the headwaters of the Rio Paraguai, in an area with a marked Amazonian influence, are cited along the text, such as *Odontophorus gujanensis*, and *Psophia viridis*. These species are probably not encountered inside the present day limits of Cáceres and, therefore, we opted to not include in the main list, or in the secondary or tertiary lists, those species recorded exclusively by Arruda (1938).

Alexander Daveron: a North American doctor who lived in Cáceres for more than 50 years. From June to November 1940, Daveron collected about 400 specimens along the Rio Paraguai, preparing then as skeletons, which are deposited in the USNM. This collection has never been studied. Given that we were unable to precise the localities visited by Daveron, which were somewhat vague (e.g. “Between Cáceres, Concepcion, Rio Paraguay”), we opted not to include here records obtained by Daveron. Nevertheless, we believe that at least some of these specimens were collected inside the present day limits of the municipality of Cáceres, including some noteworthy species not recorded by others, such as *Syndactyla dimidiata* (USNM 346001) and *Clibanornis rectirostris* (USNM 345998–346000).

Augusto Ruschi: explored Cáceres region from January to February 1954 and from July to August 1955 (Ruschi 1955). Specimens collected by Ruschi were deposited in the MBML. Ruschi, on his voluminous publications, also mentioned specimens collected in Cáceres on other periods, but it is not possible to know if these specimens were collected by Ruschi himself or by a collaborator living in the city. These specimens are from October 1955, February, July and August 1956, August and October 1959, August 1960 and July 1967 (Ruschi 1955, 1961, 1962, MBML data, Vielliard 1994). Ruschi (1953) also commented on some hummingbird nests collected in Cáceres on January 1953.

Rolf Grantsau: briefly visited Fazenda Jacobina on 18 July 1966 and Cáceres from 19–21 July 1966. This expedition resulted in the collection of about 140 specimens, which are deposited in CG, with some few specimens exchanged with MNRJ, MPEG and MZUSP. The results of this expedition have never published in full, and only some few hummingbirds were cited elsewhere (Grantsau 1988).

José Carlos Reis de Magalhães: Reis-de-Magalhães (1994) says to have examined some tinamou specimens from “Fazenda Igara, municipality of Cáceres, high Rio Paraguai”, but presented no further details. We were unable to discover in which institution these specimens

are housed, and failed to precise if Reis-de-Magalhães himself have collected them or if he examined specimens collected by others. Furthermore, this locality may not be inside the present day limits of the municipality, and, therefore, we did not include these records in our main list.

Álvaro Coutinho Aguirre: briefly visited the Fazenda Descalvados from 18 September to 2 October 1957, collecting about 20 specimens (Schubart *et al.* 1965, Aguirre & Aldrighi 1983, 1987). Aguirre & Aldrighi (1983) also list two specimens of *Zenaida auriculata* collected in this area on October 1970.

Geraldo T. Mattos: briefly visited the Fazenda Taiamã from 14–15 September 1980. The 14 specimens collected are deposited in DZUFMG.

Edwin Willis & Yoshika Oniki: visited Porto Limão on an unspecified date from the “winter” 1987 and from 21–22 January 1988. Reconstruction of the itinerary of these researchers allowed us to point 31 July 1987 (possibly extending to the morning of 1 August) as the most probably day of fieldwork during winter. An erratum for this article had been published (Willis & Oniki 1991).

Bruce C. Forrester and others: visited the Hotel Fazenda Barranquinho, located near the Barra do Rio Jauru, on unspecified dates, presenting the results of their observations in a book devoted to birdwatchers (Forrester 1993). The checklist presented, with about 360 species, is a compilation of published papers and unpublished observations of Forrester himself and other birdwatchers, including C. Ireland and T. Ford on 1988, N. J. N. Pope on 1989 and D. Stemple on an unspecified date. Given that records presented in this book cover a large area extending from the city of Cáceres to Fazenda Descalvados, we consider these records for the municipality of Cáceres, and not to the Hotel Fazenda Barranquinho. A major drawback is that Forrester's book contains many errors and doubtful records, as we discussed elsewhere (Lopes *et al.* 2009). Furthermore, it is not possible to precise the site of record, nor even the author of the records presented. Given the reasons exposed above, we decided to include all species recorded exclusively by Forrester (1993) in the secondary or in the tertiary list.

Elisabete Segatto Melo & Manoel Santos-Filho: studied the road-killed vertebrates on the access road to Cáceres from November 2000 to October 2001, presenting a list of the run over species (Melo & Santos-Filho 2007).

Although we cannot precise the exact number of specimens collected by the above cited naturalists who visited the study area, we are confident that this number surpass 3000. This large number of specimens, the majority of them collected in a period when many South American birds were still undescribed, resulted in

the description of twenty new taxa, the majority of them still valid (Table 3). This demonstrates the importance of the collections performed in the region not only to

the knowledge of the natural history and distribution of birds, but also to the development of taxonomic studies on the Neotropical avifauna.

TABLE 3. Taxa described from specimens collected inside the present day limits of the municipality of Cáceres, Mato Grosso, Brazil. We only listed the type localities found inside the present day limits of the municipality of Cáceres, but readers must bear in mind that some of the species listed below were described from more than one specimen, with some of the syntypes collected in localities outside Cáceres.

Taxon	Current name	Type locality
<i>Penelope ochrogaster</i> von Pelzeln, 1870	Idem	Rio das Flechas
<i>Penelope grayi</i> von Pelzeln, 1870	<i>Pipile cumanensis grayi</i> (von Pelzeln, 1870)	Sangradouro
<i>Pipile nattereri</i> Reichenbach, 1862	<i>Pipile cujubi nattereri</i> Reichenbach, 1862	Rio das Flechas
<i>Uropelia campestris figginsi</i> Oberholser, 1931	Junior synonym of <i>Uropelia campestris</i> (von Spix, 1825)	Descalvados
<i>Phaethornis nattereri</i> von Berlepsch, 1887	Idem	Caiçara
<i>Nonnula ruficapilla nattereri</i> Hellmayr, 1921	Idem	Villa Maria
<i>Trogon auratus</i> Swainson, 1837	Junior synonym of <i>Trogon collaris castaneus</i> von Spix, 1824	Villa Maria
<i>Picumnus aurifrons</i> von Pelzeln, 1870	Idem	Caiçara
<i>Picumnus arileucus</i> Oberholser, 1931	Junior synonym of <i>Picumnus a. albosquamatus</i> d'Orbigny, 1840	Descalvados
<i>Celeopicus lugubris</i> Malherbe, 1851	<i>Celeus lugubris</i> (Malherbe, 1851)	Villa Maria, Caiçara
<i>Picus nattereri</i> Malherbe, 1845	<i>Colaptes melanochloros nattereri</i> (Malherbe, 1845)	Villa Maria, Caiçara
<i>Picus olivinus</i> Natterer & Malherbe, 1845	<i>Veniliornis passerinus olivinus</i> (Natterer & Malherbe, 1845)	Villa Maria
<i>Conurus griseicollis</i> des Murs, 1855	Junior synonym of <i>Myiopsitta monachus</i> (Boddaert, 1783)	Rio Paraguay [near Cáceres]
<i>Attila validus</i> von Pelzeln, 1868	Junior synonym of <i>Attila b. bolivianus</i> Lafresnaye, 1848	Villa Maria
<i>Myiarchus gracilirostris</i> von Pelzeln, 1868	Junior synonym of <i>Myiarchus t. tuberculifer</i> (d'Orbigny & Lafresnaye, 1837)	Villa Maria
<i>Dysithamnus affinis</i> von Pelzeln, 1868	<i>Dysithamnus mentalis affinis</i> von Pelzeln, 1868	Villa Maria
<i>Pithys griseiventris</i> von Pelzeln, 1868	<i>Willisornis poecilnotus griseiventris</i> (von Pelzeln, 1868)	Villa Maria
<i>Hypocnemis maculicauda</i> von Pelzeln, 1868	<i>Hypocnemoides maculicauda</i> (von Pelzeln, 1868)	Villa Maria
<i>Sicalis pelzelni danisa</i> Oberholser, 1931	Junior synonym of <i>Sicalis flaveola pelzelni</i> P.L. Sclater, 1872	Descalvados
<i>Tachyphonus nattereri</i> von Pelzeln, 1870	<i>Tachyphonus cristatus nattereri</i> von Pelzeln, 1870	Villa Maria

Sources: Swainson (1838), Natterer & Malherbe (1845), Malherbe (1851), des Murs (1855), Reichenbach (1862), von Pelzeln (1868–1870), von Berlepsch (1887), Hellmayr (1921), Oberholser (1931), Warren (1966), Schifter *et al.* (2007).

Birds from Cáceres

We recorded during our fieldwork in Cáceres, 266 species in Fazenda Descalvados, 253 in Fazenda Paraguatatuba, 245 in Fazenda Baía de Pedra, 217 in Fazenda Santo Antônio das Lendas, 183 in Baía dos Malheiros and 145 in Estação Ecológica de Taiamã. The number of species recorded during our expeditions sums up to 374 (Appendix I). During our fieldwork we collected 489 specimens.

The analysis of literature data and museum specimens rises the number of species ever recorded in the municipality to 446, of which 362 (81.2%) were documented with specimens (Appendix I). The

number of documented species rises to 391 (88.5%) if we consider the photographs available in Wikiaves. The high percentage of documentation, rarely attained by modern bird surveys, assigns high credibility to the data presented here. The Secondary List includes other 13 species (Appendix II), and the Tertiary List includes 15 species (Appendix III).

The high bird species richness found in Cáceres is similar to that found in well sampled rich rain forest sites in Amazonia (*e.g.*, Stotz *et al.* 1997, Zimmer *et al.* 1997, Borges *et al.* 2001, Whittaker 2009). This is a remarkably high number of species for a predominantly non-forested area. For comparison, another large and well

sampled non-forested area in central Brazil, Chapada dos Guimarães (a Cerrado area with some few Amazonian elements in central-south Mato Grosso) has 393 species (Lopes *et al.* 2009). Other large and well sampled areas in the central portion of Cerrado, where the influence of neighbor ecoregions is small, have significantly lower number of species. For example, well sampled areas, but lacking historical data, such as the municipalities of Unaí and Cabeceira Grande (a Cerrado area in northwestern Minas Gerais) has only 340 species recorded (Lopes *et al.* 2008, Mazzoni *et al.* 2015).

The high bird diversity found in Cáceres is attributable not only to the high diversity of habitat types found in the area, but also to its unique geographic location. Bird species endemic or almost restricted to all the ecoregions that come into contact in central South America can be found in Cáceres. Species typical to the Cerrado (Cavalcanti 1988, Silva 1997) are *Penelope ochrogaster*, *Heliactin bilophus*, *Alipiopsitta xanthops*, *Antilophia galeata*, *Herpsilochmus longirostris*, *Melanopareia torquata*, and *Saltatricula atricollis*. Species closely tied to the Chiquitano Dry Forests are *Phaethornis subochraceus* and *Thamnophilus sticturus* (Vasconcelos & Hoffmann 2006).

A small Chacoan influence is also observable in Cáceres, even though Chaco vegetation only reaches the southern border of the Pantanal, in the state of Mato Grosso do Sul (Silva & Caputo 2010). The Chaco has very few endemic taxa (Short 1975), but some species with wide range in southern South American only reach Bolivia and southwestern Brazil in areas under Chacoan influence, such as *Aratinga nenday*, *Alectrurus risora*, *Knipolegus hudsoni* and *Microspingus melanoleucus*.

A strong Amazonian influence is observable along the riparian forests of the upper Rio Paraguai and its main tributaries, with 50 typically Amazonian taxa (Silva 1996) recorded, such as *Pipile cunjubi*, *Mitu tuberosum*, *Glaucidium hardyi*, *Trogon melanurus*, *Nonnula ruficapilla*, *Picumnus aurifrons*, *Piculus leucolaemus*, *Aratinga weddellii*, *Thamnophilus amazonicus*, *Drymophila devillei*, *Willisornis poecilinotus*, *Dendrocincla fuliginosa*, *Ramphotrigon ruficauda*, *Cephalopterus ornatus*, and *Gymnoderus foetidus*.

Kark *et al.* (2007) highlighted that transitional areas are rich in species not only due to the overlap between different communities, but also because ecotones hold concentrations of rare and range limited species. Nevertheless, this does not seem to be the case for Cáceres avifauna, which is represented almost exclusively by wide ranging species. A possible exception to this rule is *Tachyphonus cristatus nattereri*, an enigmatic taxon (see Zimmer 1945 for a discussion on its taxonomy) only known from the type specimen, a male collected by Natterer in the right bank of Rio Paraguai, nearby

Cáceres, on August 1825 (von Pelzeln 1868–1870). Another syntype, a female obtained in the Amazonia by Natterer, is now considered an extreme of variation of *T. c. madeirae* (Hilty 2011). We searched for *T. c. nattereri* in several habitat types, especially in dry forests and bamboo thickets. We also searched in the seasonally flooded riparian forests of the Rio Paraguai, but failed to locate it. The taxonomic status of this taxon requires further study.

Noteworthy records

Here we present some notes on the natural history, biogeography and conservation of noteworthy species. Additional notes on other interesting records obtained in Cáceres were published elsewhere (Vasconcelos *et al.* 2008, Lopes *et al.* 2011, 2012, 2013, Evangelista *et al.* 2012).

***Penelope ochrogaster*:** a common species in the area, inhabiting semideciduous and deciduous forests near to seasonally flooded areas, even in secondary forest fragments. Hunting pressure seems to be low in the region, but large tracts of semideciduous forests, the main habitat for the species, has been replaced by artificial pastures.

***Pipile spp.*:** *P. cunjubi nattereri* and *P. cumanensis grayi* are found in the region, but not in the same locality. At Descalvados we have found *P. c. nattereri*, including breeding males (*e.g.* MZUSP 79223), and *P. c. grayi* in nearby areas. Both taxa are in contact, with no hybridization, in southwestern Mato Grosso and northern Mato Grosso do Sul.

Scolopacidae species: a simple analysis of the historical records of shorebirds in Mato Grosso makes us worry about the conservation status of some of these migratory species. Three Scolopacidae species (*Bartramia longicauda*, *Limosa haemastica* and *Steganopus tricolor*) recorded by Natterer in Cáceres during the 1820's were not recorded since then. These same species and six other Scolopacidae were also collected by Natterer in the nearby municipality of Vila Bela da Santíssima Trindade and were not recorded subsequently (Silveira & D'Horta 2002). Two other Scolopacidae with historical records for Chapada dos Guimarães (*B. longicauda* and *Calidris fuscicollis*) also lacks modern records (Lopes *et al.* 2009). Modern records of these species for the entire Pantanal are scarce (see some of these records in <http://www.wikiaves.com.br>).

***Chroicocephalus cirrocephalus*:** a single bird exhibiting summer plumage was observed in a beach of the Rio Paraguai (16°42'29"S; 57°40'63"W), attempting to prey upon eggs and nestlings of *Phaetusa simplex* and *Rynchops niger*, which were breeding in the area on September 2007. Inland records of this seabird are rare (Mitchell 1957, Sick 1997).

***Pionus spp.*:** Cáceres represents a contact zone between the distribution of the two *Pionus* species, with *P. menstruus* found northward and *P. maximiliani* found

southward (Tubelis & Tomas 2003). We only recorded these species in syntopy in Fazenda Descalvados.

Xenopsaris albinucha: two adult birds observed in flooded areas in the Fazenda Descalvados. There is an old record of the species for Corumbá (Pinto 1944, MZUSP 30337) and several modern records of the species in the Pantanal region (see <http://www.wikiaves.com.br/>).

Capsiempis flaveola: one of the commonest species in the *Guadua* bamboo patches in Fazenda Baía de Pedra.

***Dendrocolaptes* spp.**: Cáceres lies in the narrow contact zone between the parapatric distributed *D. platyrostris* and *D. picumnus* (Marantz & Patten 2010). One specimen collected in Fazenda Baía de Pedra (UFMT 2963) closely approach the characters of *D. platyrostris intermedius*, the subspecies expected to occur in the region. Nevertheless, the specimen DZUFMG 5574, although tentatively referred to *D. picumnus pallescens* von Pelzeln, 1868, is somewhat intermediate between these two species, presenting a heavily barred belly and a streaked throat and breast, resembling *D. p. intermedius*. This specimen probably represents a hybrid.

Thraupidae species: it is interesting to note that, with some few remarkable exceptions (e.g., *Eucometis penicillata*, *Ramphocelus carbo* and *Tangara sayaca*), tanagers are very rare in the area. This is a phenomenon observed along the entire Pantanal, where some tanagers commonly found in the Cerrado (e.g., *Tangara cayana*, *Tersina viridis*, *Dacnis cayana* and *Hemithraupis guirina*) are absent or only rarely encountered.

Sporophila maximiliani: a single male observed in the border of a secondary forest with understory dominated by *Guadua* bamboos on 25 February 2008 in Fazenda Baía de Pedra. We also recorded this species in Paranorte, municipality of Juara (~10°23'S; 57°40'W, 370 m a.s.l.), in a similar habitat, on August 2006.

Turdus hauxwelli: an adult male was collected on 7 September 2007 in Fazenda Descalvados (MZUSP 79396). This species meets *T. fumigatus* in central Mato Grosso, but the range limits between these species are uncertain. Furthermore, the taxonomy of members of this complex deserves further investigation.

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APPENDIX I

PRIMARY LIST. Bird species recorded in the municipality of Cáceres, Mato Grosso, Brazil. Taxonomy and systematics of the species follow the 4th edition of the Howard and Moore Checklist (Dickinson & Christidis 2014, Dickinson & Remsen-Jr. 2013). We only cited museums as source of records when the record has not been published before. Otherwise, the museums that contained specimens are indicated only in the “specimens” column. Table 1 present the full name of the institutions cited and Table 2 presents a gazetteer of the localities of records.

Taxa	Localities of records and sources	Month of record	Photo	Specimen
ORDER RHEIFORMES				
Family Rheidae				
<i>Rhea americana</i> (Linnaeus, 1758)	FB ⁵⁰ FC ⁴⁷ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12}	2,5,7,8,9,10,11	WA	ANSP, DMNS, NMW
Order Tinamiformes				
Family Tinamidae				
<i>Crypturellus soui</i> (Hermann, 1783)	MC ¹² PL ⁴⁸	1		
<i>Crypturellus undulatus</i> (Temminck, 1815)	CA ⁴⁰ CC ^{30,47} FB ⁵⁰ FC ⁴⁷ FD ^{41,50} FJ ²⁰ FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸ RJ ⁴⁷	1,2,3,4,5,7,8,9,10,11	WA	ANSP, BMNH, MZUSP, MNRJ, NMW, SMF
<i>Crypturellus parvirostris</i> (Wagler, 1827)	CC ³⁰ FB ⁵⁰ FC ⁴⁷ FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸ PS ⁴⁷	1,2,3,4,5,6,7,8,9,11		ANSP, MZUSP, NMW
<i>Crypturellus tataupa</i> (Temminck, 1815)	CC ¹⁸ FB ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,4,5,7,8,9,11		MNHN
<i>Rhynchotus rufescens</i> (Temminck, 1815)	FB ⁵⁰ FD ^{16,27} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,7,8,9,11,12	WA	AMNH, FMNH
ORDER ANSERIFORMES				
Family Anhimidae				
<i>Chauna torquata</i> (Oken, 1816)	BM ⁵⁰ CC ^{47,50} ET ⁵⁰ FB ⁵⁰ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} RC ⁴⁷	1,2,3,4,5,6,7,8,9,10,11	WA	DMNS, NMW
Family Anatidae				
<i>Dendrocygna viduata</i> (Linnaeus, 1766)	BM ⁵⁰ CC ³⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,27,40,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS, MZUSP, NMW, SMF
<i>Dendrocygna autumnalis</i> (Linnaeus, 1758)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,40,41,50} FP ⁵⁰ LC ⁴⁷ MC ¹²	1,2,3,4,5,6,8,9,10,11,12	WA	ANSP, DMNS, NMW, SMF
<i>Nomonyx dominicus</i> (Linnaeus, 1766)	FC ⁴⁷	1		NMW
<i>Neochen jubata</i> (von Spix, 1825)	LC ⁴⁷	3		NMW
<i>Amazonetta brasiliensis</i> (J.F. Gmelin, 1789)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,11	WA	
<i>Sarkidiornis melanotos</i> (Pennant, 1769)	LC ⁴⁷	3		NMW
<i>Cairina moschata</i> (Linnaeus, 1758)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,27,37,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	DMNS, MNRJ, NMW
ORDER GALLIFORMES				
Family Cracidae				
<i>Penelope superciliaris</i> Temminck, 1815	CC ³⁰ MC ¹²	12		MZUSP
<i>Penelope ochrogaster</i> von Pelzeln, 1870	CC ⁶ FB ⁵⁰ FD ^{9,27} FF ⁴⁷ FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,7,8,9,11	WA	AMNH, DMNS, DZUFMG, MNRJ, NMW, UFMT
<i>Pipile cumanensis grayi</i> (von Pelzeln, 1870)	FG ⁴⁷	7,9	WA	NMW
<i>Pipile cujubi nattereri</i> Reichenbach, 1861	CC ^{30,47} ET ⁵⁰ FD ^{9,27,50} FF ⁴⁷ FP ⁵⁰ FS ⁵⁰ MC ^{3,12}	2,3,4,7,8,9,11	WA	AMNH, DMNS, MZUSP, NMW
<i>Ortalis canicollis</i> (Wagler, 1830)	CC ⁴⁷ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,16,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12}	1,2,3,4,5,7,8,9,10,11	WA	ANSP, DMNS, FMNH, MZUSP, NMW, UFMT
<i>Crax fasciolata</i> von Spix, 1825	ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} RC ⁴⁷ RS ⁴⁷	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, BMNH, DMNS, MZUSP, NMW, UFMT
<i>Mitu tuberosum</i> (von Spix, 1825)	MC	1	WA	

Taxa	Localities of records and sources	Month of record	Photo	Specimen
ORDER PHOENICOPTERIFORMES				
Family Podicipedidae				
<i>Podilymbus podiceps</i> (Linnaeus, 1758)	FD ⁵⁰	9		
<i>Tachybaptus dominicus</i> (Linnaeus, 1766)	BM ⁵⁰ ET ⁵⁰ FC ⁴⁷ FD ⁵⁰ FP ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11,12	WA	NMW
ORDER COLUMBIFORMES				
Family Columbidae				
<i>Columba livia</i> J.F. Gmelin, 1789	BM ⁵⁰	1,2,3,4,5,6,7,8,9,10,11	WA	
<i>Patagioenas speciosa</i> (J.F. Gmelin, 1789)	CC ³⁰ FB ⁵⁰ FD ⁵⁰ MC ¹² PL ⁴⁸	2,7,8,9		MZUSP
<i>Patagioenas picazuro</i> (Temminck, 1813)	BM ⁵⁰ CC ¹⁸ ET ⁵⁰ FB ⁵⁰ FD ^{41,50} FP ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, MNHN
<i>Patagioenas cayennensis</i> (Bonnaterra, 1792)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	
<i>Patagioenas subvinacea</i> (Lawrence, 1868)	FD ⁵⁰	9		
<i>Leptotila verreauxi</i> Bonaparte, 1855	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS, MZUSP
<i>Leptotila rufaxilla</i> (Richard & Bernard, 1792)	FP ⁵⁰	1,2,3,4,5,7,8,9	WA	
<i>Zenaida auriculata</i> (Des Murs, 1847)	FD ^{37,41} FP ⁵⁰ FS ⁵⁰ MC ^{3,12}	4,5,6,7,8,9,11		ANSP, MNRJ
<i>Columbina squammata</i> (Lesson, 1831)	BM ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	UFMT
<i>Columbina minuta</i> (Linnaeus, 1766)	CC ³⁰ FD ⁹ MC ¹²	12	WA	DMNS, MZUSP
<i>Columbina talpacoti</i> (Temminck, 1810)	AR ¹⁷ BM ⁵⁰ CC ¹⁸ ET ⁵⁰ FB ⁵⁰ FD ^{9,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	DMNS, MNHN, UFMT
<i>Columbina picui</i> (Temminck, 1813)	BM ⁵⁰ CC ^{5,18,47} ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,16,41} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, BMNH, CG, DMNS, FMNH, MNHN, NMW, UFMT
<i>Claravis pretiosa</i> (Ferrari-Pérez, 1886)	FB ⁵⁰ FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,7,8,9,11		
<i>Uropelia campestris</i> (von Spix, 1825)	CA ¹⁶ CC ⁵ FB ⁵⁰ FD ^{29,41,50} FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,11	WA	ANSP, CG, DMNS, DZUFMG
ORDER EURYPYGIFORMES				
Family Eurypygidae				
<i>Eurypyga helias</i> (Pallas, 1781)	CC ⁴⁷ FB ⁵⁰ FC ⁴⁷ FD ⁵⁰ MC ^{3,12} RJ ⁴	2,5,7,9,10	WA	NMW
ORDER CAPRIMULGIFORMES				
Family Nyctibiidae				
<i>Nyctibius grandis</i> (J.F. Gmelin, 1789)	FB ⁵⁰ FC ⁴⁷ FD ¹¹	1,8	WA	FMNH, NMW, UFMT
<i>Nyctibius griseus</i> (J.F. Gmelin, 1789)	BM ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ MC ³	1,2,3,4,5,6,7,8,9,11	WA	UFMT
Family Caprimulgidae				
<i>Chordeiles nacunda</i> (Vieillot, 1817)	CC ³⁰ FB ⁵⁰ FD ^{27,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,7,8,9,11	WA	MZUSP, UFMT
<i>Chordeiles pusillus</i> Gould, 1861	FS ⁵⁰	11,12		NMW
<i>Chordeiles minor</i> (J.R. Forster, 1771)	MC ¹² PL ⁴⁸	1		
<i>Lurocalis semitorquatus</i> (J.F. Gmelin, 1789)	FD ⁵⁰ MC ¹² PL ⁴⁸	1,9		
<i>Nyctiprogne leucopyga</i> (von Spix, 1825)	FD ^{9,50} FS ⁵⁰ MC ¹²	9,11,12		DMNS, MZUSP
<i>Nyctidromus albicollis</i> (J.F. Gmelin, 1789)	AR ¹⁷ BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, ANSP, DMNS, NMW, UFMT
<i>Setopagis parvula</i> (Gould, 1837)	BM ⁵⁰ CC ⁴⁷ ET ⁵⁰ FD ^{41,50} FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11		ANSP, BMNH, NMW
<i>Hydropsalis torquata</i> (J.F. Gmelin, 1789)	CC ²⁷ FD ^{27,50} MC ¹² PL ⁴⁸	1,7,8		FMNH, MNHN
<i>Nyctiphrynus ocellatus</i> (von Tschudi, 1844)	FS ^{42,50}	10,11		

Taxa	Localities of records and sources	Month of record	Photo	Specimen
<i>Antrostomus rufus</i> (Boddaert, 1783)	FD ⁵⁰	9		
Family Apodidae				
<i>Chaetura meridionalis</i> Hellmayr, 1907	FB ⁵⁰ FS ⁵⁰	2,8,11		
<i>Tachornis squamata</i> (Cassin, 1853)	FD ⁵⁰ FS ^{42,50}	9,10,11		
Family Trochilidae				
<i>Glaucis hirsutus</i> (J.F. Gmelin, 1788)	BM ⁵⁰ CC ³⁶ FD ²⁷ FP ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,11		AMNH
<i>Phaethornis nattereri</i> von Berlepsch, 1887	CC ^{35,36} FB ⁵⁰ FC ⁴⁵ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰	1,2,3,4,7,8,9,11		MBML, MZUSP
<i>Phaethornis subochraceus</i> Todd, 1915	FD ¹⁹ MC ¹² PL ⁴⁸	7,9		AMNH, MZUSP
<i>Phaethornis pretrei</i> (Lesson & Delattre, 1839)	BM ⁵⁰ CC ³⁶ ET ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10		
<i>Heliactin bilophus</i> (Temminck, 1820)	CC ^{5,34,36} FB ⁵⁰ FJ ⁵ MC ¹²	7,8		CG, MBML, MNRJ
<i>Polytmus guainumbi</i> (Pallas, 1764)	CC ^{5,36,39} FB ⁵⁰ FC ⁴⁷ FD ⁵⁰ FJ ⁵ MC ¹²	2,3,7,8,9		CG, MBML, MNHN, NMW
<i>Chrysolampis mosquitus</i> (Linnaeus, 1758)	CC ¹⁴ FD ⁹ FP ⁵⁰	1,3,4,7,8		DMNS
<i>Anthracothorax nigricollis</i> (Vieillot, 1817)	BM ⁵⁰ CC ^{5,36,50} FD ^{27,50} FP ⁵⁰ MC ¹² PP ³⁴	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, CG, MNRJ
<i>Lophornis gouldii</i> (Lesson, 1832)	CC ^{13,35,36} MC ¹²	1,7		CG
<i>Chlorostilbon lucidus</i> (Shaw, 1812)	CC ^{5,36,39} ET ⁵⁰ FD ⁵⁰ FJ ⁵ MC ¹²	7,8,9		CG, MBML, MNHN
<i>Eupetomena macroura</i> (J.F. Gmelin, 1788)	BM ⁵⁰ CC ^{5,34,36} FB ⁵⁰ FD ^{9,41,50} FJ ⁵ FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, CG, DMNS, MBML, MNRJ
<i>Thalurania furcata</i> (J.F. Gmelin, 1788)	CA ³⁹ CC ^{13,36} FB ⁵⁰ FD ^{9,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,7,8,9,11	WA	CG, DMNS, MBML
<i>Amazilia chionogaster</i> (von Tschudi, 1845)	CC ³⁶ MC ¹²	7		MBML
<i>Amazilia versicolor</i> (Vieillot, 1818)	CC ³⁶ ET ⁵⁰ FJ ⁵ FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,7,8,9,11		CG
<i>Amazilia fimbriata</i> (J.F. Gmelin, 1788)	BM ⁵⁰ CC ^{5,39,44} ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{40,41,50} FJ ⁵ FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, CG, MBML, MNHN, MNRJ, MZUSP, NMW, SMF, UFMT
<i>Hylocharis cyanus</i> (Vieillot, 1818)	CA ³⁹ ET ⁵⁰ FD ⁵⁰	8,9,10		MNHN
<i>Hylocharis chrysura</i> (Shaw, 1812)	CA ³⁹ CC ^{13,34,36} ET ⁵⁰ FB ⁵⁰ FD ^{9,11,27,41,50} FP ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11		AMNH, ANSP, CG, DMNS, FMNH, MBML, MNHN, MNRJ, MZUSP
<i>Heliomaster longirostris</i> (Audebert & Vieillot, 1801)	CC ³⁶ FD ⁵⁰	9		
<i>Heliomaster furcifer</i> (Shaw, 1812)	CC ^{13,34,36} FB ⁵⁰ FD ⁹ FJ ²⁶ MC ¹² PL ⁴⁸	5,7,8	WA	CG, DMNS, MBML, MZUSP, MNRJ
<i>Calliphlox amethystina</i> (Boddaert, 1783)	CC ^{13,36} FD ²⁷ MC ¹²	7,12	WA	AMNH, CG, MBML, MZUSP
ORDER CUCULIFORMES				
Family Cuculidae				
<i>Crotophaga major</i> J.F. Gmelin, 1788	BM ⁵⁰ CC ³⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,27,50} FP ⁵⁰ MC ¹²	1,2,3,4,5,8,9,11,12	WA	AMNH, DMNS, MZUSP, NMW
<i>Crotophaga ani</i> Linnaeus, 1758	AR ¹⁷ BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS
<i>Guira guira</i> (J.F. Gmelin, 1788)	AR ¹⁷ BM ⁵⁰ CC ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS, NMW
<i>Tapera naevia</i> (Linnaeus, 1766)	BM ⁵⁰ FB ⁵⁰ FD ^{11,50} FP ⁵⁰ MC ¹²	5,6,7,8,9,10,11		FMNH
<i>Dromococcyx phasianellus</i> (von Spix, 1824)	BM ⁵⁰ FD ²⁷ FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11		AMNH
<i>Dromococcyx pavoninus</i> von Pelzeln, 1870	FB ⁵⁰	8		
<i>Coccyua minuta</i> (Vieillot, 1817)	BM ⁵⁰ CC ^{30,47} FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,11,12	WA	BMNH, MZUSP, NMW
<i>Piaya cayana</i> (Linnaeus, 1766)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, MZUSP, UFMT
<i>Coccyzus euleri</i> Cabanis, 1873	BM ⁵⁰ FP ⁵⁰	1,2,3,4,5,6,7,8,9		
<i>Coccyzus melacoryphus</i> Vieillot, 1817	FD ²⁷ MC ¹²			AMNH

Taxa	Localities of records and sources	Month of record	Photo	Specimen
ORDER GRUIFORMES				
Family Rallidae				
<i>Laterallus exilis</i> (Temminck, 1831)	FD ⁵⁰	9		MZUSP
<i>Aramides cajaneus</i> (Statius Muller, 1776)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{16,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, FMNH, MZUSP, UFMT
<i>Porzana albicollis</i> (Vieillot, 1819)	FD ⁵⁰ FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,7,8,9		
<i>Porphyrio martinicus</i> (Linnaeus, 1766)	BM ⁵⁰ FC ⁴⁷ FD ⁵⁰ FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	NMW
<i>Porphyrio flavirostris</i> (J.F. Gmelin, 1789)	FB ⁵⁰ FC ⁴⁷ FD ²⁷ MC ¹²	2,11,12	WA	AMNH, DZUFMG, NMW
<i>Gallinula chloropus</i> (Linnaeus, 1758)	FC ⁴⁷ FD ⁵⁰	3,4,9		NMW
Family Heliornithidae				
<i>Heliornis fulica</i> (Boddaert, 1783)	ET ⁵⁰ FD ^{41,50} FS ⁵⁰ MC ¹²	8,9,11	WA	
Family Aramidae				
<i>Aramus guarana</i> (Linnaeus, 1766)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,16,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12}	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS, FMNH, NMW, UFMT
ORDER PELECANIFORMES				
Family Ciconiidae				
<i>Mycteria americana</i> Linnaeus, 1758	BM ⁵⁰ CC ⁴⁷ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸ RE ⁴⁷	1,2,3,4,5,7,8,9,10,11,12	WA	DMNS, NMW
<i>Ciconia maguari</i> (J.F. Gmelin, 1789)	FB ⁵⁰ FC ⁴⁷ FD ^{9,27,50} FP ⁵⁰ MC ¹²	2,3,4,5,6,8,9,10	WA	DMNS, NMW
<i>Jabiru mycteria</i> (M.H.C. Lichtenstein, 1819)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PC ¹¹ PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS, FMNH
Family Ardeidae				
<i>Tigrisoma lineatum</i> (Boddaert, 1783)	BM ⁵⁰ CC ¹⁸ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS, MNHN, MZUSP, NMW, FMT, UFMT
<i>Agamia agami</i> (J.F. Gmelin, 1789)	FC ⁴⁷ MC ¹² RC ⁴⁷	1,8	WA	NMW
<i>Cochlearius cochlearius</i> (Linnaeus, 1766)	FB ⁵⁰ FC ⁴⁷ FD ^{41,50} MC ¹² RC ⁴⁷	6,8,9	WA	ANSP, DZUFMG, NMW, UFMT
<i>Zebriulus undulatus</i> (J.F. Gmelin, 1789)	FC ⁴⁷	2,9	WA	NMW
<i>Ixobrychus exilis</i> (J.F. Gmelin, 1789)	FD ⁵⁰	9,12	WA	
<i>Nycticorax nycticorax</i> (Linnaeus, 1758)	FB ⁵⁰ FC ⁴⁷ FD ^{9,41,50} MC ¹² PL ⁴⁸	2,3,6,7,8,9,11	WA	ANSP, DMNS, MZUSP, NMW, UFMT
<i>Butorides striata</i> (Linnaeus, 1758)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,16,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS, FMNH, NMW
<i>Bubulcus ibis</i> (Linnaeus, 1758)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11		
<i>Ardea cocoi</i> Linnaeus, 1766	CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,7,8,9,10,11,12	WA	ANSP, DMNS, NMW
<i>Ardea alba</i> Linnaeus, 1758	BM ⁵⁰ CC ³⁶ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, DMNS, NMW
<i>Syrigma sibilatrix</i> (Temminck, 1824)	BM ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	
<i>Pilberodius pileatus</i> (Boddaert, 1783)	BM ⁵⁰ CC ⁴⁷ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,16,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS, FMNH, NMW
<i>Egretta caerulea</i> (Linnaeus, 1758)	FD ³⁷ FP ⁵⁰	2,3,4,5,9	WA	MNRJ
<i>Egretta thula</i> (Molina, 1782)	BM ⁵⁰ CC ³⁶ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{37,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸ PS ⁴⁷	1,2,3,4,5,6,7,8,9,10,11	WA	MNRJ, NMW, UFMT
Family Threskiornithidae				
<i>Platalea ajaja</i> Linnaeus, 1758	CC ⁴⁷ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,41,50} FP ⁵⁰ MC ^{3,12}	2,3,4,5,6,7,8,9,11	WA	ANSP, DMNS, MZUSP, NMW, UFMT
<i>Theristicus caerulescens</i> (Vieillot, 1817)	CC ⁴⁷ FB ⁵⁰ FC ⁴⁷ FD ^{9,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, BMNH, DMNS, MZUSP, NMW, UFMT
<i>Theristicus caudatus</i> (Boddaert, 1783)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12}	1,2,3,4,5,6,7,8,9,10,11	WA	DMNS, NMW, UFMT
<i>Mesembrinibis cayennensis</i> (J.F. Gmelin, 1789)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, CG, NMW, UFMT

Taxa	Localities of records and sources	Month of record	Photo	Specimen
<i>Phimosus infuscatus</i> (M.H.C. Lichtenstein, 1823)	BM ⁵⁰ CA ⁴⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,27} FP ⁵⁰ MC ^{3,12}	1,2,3,4,5,6,7,8,9,10,11	WA	BMNH, DMNS, NMW, SME, UFMT
<i>Plegadis chibi</i> (Vieillot, 1817)	FC ⁴⁷ PS ⁴⁷	3?,4,5,6,10		NMW
Family Phalacrocoracidae				
<i>Phalacrocorax brasilianus</i> (J.F. Gmelin, 1789)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS
Family Anhingidae				
<i>Anhinga anhinga</i> (Linnaeus, 1766)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PC ¹¹ PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, BMNH, DMNS, FMNH, MZUSP, NMW
ORDER CHARADRIIFORMES				
Family Recurvirostridae				
<i>Himantopus himantopus melanurus</i> Vieillot, 1817	FB ⁵⁰ FC ⁴⁷ FD ⁵⁰ FP ⁵⁰ MC ¹² PL ⁴⁸ PS ⁴⁷	1,2,3,4,6,7,8,9	WA	BMNH, MZUSP, NMW, UFMT
Family Charadriidae				
<i>Pluvialis dominica</i> (Statius Muller, 1776)	CC ⁴⁷ FD ⁵⁰ MC ¹²	9	WA	BMNH, MZUSP, NMW
<i>Charadrius collaris</i> Vieillot, 1818	BM ⁵⁰ ET ⁵⁰ FC ⁴⁷ FD ^{9,41,50} FP ⁵⁰ MC ¹²	5,6,7,8,9	WA	ANSP, DMNS, MZUSP, NMW
<i>Vanellus chilensis</i> (Molina, 1782)	BM ⁵⁰ CA ⁴⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PC ²⁷ PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS, FMNH, NMW, SME, UFMT
<i>Vanellus cayanus</i> (Latham, 1790)	CA ⁴⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,41,50} FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,7,8,9,11,12	WA	ANSP, DMNS, MZUSP, SMF
Family Jacanidae				
<i>Jacana jacana</i> (Linnaeus, 1766)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, BMNH, DMNS, NMW, UFMT
Family Scolopacidae				
<i>Bartramia longicauda</i> (Bechstein, 1812)	MC ¹² RJ ⁴⁷	10		NMW
<i>Numenius borealis</i> (J.R. Forster, 1772)	XA ⁴⁷	10		NMW
<i>Limosa haemastica</i> (Linnaeus, 1758)	FC ⁴⁷	11		NMW
<i>Calidris fuscicollis</i> (Vieillot, 1819)	FC ⁴⁷ FD ^{41,50} MC ¹²	9,10		ANSP, MZUSP, NMW
<i>Calidris subruficollis</i> (Vieillot, 1819)	MC	4	WA	
<i>Gallinago paraguayia</i> (Vieillot, 1816)	CC ^{18,30} FB ⁵⁰ FC ⁴⁷ FD ⁵⁰ MC ¹²	2,3,4,8,9	WA	BMNH, MNHN, MZUSP, NMW
<i>Actitis macularius</i> (Linnaeus, 1766)	BM ⁵⁰ ET ⁵⁰ FC ⁴⁷ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰	5,6,7,8,9,10,11	WA	NMW
<i>Tringa solitaria</i> A. Wilson, 1813	ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,37,50} FS ⁵⁰ MC ¹²	1,2,3,8,9,11	WA	DMNS, DZUFMG, MNRJ, MZUSP, NMW, UFMT
<i>Tringa flavipes</i> (J.F. Gmelin, 1789)	FB ⁵⁰ FC ⁴⁷ FD ⁵⁰ FS ⁵⁰ MC ¹²	8,9,10,11	WA	MZUSP, NMW
<i>Tringa melanoleuca</i> (J.F. Gmelin, 1789)	FC ⁴⁷ FD ⁵⁰	9,11		MZUSP, NMW
<i>Steganopus tricolor</i> Vieillot, 1819	FC ⁴⁷	9	WA	BMNH, NMW
Family Laridae				
<i>Rynchops niger</i> Linnaeus, 1758	BM ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,40,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸ RC ⁴⁷	1,4,5,6,7,8,9,11	WA	ANSP, DMNS, MZUSP, NMW, SMF
<i>Chroicocephalus cirrocephalus</i> (Vieillot, 1818)	FD ⁵⁰	9		
<i>Leucophaeus pipixcan</i> (Wagler, 1831)	ET ⁵¹	5		
<i>Sternula superciliaris</i> (Vieillot, 1819)	BM ⁵⁰ ET ⁵⁰ FD ^{9,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	DMNS, MZUSP
<i>Phaetusa simplex</i> (J.F. Gmelin, 1789)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FC ⁴⁷ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12}	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS, MZUSP, NMW
ORDER ACCIPITRIFORMES				
Family Cathartidae				
<i>Cathartes aura</i> (Linnaeus, 1758)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	DMNS
<i>Cathartes burrovianus</i> Cassin, 1845	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	

Taxa	Localities of records and sources	Month of record	Photo	Specimen
<i>Coragyps atratus</i> (Bechstein, 1793)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	
<i>Sarcoramphus papa</i> (Linnaeus, 1758)	FC ⁴⁷ FD ⁵⁰ FJ ⁴⁷ FS ⁵⁰ MC ^{3,12}	7,9,10,11	WA	NMW
Family Pandionidae				
<i>Pandion haliaetus</i> (Linnaeus, 1758)	FC ⁴⁷ FD ⁵⁰ FS ⁵⁰ MC ¹²	9,10,11	WA	NMW
Family Accipitridae				
<i>Elanus leucurus</i> (Vieillot, 1818)	FD ⁵⁰	9		
<i>Gampsonyx swainsonii</i> Vigors, 1825	BM ⁵⁰ FC ⁴⁷ FD ^{9,40,41,50,2} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸ RJ ⁴⁷	1,2,3,4,5,6,7,8,9,10,11,12		ANSP, DMNS, NMW, SMF
<i>Leptodon cayanensis</i> (Latham, 1790)	FB ⁵⁰ FD ⁵⁰ MC ¹² PL ⁴⁸	1,2,7,9	WA	
<i>Chondrohierax uncinatus</i> (Temminck, 1822)	FD ^{41,50} FG ⁴⁷ MC ¹²	7,9	WA	ANSP, NMW
<i>Elanoides forficatus</i> (Linnaeus, 1758)	BM ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ MC ¹²	1,2,3,4,5,9,10,11	WA	
<i>Spizaetus tyrannus</i> (zu Wied-Neuwied, 1820)	CC ³⁰ MC ¹²	2	WA	MZUSP
<i>Spizaetus melanoleucus</i> (Vieillot, 1816)	CC ⁴⁷ FB ⁵⁰ MC ¹²	2,8		NMW
<i>Spizaetus ornatus</i> (Daudin, 1800)	MC ¹² PL ⁴⁸	7		
<i>Accipiter bicolor</i> (Vieillot, 1817)	FD ²⁹ MC ¹² RJ ⁴⁷	10,12		DMNS, NMW
<i>Busarellus nigricollis</i> (Latham, 1790)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,16,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸ RC ⁴⁷	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS, FMNH, MZUSP, NMW, UFMT
<i>Geranospiza caerulescens</i> (Vieillot, 1817)	BM ⁵⁰ CA ⁴⁰ ET ⁵⁰ FB ⁵⁰ FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PS ⁴⁷ RJ ⁴⁷	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, NMW, SMF
<i>Ictinia plumbea</i> (J.F. Gmelin, 1788)	BM ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,11	WA	NMW
<i>Rostrhamus sociabilis</i> (Vieillot, 1817)	BM ⁵⁰ CC ⁴⁷ ET ⁵⁰ FB ⁵⁰ FD ^{27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, NMW, YPM, UFMT
<i>Rupornis magnirostris</i> (J.F. Gmelin, 1788)	AR ¹⁷ BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PC ¹¹ PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, FMNH, MZUSP, NMW, UFMT
<i>Buteogallus meridionalis</i> (Latham, 1790)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{16,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DZUFMG, FMNH, NMW, UFMT
<i>Buteogallus urubitinga</i> (J.F. Gmelin, 1788)	BM ⁵⁰ CC ⁴⁷ ET ⁵⁰ FC ⁴⁷ FD ^{16,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² RC ⁴⁷	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, FMNH, MZUSP, NMW
<i>Geranoaetus albicaudatus</i> (Vieillot, 1816)	BM ⁵⁰ FD ⁵⁰ FF ⁴⁷ FP ⁵⁰ FS ⁵⁰	5,7,8,9,11	WA	NMW
<i>Pseudastur albicollis</i> (Latham, 1790)	CC ⁵ FS ^{42,50}	7,10,11		CG
<i>Buteo nitidus</i> (Latham, 1790)	CC ³⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,50} FS ⁵⁰ MC ¹²	2,4,9,11		DMNS, MZUSP, NMW
<i>Buteo albonotatus</i> Kaup, 1847	FB ⁵⁰	8	WA	
ORDER STRIGIFORMES				
Family Tytonidae				
<i>Tyto alba</i> (Scopoli, 1769)	ET ⁵⁰ FD ^{41,50} FP ⁵⁰ MC ¹²	1,2,3,4,5,7,8,9		ANSP
Family Strigidae				
<i>Glaucidium hardyi</i> Vielliard, 1989	FC ⁴³	2		NMW
<i>Glaucidium brasilianum</i> (J.F. Gmelin, 1788)	R ¹⁷ BM ⁵⁰ FB ⁵⁰ FD ^{9,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11,12		AMNH, ANSP, DMNS, UFMT
<i>Athene cunicularia</i> (Molina, 1782)	BM ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰	1,2,3,4,5,6,7,8,9,10,11	WA	UFMT
<i>Asio clamator</i> (Vieillot, 1808)	FP ⁵⁰	2,3,5,7		
<i>Megascops choliba</i> (Vieillot, 1817)	BM ⁵⁰ CC ⁵ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰	1,2,3,4,5,6,7,8,9,10,11		CG
<i>Bubo virginianus</i> (J.F. Gmelin, 1788)	FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,4,6,7,9,11	WA	ANSP
ORDER TROGONIFORMES				
Family Trogonidae				
<i>Trogon melanurus</i> Swainson, 1838	CC ^{30,47} MC ¹² RS ⁴⁷	7,8,9,11	WA	MZUSP, NMW

Taxa	Localities of records and sources	Month of record	Photo	Specimen
<i>Trogon viridis</i> Linnaeus, 1766	CC ⁴⁷ RS ⁴⁷	8		NMW
<i>Trogon curucui</i> Linnaeus, 1766	CC ^{30,47,50} ET ⁵⁰ FB ⁵⁰ FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,11	WA	ANSP, MZUSP, NMW, UFMT
<i>Trogon collaris</i> Vieillot, 1817	CC ⁴⁷	8		NMW
ORDER PICIFORMES				
Family Galbulidae				
<i>Brachygalba lugubris</i> (Swainson, 1838)	CC ³⁰ MC ¹²	11,12		MZUSP
<i>Galbula ruficauda</i> Cuvier, 1816	BM ⁵⁰ CC ^{30,47,50} ET ⁵⁰ FB ⁵⁰ FD ^{9,15,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS, FMNH, MZUSP, NMW
Family Buccconidae				
<i>Nystalus chacuru</i> (Vieillot, 1816)	BM ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	DMNS, NMW
<i>Nystalus maculatus</i> (J.F. Gmelin, 1788)	BM ⁵⁰ CC ⁵ FC ⁴⁷ FD ⁵⁰ FP ⁵⁰ RE ⁴⁷	1,2,3,4,5,7,8,9,10,11		CG, NMW
<i>Nonnula ruficapilla</i> (von Tschudi, 1844)	CC ^{30,47,50} MC ¹²	7,8,9,11		BMNH, MZUSP, NMW
<i>Monasa nigrifrons</i> (von Spix, 1824)	BM ⁵⁰ CC ^{30,47,50} ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	DMNS, MZUSP, NMW, UFMT
<i>Chelidoptera tenebrosa</i> (Pallas, 1782)	BM ⁵⁰ FD ⁵⁰ FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11		
Family Picidae				
<i>Picumnus aurifrons</i> von Pelzeln, 1870	FC ⁴⁷	10		NMW
<i>Picumnus albosquamatus</i> d'Orbigny, 1840	CC ⁵⁰ FB ⁵⁰ FD ^{27,29,41,50} FF ⁴⁷ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS, DZUFMG, MZUSP, NMW, UFMT
<i>Dryocopus lineatus</i> (Linnaeus, 1766)	FB ⁵⁰ FD ^{9,27,37,41,50} FS ⁵⁰ MC ¹² PL ⁴⁸	2,3,7,8,9,11	WA	AMNH, ANSP, DMNS, MNRJ, UFMT
<i>Celeus torquatus</i> (Boddaert, 1783)	FC ⁴⁷ MC ¹²	10,11		NMW
<i>Celeus lugubris</i> (Malherbe, 1851)	CC ^{30,47,50} ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{11,27,37,41} FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,6,7,8,9,11,12	WA	AMNH, ANSP, DZUFMG, FMNH, MNRJ, MZUSP, NMW, UFMT
<i>Piculus leucolaemus</i> (Natterer & Malherbe, 1845)	CC ⁵	7		CG
<i>Piculus chrysochloros</i> (Vieillot, 1818)	FB ⁵⁰ FD ⁵⁰ MC ¹²	2,8,9	WA	DZUFMG, MZUSP, UFMT
<i>Colaptes melanochloros</i> (J.F. Gmelin, 1788)	BM ⁵⁰ CC ⁴⁷ FB ⁵⁰ FC ⁴⁷ FD ^{9,11,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	DMNS, FMNH, NMW
<i>Colaptes campestris</i> (Vieillot, 1818)	BM ⁵⁰ CC ⁵⁰ FB ⁵⁰ FD ^{9,37,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,7,8,9,10,11,12	WA	DMNS, MNRJ, UFMT
<i>Campephilus melanoleucos</i> (J.F. Gmelin, 1788)	BM ⁵⁰ CC ^{30,47} ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,11,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸ RJ ⁴⁷	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS, FMNH, MZUSP, NMW, UFMT
<i>Melanerpes candidus</i> (Otto, 1796)	BM ⁵⁰ CC ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	NMW
<i>Melanerpes cruentatus</i> (Boddaert, 1783)	BM ⁵⁰ CC ^{5,47} FC ⁴⁷ FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	CG, NMW
<i>Veniliornis passerinus</i> (Linnaeus, 1766)	BM ⁵⁰ CC ^{5,30,47} ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{11,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,11,12	WA	ANSP, BMNH, CG, FMNH, MZUSP, NMW
<i>Veniliornis affinis</i> (Swainson, 1821)	CC ⁴⁷	8		NMW
Family Ramphastidae				
<i>Capito dayi</i> Cherrie, 1916	RJ ²¹			MNRJ
<i>Ramphastos toco</i> Statius Muller, 1776	BM ⁵⁰ CC ^{5,18,28} ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,11,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, ANSP, CG, DMNS, FMNH, MNHN, MNRJ, MZUSP, NMW
<i>Ramphastos tucanus</i> Linnaeus, 1758	RJ ²⁸			MNRJ
<i>Ramphastos vitellinus</i> M.H.C. Lichtenstein, 1823	CC ⁴⁷ RS ⁴⁷	8		NMW
<i>Pteroglossus inscriptus</i> Swainson, 1822	MC	5	WA	
<i>Pteroglossus castanotis</i> Gould, 1834	AR ¹⁷ BM ⁵⁰ CC ^{18,30} FB ⁵⁰ FC ⁴⁷ FD ^{27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, MNHN, MZUSP, NMW, UFMT

Taxa	Localities of records and sources	Month of record	Photo	Specimen
ORDER CORACIIFORMES				
Family Momotidae				
<i>Momotus momota</i> (Linnaeus, 1766)	CC ⁴⁷ ET ⁵⁰ FB ⁵⁰ FD ⁵⁰ FJ ²⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸ QU ²² RJ ²² RS ²² TU ²²	1,2,3,4,5,7,8,9,11	WA	MNRJ, NMW
Family Alcedinidae				
<i>Megaceryle torquata</i> (Linnaeus, 1766)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS, MZUSP
<i>Chloroceryle amazona</i> (Latham, 1790)	BM ⁵⁰ CC ¹⁸ ET ⁵⁰ FB ⁵⁰ FD ^{9,11,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS, FMNH, MNHN, UFMT
<i>Chloroceryle aenea</i> (Pallas, 1764)	FB ⁵⁰ FC ⁴⁷ FD ^{27,50} FS ⁵⁰ MC ¹²	2,3,8,9,10,11	WA	AMNH, NMW
<i>Chloroceryle americana</i> (J.F. Gmelin, 1788)	BM ⁵⁰ CC ⁵⁰ FB ⁵⁰ FD ^{9,11,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS, FMNH, UFMT
<i>Chloroceryle inda</i> (Linnaeus, 1766)	FB ⁵⁰ FS ⁵⁰	2,11		
Family Cariamidae				
<i>Cariama cristata</i> (Linnaeus, 1766)	FB ⁵⁰ FD ^{41,50} FS ⁵⁰ MC ^{3,12} PD ⁴⁷ PP ²³	1,2,5,6,7,8,9,11	WA	MNRJ, UFMT
ORDER FALCONIFORMES				
Family Falconidae				
<i>Herpetotheres cachimans</i> (Linnaeus, 1758)	BM ⁵⁰ CC ^{30,50} FB ⁵⁰ FC ⁴⁷ FD ^{9,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	DMNS, MZUSP, NMW
<i>Micrastur ruficollis</i> (Vieillot, 1817)	FD ⁵⁰	9		
<i>Micrastur semitorquatus</i> (Vieillot, 1817)	CC ⁴⁷ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ MC ¹²	2,8,9		NMW
<i>Caracara plancus</i> (J.F. Miller, 1777)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP
<i>Milvago chimachima</i> (Vieillot, 1816)	BM ⁵⁰ CC ¹⁸ FB ⁵⁰ FD ^{9,41,50} FP ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11		ANSP, DMNS, MNHN
<i>Falco sparverius</i> Linnaeus, 1758	BM ⁵⁰ CC ^{1,5} FB ⁵⁰ FD ⁵⁰ FJ ¹ FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	CG, MNRJ, UFMT
<i>Falco rufigularis</i> Daudin, 1800	FB ⁵⁰ FC ⁴⁷ FD ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,5,9,11,12	WA	NMW
<i>Falco femoralis</i> Temminck, 1822	BM ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{16,50} FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	FMNH, NMW
<i>Falco peregrinus</i> Tunstall, 1771	CC ¹⁸ MC ¹²	3		MNHN
ORDER PSITTACIFORMES				
Family Psittacidae				
<i>Myiopsitta monachus</i> (Boddaert, 1783)	CC ⁸ ET ⁵⁰ FB ⁵⁰ FD ^{9,27,41,50} FS ⁵⁰ MC ^{3,12}	1,5,7,8,9,10,11,12	WA	ANSP, DMNS, FMNH, MNHN, MZUSP
<i>Brotogeris chiriri</i> (Vieillot, 1818)	AR ¹⁷ BM ⁵⁰ CA ^{2,33} CC ^{5,18,30} ET ⁵⁰ FB ⁵⁰ FD ^{9,11,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, CG, DMNS, FMNH, MNHN, MZUSP, ROM, UFMT
<i>Pionus maximiliani</i> (Kuhl, 1820)	BM ⁵⁰ ET ⁵⁰ FD ^{9,11,41,50} FJ ⁷ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS, FMNH, MNRJ
<i>Pionus menstruus</i> (Linnaeus, 1766)	CC ^{30,47} FB ⁵⁰ FD ^{9,50} FG ⁴⁷ MC ¹²	2,4,5,7,8,9,10,11	WA	DMNS, MZUSP, NMW
<i>Alipiopsitta xanthops</i> (von Spix, 1824)	FG ⁴⁷ FJ ⁴⁷ MC ³	3,7		NMW
<i>Amazona aestiva</i> (Linnaeus, 1758)	BM ⁵⁰ CC ³⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,11,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS, FMNH, MNRJ, MZUSP, UFMT
<i>Amazona amazonica</i> (Linnaeus, 1766)	BM ⁵⁰ CC ^{5,18,24,30,47,50} ET ⁵⁰ FB ⁵⁰ FD ^{9,41,50} FP ⁵⁰ MC ¹² MT ²⁴ PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, CG, DMNS, MNHN, MNRJ, MZUSP, NMW
<i>Forpus xanthopterygius</i> (von Spix, 1824)	ET ⁵⁰ FD ⁵⁰	8,9		
<i>Pyrrhura perlata</i> (von Spix, 1824)	SA ²⁰	12		MNRJ
<i>Anodorhynchus hyacinthinus</i> (Latham, 1790)	FB ⁵⁰ FD ^{9,11,27,41} FF ⁴⁷ FS ⁵⁰ MC ^{3,12}	2,7,8,11,12	WA	AMNH, ANSP, DMNS, FMNH, NMW
<i>Eupsittula aurea</i> (J.F. Gmelin, 1788)	BM ⁵⁰ CC ³⁰ ET ⁵⁰ FB ⁵⁰ FD ^{2,9,11,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,7,8,9,11,12,12	WA	AMNH, ANSP, CG, DMNS, FMNH, MZUSP, UFMT

Taxa	Localities of records and sources	Month of record	Photo	Specimen
<i>Aratinga weddellii</i> (Deville, 1851)	FU ²⁴ , PL ⁴⁸	1,11,12	WA	MNRJ
<i>Aratinga nenday</i> (Vieillot, 1823)	ET ⁵⁰ FD ^{27,50} FS ⁵⁰ MC ¹²	8,9,11	WA	AMNH
<i>Primolius auricollis</i> (Cassin, 1853)	BM ⁵⁰ CA ² CC ⁴⁷ FB ⁵⁰ FD ^{9,27,41,50} FJ ²⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, BMNH, DMNS, DZUFMG, NMW, UFMT
<i>Ara ararauna</i> (Linnaeus, 1758)	BM ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ MC ³ RJ ²⁴	1,2,3,4,5,6,7,8,9,10,11,12	WA	MNRJ
<i>Ara chloropterus</i> G.R. Gray, 1859	BM ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ²⁷ FF ⁴⁷ FJ ²⁰ FP ⁵⁰ FS ⁵⁰ MC ^{3,12}	1,2,3,4,5,6,7,8,9,11	WA	MNRJ, NMW
<i>Diopsittaca nobilis</i> (Linnaeus, 1758)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	
<i>Psittacara acuticaudatus</i> (Vieillot, 1818)	FD ^{9,11} FF ⁴⁷ FS ⁵⁰ MC ¹²	7,10,11,12		DMNS, NMW
<i>Psittacara leucophthalmus</i> (Statius Muller, 1776)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{2,9,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS
ORDER PASSERIFORMES				
Family Pipridae				
<i>Neopelma pallescens</i> (Lafresnaye, 1853)	FD ⁵⁰ FP ⁵⁰	1,2,3,4,5,6,7,8,9,10,11		
<i>Manacus manacus</i> (Linnaeus, 1766)	FP ⁵⁰	1,2,3,4,5,7,8,9		
<i>Pipra fasciicauda</i> Hellmayr, 1906	CC ^{31,47} FB ⁵⁰ FD ^{27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,7,8,9,11		AMNH, ANSP, MZUSP, NMW
<i>Antilophia galeata</i> (M.H.C. Lichtenstein, 1823)	FD ²⁷ FP ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11		AMNH
Family Cotingidae				
<i>Cephalopterus ornatus</i> E. Geoffroy Saint-Hilaire, 1809	CC ^{8,47} FC ⁴⁷ RC ⁸	2,8		NMW
<i>Gymnoderus foetidus</i> (Linnaeus, 1758)	CC ⁴⁷ FB ⁵⁰ FC ⁴⁷ FD ^{27,50} FS ⁵⁰ MC ¹² RC ⁴⁷ RE ⁴⁷	1,2,8,9,10,11,12	WA	AMNH, BMNH, DZUFMG, NMW
Family Onychorhynchidae				
Family Tityridae				
<i>Schiffornis turdina</i> (zu Wied-Neuwied, 1831)	CC ⁴⁷	8		NMW
<i>Tityra inquisitor</i> (M.H.C. Lichtenstein, 1823)	CC ³⁰ FB ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11		MZUSP
<i>Tityra cayana</i> (Linnaeus, 1766)	FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,11	WA	
<i>Tityra semifasciata</i> (von Spix, 1825)	MC ¹² PL ⁴⁸	1		
<i>Xenopsaris albinucha</i> (Burmeister, 1869)	FD ⁵⁰	9		
<i>Pachyramphus viridis</i> (Vieillot, 1816)	CC ¹⁸ FB ⁵⁰ MC ¹²	5,8		MNHN
<i>Pachyramphus validus</i> (M.H.C. Lichtenstein, 1823)	FB ⁵⁰ FP ⁵⁰ MC ¹²	3,4,5,7,8,9		
<i>Pachyramphus marginatus</i> (M.H.C. Lichtenstein, 1823)	MC	12	WA	
<i>Pachyramphus polychopterus</i> (Vieillot, 1818)	FB ⁵⁰ FD ^{27,50} FS ⁵⁰ MC ¹² RJ ⁴⁷	2,9,10,11		AMNH, NMW
Family Pipromorphidae				
<i>Corythopsis delalandi</i> (Lesson, 1831)	CC ⁴⁷ FS ⁵⁰	8,11		NMW
<i>Mionectes oleagineus</i> (M.H.C. Lichtenstein, 1823)	FP ⁵⁰	2,3,4,7,8,9		
<i>Leptopogon amaurocephalus</i> von Tschudi, 1846	FD ⁵⁰ FP ⁵⁰ FS ⁵⁰	1,2,3,4,5,7,8,9,11		
<i>Tolmomyias sulphurescens</i> (von Spix, 1825)	CC ⁵⁰ FB ⁵⁰ FD ^{27,41,50} MC ¹² PL ⁴⁸	1,2,6,8,9		AMNH, ANSP, MZUSP
<i>Myiornis ecaudatus</i> (d'Orbigny & Lafresnaye, 1837)	FP ⁵⁰	4,5,7,8,9		
<i>Hemitriccus striatocollis</i> (Lafresnaye, 1853)	CC ^{31,47} FD ^{27,50} FP ⁵⁰ MC ¹²	1,2,3,4,5,7,8,9,11	WA	AMNH, BMNH, MZUSP, NMW
<i>Hemitriccus margaritaceiventer</i> (d'Orbigny & Lafresnaye, 1837)	CC ¹⁸ FB ⁵⁰ FD ^{27,41} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸ RJ ⁴⁷	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, ANSP, MNHN
<i>Poecilotriccus latirostris</i> (von Pelzeln, 1868)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,27,50} FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, DMNS, DZUFMG, MZUSP
<i>Todirostrum cinereum</i> (Linnaeus, 1766)	BM ⁵⁰ CC ¹⁸ ET ⁵⁰ FC ⁴⁷ FD ^{9,16,27,41} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS, FMNH, NMW, MNHN

Taxa	Localities of records and sources	Month of record	Photo	Specimen
Family Tyrannidae				
<i>Hirundinea ferruginea</i> (J.F. Gmelin, 1788)	FD ⁵⁰	9		
<i>Inezia inornata</i> (Salvadori, 1897)	FB ⁵⁰ FD ⁵⁰ MC ¹² PL ⁴⁸	7,8,9		MZUSP
<i>Euscarthmus meloryphus</i> zu Wied-Neuwied, 1831	BM ⁵⁰ FB ⁵⁰ FD ^{16,50} FP ⁵⁰ MC ¹² PL ⁴⁸	4,5,6,7,8,9,10,11		DMNS, FMNH, MZUSP, UFMT
<i>Camptostoma obsoletum</i> (Temminck, 1824)	CC ^{5,18} ET ⁵⁰ FB ⁵⁰ FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,7,8,9,11	WA	ANSP, CG, MNHN, UFMT
<i>Elaenia flavogaster</i> (Thunberg, 1822)	BM ⁵⁰ CC ¹⁸ ET ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11		MNHN
<i>Elaenia parvirostris</i> von Pelzeln, 1868	FB ⁵⁰ MC ¹²	5		UFMT
<i>Elaenia spectabilis</i> von Pelzeln, 1868	CC ⁵ FD ⁵⁰	7,9		CG
<i>Elaenia chiriquensis</i> Lawrence, 1865	FD ⁵⁰	5,9		MZUSP, UFMT
<i>Elaenia albiceps chilensis</i> Hellmayr, 1927	FB ⁵⁰	5		UFMT
<i>Myiopagis caniceps</i> (Swainson, 1835)	FD ⁵⁰ MC ¹² PL ⁴⁸	1,9		
<i>Myiopagis gaimardii</i> (d'Orbigny, 1840)	FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,7,8,9		
<i>Myiopagis viridicata</i> (Vieillot, 1817)	FB ⁵⁰ FD ²⁷ MC ¹² PL ⁴⁸	1,2		AMNH
<i>Capsiempis flaveola</i> (M.H.C. Lichtenstein, 1823)	FB ⁵⁰ MC ¹² PL ⁴⁸	1,2,7,8		UFMT
<i>Phyllomyias fasciatus</i> (Thunberg, 1822)	FD ⁵⁰	9		
<i>Phaeomyias murina</i> (von Spix, 1825)	CC ¹⁸ FD ^{9,50} MC ¹²	1,3,9,11	WA	DMNS, MNHN
<i>Pseudocolopteryx sclateri</i> (Oustalet, 1892)	FD ⁵⁰ PS ⁴⁷	6,9		NMW
<i>Attila bolivianus</i> Lafresnaye, 1848	CC ⁴⁷ FB ⁵⁰ FD ^{27,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,8,9,11	WA	AMNH, MZUSP, NMW
<i>Legatus leucophaeus</i> (Vieillot, 1818)	BM ⁵⁰ FB ⁵⁰ FD ^{27,50} FP ⁵⁰ FS ⁵⁰ PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11		AMNH
<i>Ramphotrigon ruficauda</i> (von Spix, 1825)	CC ⁴⁷ MC ¹²	?		NMW
<i>Pitangus sulphuratus</i> (Linnaeus, 1766)	AR ¹⁷ BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,16,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS, FMNH, MZUSP
<i>Pitangus lictor</i> (M.H.C. Lichtenstein, 1823)	FB ⁵⁰ FD ¹⁶ MC ¹²	2,7,8	WA	FMNH
<i>Machetornis rixosa</i> (Vieillot, 1819)	BM ⁵⁰ FB ⁵⁰ FD ^{11,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	FMNH
<i>Megarynchus pitangua</i> (Linnaeus, 1766)	BM ⁵⁰ CC ¹⁸ ET ⁵⁰ FB ⁵⁰ FD ^{9,27} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12		AMNH, DMNS, MNHN
<i>Myiodynastes maculatus</i> (Stadius Muller, 1776)	BM ⁵⁰ FB ⁵⁰ FD ^{9,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	DMNS
<i>Myiozetetes cayanensis</i> (Linnaeus, 1766)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{27,41} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, ANSP
<i>Empidonomus varius</i> (Vieillot, 1818)	BM ⁵⁰ ET ¹⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ MC ¹² PL ⁴⁸ RJ ⁴⁷	1,2,3,4,5,6,7,8,9,10,11	WA	DZUFMG, NMW, UFMT
<i>Griseotyrannus aurantioatrocristatus</i> (d'Orbigny & Lafresnaye, 1837)	CC ³⁰ FD ⁵⁰ MC ¹² PL ⁴⁸	1,9,11		MZUSP
<i>Tyrannus albogularis</i> Burmeister, 1856	BM ⁵⁰ FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10	WA	
<i>Tyrannus melancholicus</i> Vieillot, 1819	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS
<i>Tyrannus savana</i> Daudin, 1802	BM ⁵⁰ CC ¹⁸ FB ⁵⁰ FD ^{9,37,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	2,3,5,8,9,10,11	WA	ANSP, DMNS, MNHN
<i>Casiornis rufus</i> (Vieillot, 1816)	ET ⁵⁰ FB ⁵⁰ FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,11	WA	ANSP, MZUSP, UFMT
<i>Sirystes sibilator</i> (Vieillot, 1818)	FB ⁵⁰ FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,7,8,9		DZUFMG
<i>Myiarchus swainsoni</i> Cabanis & Heine, 1859	FB ⁵⁰ FD ⁵⁰ MC ¹²	2,8,9		
<i>Myiarchus tuberculifer</i> (d'Orbigny & Lafresnaye, 1837)	CC ⁴⁷ MC ¹²			NMW
<i>Myiarchus ferox</i> (J.F. Gmelin, 1789)	BM ⁵⁰ CC ⁵⁰ ET ^{10,50} FB ⁵⁰ FD ^{27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, ANSP, DZUFMG
<i>Myiarchus tyrannulus</i> (Stadius Muller, 1776)	BM ⁵⁰ CC ⁵ FB ⁵⁰ FD ^{9,16,41,50} FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, CG, DMNS, FMNH, MZUSP
<i>Colonia colonus</i> (Vieillot, 1818)	FP ⁵⁰ MC ¹²	3,4,5,7		

Taxa	Localities of records and sources	Month of record	Photo	Specimen
<i>Myiophobus fasciatus</i> (Stadius Muller, 1776)	FD ^{11,50} MC ¹² PL ⁴⁸	1,7,9		FMNH
<i>Sublegatus modestus</i> (zu Wied-Neuwied, 1831)	CC ¹⁸ ET ⁵⁰ FB ⁵⁰ FD ^{41,50} FP ⁵⁰ MC ¹² PL ⁴⁸	5,6,7,8,9	WA	ANSP, MNHR, MZUSP, UFMT
<i>Pyrocephalus rubinus</i> (Boddaert, 1783)	CC ^{18,50} ET ⁵⁰ FB ⁵⁰ FD ^{9,41} FP ⁵⁰ MC ^{3,12} PC ¹¹	2,3,4,5,6,7,8,9	WA	ANSP, DMNS, FMNH, MNHN
<i>Fluvicola albiventer</i> (von Spix, 1825)	BM ⁵⁰ CC ¹⁸ ET ⁵⁰ FB ⁵⁰ FD ⁴¹ FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, MNHN
<i>Arundinicola leucocephala</i> (Linnaeus, 1764)	BM ⁵⁰ CC ¹⁸ FB ⁵⁰ FD ^{9,50} FP ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	DMNS, MNHN
<i>Gubernetes yetapa</i> (Vieillot, 1818)	PS ⁴⁷	3,6	WA	NMW
<i>Alectrurus risora</i> (Vieillot, 1824)	PS ⁴⁷	6		NMW
<i>Hymenops perspicillatus</i> (J.F. Gmelin, 1789)	PS ⁴⁷	6		NMW
<i>Knipolegus hudsoni</i> P.L. Sclater, 1872	ET ⁵⁰ FD ⁴¹ FP ⁵⁰ MC ¹²	1,2,3,4,5,8,9		ANSP
<i>Satrapa icterophrys</i> (Vieillot, 1818)	MC ¹²	6	WA	
<i>Xolmis cinereus</i> (Vieillot, 1816)	BM ⁵⁰ FB ⁵⁰ FD ³³ FP ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	ROM
<i>Xolmis velatus</i> (M.H.C. Lichtenstein, 1823)	FB ⁵⁰ FD ^{9,11,27} MC ¹² PL ⁴⁸	2,7,8,11,12	WA	AMNH, DMNS, FMNH, UFMT
<i>Cnemotriccus fuscatus</i> (zu Wied-Neuwied, 1831)	CC ¹⁸ ET ⁵⁰ FB ⁵⁰ FD ^{27,41,50} FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9		AMNH, ANSP, MNHN, MZUSP, UFMT
<i>Lathrotriccus euleri</i> (Cabanis, 1868)	FD ^{27,50} FS ⁵⁰	9,11		AMNH, MZUSP
<i>Contopus cinereus</i> (von Spix, 1825)	MC ¹² PL ⁴⁸	7		
Family Thamnophilidae				
<i>Myrmophylax atrothorax</i> (Boddaert, 1783)	CC ^{30,47,50} MC ¹²	7,8,12		BMNH, MZUSP, NMW
<i>Formicivora grisea</i> (Boddaert, 1783)	FS ⁵⁰ MC ¹² PL ⁴⁸	1,7,11		
<i>Formicivora melanogaster</i> von Pelzeln, 1868	FB ⁵⁰ FD ⁵⁰ MC ¹² PL ⁴⁸	2,7,8,9		UFMT
<i>Formicivora rufa</i> (zu Wied-Neuwied, 1831)	CC ^{5,18} FB ⁵⁰ FD ^{9,16,27,41} FP ⁵⁰ MC ¹²	1,2,3,4,5,7,8,9,10	WA	AMNH, ANSP, CG, DMNS, MNHN, UFMT
<i>Myrmotherula axillaris</i> (Vieillot, 1817)	CC ⁴⁷	8		NMW
<i>Dysithamnus mentalis</i> (Temminck, 1823)	CC ^{30,47} FS ⁵⁰ MC ¹²	8,11		MZUSP, NMW
<i>Herpsilochmus longirostris</i> von Pelzeln, 1868	FD ^{27,50} FP ⁵⁰ MC ¹²	1,2,3,4,5,7,8,9		AMNH
<i>Taraba major</i> (Vieillot, 1816)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,11,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS, FMNH, MZUSP, UFMT
<i>Thamnophilus doliatus</i> (Linnaeus, 1764)	BM ⁵⁰ CC ^{18,50} FB ⁵⁰ FD ^{9,41} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS, DZUFMG, MNHN, UFMT
<i>Thamnophilus sticturus</i> von Pelzeln, 1868	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11		DZUFMG, MZUSP, UFMT
<i>Thamnophilus amazonicus</i> P.L. Sclater, 1858	BM ⁵⁰ CC ⁴⁷ MC ¹²	1,2,3,4,5,7,8		NMW
<i>Cercomacra melanaria</i> (Ménétries, 1835)	BM ⁵⁰ CA ¹⁶ CC ^{18,47,50} ET ⁵⁰ FD ^{9,11,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS, FMNH, MNHN, MZUSP, NMW, UFMT, UMMZ
<i>Drymophila devillei</i> (Menegaux & Hellmayr, 1906)	FB ⁵⁰ MC ¹² PL ⁴⁸	1,2		DZUFMG
<i>Hypocnemis ochrogyna</i> J.T. Zimmer, 1932	CC ⁴⁷	7,8		NMW
<i>Willisornis poecilinotus</i> (Cabanis, 1847)	CC ⁴⁷ MC ¹²	9		NMW
<i>Hypocnemoides maculicauda</i> (von Pelzeln, 1868)	CC ⁴⁷ FD ^{11,27,50} FP ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, FMNH, NMW, MZUSP
<i>Pyriglena leuconota</i> (von Spix, 1824)	CC ³⁰ FB ⁵⁰ FF ⁴⁷ FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,7,8,9,11	WA	DZUFMG, MZUSP, NMW, UFMT
Family Melanopareiidae				
<i>Melanopareia torquata</i> (zu Wied-Neuwied, 1831)	CC ³⁸	9		MNRJ
Family Dendrocolaptidae				
<i>Sittasomus griseicapillus</i> (Vieillot, 1818)	CC ⁵ ET ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11		CG, MZUSP

Taxa	Localities of records and sources	Month of record	Photo	Specimen
<i>Dendrocincla fuliginosa</i> (Vieillot, 1818)	MC ¹² PL ⁴⁸	7		
<i>Glyphorhynchus spirurus</i> (Vieillot, 1819)	FP ⁵⁰	3,4,7,8,9		
<i>Dendrocolaptes picumnus</i> M.H.C. Lichtenstein, 1820	FB ⁵⁰ FD ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,7,8,9,11		DZUFMG
<i>Dendrocolaptes platyrostris</i> von Spix, 1824	FB ⁵⁰	5	WA	UFMT
<i>Xiphocolaptes major</i> (Vieillot, 1818)	BM ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,11} FP ⁵⁰ MC ¹² PL ⁴⁸ RE ⁴⁷ RJ ⁴⁷	1,2,3,4,5,6,7,8,9,10,11,12		DMNS, DZUFMG, FMNH, NMW
<i>Xiphorhynchus elegans</i> (von Pelzeln, 1868)	RS ³²			MNRJ
<i>Xiphorhynchus guttatus</i> (M.H.C. Lichtenstein, 1820)	CC ^{5,47} FB ⁵⁰ FD ^{27,50} FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,6,7,8,9,11	WA	AMNH, CG, MZUSP, NMW, UFMT
<i>Dendroplex picus</i> (J.F. Gmelin, 1788)	BM ⁵⁰ CC ^{47,50} ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11		AMNH, ANSP, MZUSP, NMW, UFMT, UMMZ
<i>Campylorhamphus trochilostrius</i> (M.H.C. Lichtenstein, 1820)	CC ³⁰ ET ⁵⁰ FB ⁵⁰ FD ^{27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,4,5,7,8,9,11	WA	AMNH, ANSP, MZUSP, UFMT
<i>Lepidocolaptes angustirostris</i> (Vieillot, 1818)	BM ⁵⁰ CC ⁵ FB ⁵⁰ FC ⁴⁷ FD ^{11,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	CG, FMNH, NMW
Family Furnariidae				
<i>Xenops rutilus</i> Temminck, 1821	CC ⁴⁷ MC ¹² PL ⁴⁸	7,9		NMW
<i>Furnarius leucopus</i> Swainson, 1838	BM ⁵⁰ ET ⁵⁰ FD ^{27,41,50} FP ⁵⁰ MC ^{3,12}	1,2,3,4,5,6,7,8,9	WA	AMNH, ANSP, MZUSP
<i>Furnarius rufus</i> (J.F. Gmelin, 1788)	BM ⁵⁰ CC ^{8,50} ET ⁵⁰ FB ⁵⁰ FD ^{9,37,41} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS, MNHN, MNRJ
<i>Phacellodomus rufifrons</i> (zu Wied-Neuwied, 1821)	BM ⁵⁰ CC ¹⁸ ET ⁵⁰ FD ^{9,11,27,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, DMNS, FMNH, MNHN
<i>Phacellodomus ruber</i> (Vieillot, 1817)	CC ⁴⁷ FB ⁵⁰ FD ²⁷ FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	NMW
<i>Cranioleuca vulpina</i> (von Pelzeln, 1856)	BM ⁵⁰ CC ^{47,50} ET ⁵⁰ FD ^{9,11,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS, FMNH, MZUSP, NMW, UFMT
<i>Pseudoseisura unirufa</i> (d'Orbigny & Lafresnaye, 1838)	BM ⁵⁰ CC ^{47,50} ET ⁵⁰ FB ⁵⁰ FD ^{9,11,27,41} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS, FMNH, NMW, UMMZ
<i>Schoeniophylax phryganophilus</i> (Vieillot, 1817)	FD ^{9,11,41,50} FF ⁴⁷ MC ¹² PL ⁴⁸	3,7,9	WA	ANSP, DMNS, FMNH, MZUSP, NMW
<i>Certhiaxis cinnamomeus</i> (J.F. Gmelin, 1788)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,27,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	DMNS, FMNH
<i>Synallaxis scutata</i> P.L. Sclater, 1859	FB ⁵⁰ MC ¹² PL ⁴⁸	1,8		
<i>Synallaxis albiflora</i> von Pelzeln, 1856	BM ⁵⁰ CC ^{47,50} ET ⁵⁰ FB ⁵⁰ FD ^{9,11,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS, DZUFMG, FMNH, MZUSP
<i>Synallaxis albescens</i> Temminck, 1823	FC ⁴⁷			NMW
<i>Synallaxis frontalis</i> von Pelzeln, 1859	CC ¹⁸ FD ^{41,50} FS ⁵⁰ MC ¹² PL ⁴⁸	1,4,7,9,11		ANSP, MNHN, MZUSP
Family Vireonidae				
<i>Cyclarhis gujanensis</i> (J.F. Gmelin, 1789)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,16,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS, FMNH, MZUSP, UFMT
<i>Vireo olivaceus</i> (Linnaeus, 1766)	BM ⁵⁰ CC ¹⁸ FB ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11		MNHN
<i>Hylophilus pectoralis</i> P.L. Sclater, 1866	CC ^{47,50} ET ⁵⁰ FD ^{9,50} FS ⁵⁰ MC ¹²	8,9,11,12		DMNS, MZUSP, NMW
Family Corvidae				
<i>Cyanocorax cyanomelas</i> (Vieillot, 1818)	BM ⁵⁰ CC ³⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,41} FJ ⁴⁷ FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS, MZUSP, NMW, UFMT
<i>Cyanocorax cristatellus</i> (Temminck, 1823)	FP ⁵⁰	1,2,3,4,5,7,8,9		
Family Passeridae				
<i>Passer domesticus</i> (Linnaeus, 1758)	BM ⁵⁰ CC ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,7,8,9,10,11	WA	
Family Motacillidae				
<i>Anthus lutescens</i> Pucheran, 1855	BM ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	UFMT
Family Fringillidae				
<i>Euphonia chlorotica</i> (Linnaeus, 1766)	BM ⁵⁰ CC ⁵ FB ⁵⁰ FD ^{9,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, ANSP, CG, DMNS, MZUSP
<i>Euphonia lanirostris</i> d'Orbigny & Lafresnaye, 1837	CC ⁴⁷	8	WA	NMW

Taxa	Localities of records and sources	Month of record	Photo	Specimen
Family Passerellidae				
<i>Ammodramus humeralis</i> (Bosc, 1792)	BM ⁵⁰ CC ^{5,18} FB ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	CG, MNHN
<i>Arremon flavirostris</i> Swainson, 1838	CC ¹⁸ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,7,8,9,11	WA	MNHN
<i>Zonotrichia capensis</i> (Stadius Muller, 1776)	FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹²	4,5,7,8,9,11		
Family Parulidae				
<i>Geothlypis aequinoctialis</i> (J.F. Gmelin, 1789)	BM ⁵⁰ FD ^{16,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,11	WA	ANSP, FMNH
<i>Setophaga pitaiayumi</i> (Vieillot, 1817)	BM ⁵⁰ CC ^{5,18,50} ET ⁵⁰ FB ⁵⁰ FD ^{41,50} FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, CG, MNHN, UFMT
<i>Myiothlypis flaveola</i> S.F. Baird, 1865	BM ⁵⁰ CC ^{5,18} FB ⁵⁰ FD ^{27,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,5,6,7,8,9,11,10,12		AMNH, CG, MNHN, UFMT
<i>Basileuterus culicivorus hypoleucus</i> Bonaparte, 1850	CC ⁵ FD ⁵⁰ FS ⁵⁰	7,9,11	WA	CG
Family Icteridae				
<i>Leistes superciliaris</i> (Bonaparte, 1850)	ET ⁵⁰ FC ⁴⁷ FD ^{9,41} MC ¹² PS ⁴⁷	6,7,8,9,10		ANSP, DMNS, BMNH, NMW
<i>Psarocolius decumanus</i> (Pallas, 1769)	CC ³⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,27,41} FS ⁵⁰ MC ¹²	2,8,11	WA	ANSP, DMNS, MZUSP
<i>Procacicus solitarius</i> (Vieillot, 1816)	CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,16,41,50} FS ⁵⁰ MC ¹²	2,5,6,7,8,9,11	WA	ANSP, DMNS, FMNH, MZUSP, UFMT
<i>Cacicus cela</i> (Linnaeus, 1758)	AR ¹⁷ BM ⁵⁰ CC ^{31,47} ET ⁵⁰ FD ⁴¹ FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, MZUSP, NMW
<i>Icterus croconotus</i> (Wagler, 1829)	BM ⁵⁰ CC ^{49,50} ET ⁵⁰ FB ⁵⁰ FD ^{9,16,27,41} FF ⁴⁷ FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS, FMNH, NMW, UFMT, ZUEC
<i>Icterus pyrrhopterus</i> (Vieillot, 1819)	BM ⁵⁰ CC ^{18,31} ET ⁵⁰ FB ⁵⁰ FD ^{9,16,27,41,50} FF ⁴⁷ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS, FMNH, MNHN, MZUSP, NMW, UFMT
<i>Molothrus oryzivorus</i> (J.F. Gmelin, 1788)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ LC ⁴⁷ MC ¹²	1,2,3,5,6,7,8,9,10,11	WA	NMW, USNM
<i>Molothrus bonariensis</i> (J.F. Gmelin, 1789)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{27,41} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, ANSP, UFMT
<i>Amblyramphus holosericeus</i> (Scopoli, 1786)	FD ^{9,37} MC ¹² PS ⁴⁷ RJ ⁴⁷	6,9,10,11	WA	DMNS, MNRJ, NMW
<i>Gnorimopsar chopi</i> (Vieillot, 1819)	BM ⁵⁰ CC ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	
<i>Agelaioides badius</i> (Vieillot, 1819)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ⁴¹ FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP
<i>Agelasticus cyanopus</i> (Vieillot, 1819)	ET ^{10,50} FB ⁵⁰ FD ^{9,27,37,41} MC ¹²	2,8,9,11,12	WA	AMNH, ANSP, DMNS, DZUFMG, MNRJ
<i>Chrysomus ruficapillus</i> (Vieillot, 1819)	FD ⁵⁰	9		
Family Cardinalidae				
<i>Pheucticus aureoventris</i> (d'Orbigny & Lafresnaye, 1837)	CC ⁴⁷ FB ⁵⁰ FD ⁴¹ MC ¹² PL ⁴⁸	7,8,9		ANSP, NMW
<i>Amaurospiza moesta</i> (Hartlaub, 1853)	FB ⁵⁰	2		DZUFMG
<i>Cyanoloxia brissonii</i> (M.H.C. Lichtenstein, 1823)	FB ⁵⁰ FD ⁴¹ MC ^{3,12} PL ⁴⁸	1,2,7,9		ANSP
<i>Piranga flava</i> (Vieillot, 1822)	FD ⁵⁰ FJ ⁵	7,9		CG
Family Thraupidae				
<i>Nemosia pileata</i> (Boddaert, 1783)	BM ⁵⁰ CC ³⁰ FB ⁵⁰ FD ^{9,50} FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	DMNS, MZUSP
<i>Hemithraupis guira</i> (Linnaeus, 1766)	CC ⁵ FB ⁵⁰ FD ⁵⁰ MC ¹² PL ⁴⁸	1,2,7,8,9		CG
<i>Conirostrum speciosum</i> (Temminck, 1824)	CC ³⁰ ET ⁵⁰ FB ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,7,8,9,11,12	WA	MZUSP
<i>Sicalis flaveola</i> (Linnaeus, 1766)	BM ⁵⁰ CA ¹⁶ CC ¹⁸ FB ⁵⁰ FD ^{9,27,29,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS, MNHN
<i>Volatinia jacarina</i> (Linnaeus, 1766)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{16,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11		ANSP, FMNH, MZUSP, UFMT
<i>Tachyphonus luctuosus</i> d'Orbigny & Lafresnaye, 1837	CC ⁴⁷ ET ⁵⁰	8		NMW
<i>Tachyphonus cristatus nattereri</i> von Pelzeln, 1870	CC ⁴⁷ MC ¹²	8		NMW
<i>Tachyphonus rufus</i> (Boddaert, 1783)	CC ³⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,7,8,9,10,11	WA	MZUSP

Taxa	Localities of records and sources	Month of record	Photo	Specimen
<i>Eucometis penicillata</i> (von Spix, 1825)	CC ^{31,47} FB ⁵⁰ FD ^{27,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,7,8,9,10,11	WA	AMNH, MZUSP, NMW, UFMT
<i>Coryphospingus cucullatus</i> (Statius Muller, 1776)	BM ⁵⁰ CC ^{5,18} ET ^{10,50} FB ⁵⁰ FD ^{9,27,41} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, ANSP, CG, DMNS, DZUFMG, MNHN
<i>Ramphocelus carbo</i> (Pallas, 1764)	BM ⁵⁰ CC ^{5,31,47,50} ET ⁵⁰ FB ⁵⁰ FD ^{9,16,27,41,46,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, ANSP, CG, DMNS, DZUFMG, FMNH, MZUSP, NMW
<i>Charitospiza eucosma</i> Oberholser, 1905	FJ ⁵	7		CG
<i>Cyanerpes cyaneus</i> (Linnaeus, 1766)	FB ⁵⁰	8		
<i>Tersina viridis</i> (Illiger, 1811)	FP ⁵⁰	3,4,5,7,8,9		
<i>Dacnis cayana</i> (Linnaeus, 1766)	CC ⁴² FD ⁵⁰ FP ⁵⁰ MC ¹²	2,3,4,5,7,8,9,11	WA	
<i>Sporophila lineola</i> (Linnaeus, 1758)	BM ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11	WA	
<i>Sporophila leucoptera</i> (Vieillot, 1817)	BM ⁵⁰ CC ¹⁸ FD ^{9,11,41} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS, FMNH, MNHN
<i>Sporophila hypoxantha</i> Cabanis, 1851	FD ²⁷ MC ¹²	12		AMNH
<i>Sporophila angolensis</i> (Linnaeus, 1766)	BM ⁵⁰ FB ⁵⁰ FD ^{27,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, MZUSP, UFMT
<i>Sporophila maximiliani</i> (Cabanis, 1851)	FB ⁵⁰ MC ³	2		
<i>Sporophila nigricollis</i> (Vieillot, 1823)	MC ^{3,12} PL ⁴⁸	1,7	WA	
<i>Sporophila caerulescens</i> (Vieillot, 1823)	BM ⁵⁰ FB ⁵⁰ FD ²⁷ FP ⁵⁰ MC ^{3,12} PL ⁴⁸	2,3,4,5,6,7,8,9	WA	AMNH
<i>Sporophila plumbea</i> (zu Wied-Neuwied, 1830)	FD ⁵⁰	9		
<i>Sporophila collaris</i> (Boddaert, 1783)	AR ¹⁷ BM ⁵⁰ CC ¹⁸ FB ⁵⁰ FD ^{27,37,41} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, ANSP, DZUFMG, MNHP, MNRJ, MZUSP, UFMT
<i>Saltatricula atricollis</i> (Vieillot, 1817)	AR ¹⁷ FJ ²⁵ MC ¹²	12	WA	MNRJ
<i>Saltator maximus</i> (Statius Muller, 1776)	CC ⁴² MC ¹²	1	WA	
<i>Saltator coerulescens</i> Vieillot, 1817	BM ⁵⁰ CC ¹⁸ ET ^{10,50} FB ⁵⁰ FD ^{9,16,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS, DZUFMG, FMNH, MNHN, MZUSP, UFMT
<i>Saltator similis</i> d'Orbigny & Lafresnaye, 1837	BM ⁵⁰ FB ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11		UFMT
<i>Emberizoides herbicola</i> (Vieillot, 1817)	BM ⁵⁰ CC ³⁰ FD ⁵⁰ FP ⁵⁰	2,4,5,7,8,9,10,11	WA	MZUSP
<i>Thlypopsis sordida</i> (d'Orbigny & Lafresnaye, 1837)	BM ⁵⁰ ET ⁵⁰ FD ^{41,50} FP ⁵⁰ FS ⁵⁰	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, MZUSP
<i>Microspingus melanoleucus</i> (d'Orbigny & Lafresnaye, 1837)	MC ¹² PL ⁴⁸	7		
<i>Coereba flaveola</i> (Linnaeus, 1758)	BM ⁵⁰ CC ^{18,50} FD ^{41,50} FP ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, MNHN
<i>Tiaris obscurus</i> (d'Orbigny & Lafresnaye, 1837)	FD ⁵⁰	9		MZUSP
<i>Paroaria coronata</i> (J.F. Miller, 1776)	FB ⁵⁰ FD ^{9,27,41,50} FS ⁵⁰ MC ^{3,12}	2,8,9,10,11,12	WA	AMNH, ANSP, DMNS, DZUFMG, MZUSP, UFMT
<i>Paroaria capitata</i> (d'Orbigny & Lafresnaye, 1837)	BM ⁵⁰ CA ¹⁶ CC ^{18,47,50} ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,16,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PC ¹¹ PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, ANSP, DMNS, DZUFMG, FMNH, MNHN, MZUSP, NMW, UFMT
<i>Schistochlamys melanopsis</i> (Latham, 1790)	FD ⁵⁰ PL ⁴⁸	1		
<i>Cissopis leverianus</i> (J.F. Gmelin, 1788)	FS ^{42,50} MC ¹²	1,10,11	WA	
<i>Tangara sayaca</i> (Linnaeus, 1766)	BM ⁵⁰ CC ^{5,50} ET ⁵⁰ FB ⁵⁰ FD ^{9,41} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, CG, DMNS, UFMT
<i>Tangara palmarum</i> (zu Wied-Neuwied, 1821)	BM ⁵⁰ CC ^{18,31,47,50} FB ⁵⁰ FD ^{9,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	DMNS, MNHN, MZUSP, NMW, UFMT
<i>Tangara cayana</i> (Linnaeus, 1766)	FD ⁵⁰	9		
Family Donacobiidae				
<i>Donacobius atricapilla</i> (Linnaeus, 1766)	ET ⁵⁰ FD ^{9,16,41,50} FS ⁵⁰ MC ¹²	6,7,8,9,11,12	WA	ANSP, DMNS, FMNH

Taxa	Localities of records and sources	Month of record	Photo	Specimen
Family Hirundinidae				
<i>Hirundo rustica</i> Linnaeus, 1758	BM ⁵⁰ FB ⁵⁰ FP ⁵⁰ MC ¹²	1,2,3		
<i>Riparia riparia</i> (Linnaeus, 1758)	FC ⁴⁷	4		NMW
<i>Tachycineta albiventer</i> (Boddaert, 1783)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,16} FP ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11,12	WA	DMNS, FMNH
<i>Tachycineta leucorrhoa</i> (Vieillot, 1817)	ET ⁵⁰ FS ⁵⁰ MC ¹²	8,11	WA	
<i>Progne tapera</i> (Linnaeus, 1766)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FC ⁴⁷ FD ^{9,27,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11,12	WA	AMNH, DMNS, NMW
<i>Progne chalybea</i> (J.F. Gmelin, 1789)	BM ⁵⁰ ET ⁵⁰ FC ⁴⁷ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹²	4,5,6,7,8,9,10,11	WA	MZUSP, NMW
<i>Stelgidopteryx ruficollis</i> (Vieillot, 1817)	BM ⁵⁰ ET ⁵⁰ FC ⁴⁷ FD ^{27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,3,4,5,6,7,8,9,11	WA	AMNH, ANSP, NMW
<i>Pygochelidon cyanoleuca</i> (Vieillot, 1817)	FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,8,9,11		ANSP
Family Troglodytidae				
<i>Troglodytes aedon</i> Vieillot, 1809	BM ⁵⁰ FD ^{9,50} FP ⁵⁰ FS ⁵⁰ MC ^{3,12} PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11		DMNS
<i>Campylorhynchus turdinus</i> (zu Wied-Neuwied, 1821)	BM ⁵⁰ CC ^{31,50} ET ⁵⁰ FB ⁵⁰ FD ^{2,9,16,27,41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, ANSP, DMNS, FMNH, MZUSP, UFMT
<i>Pheugopedius genibarbis</i> (Swainson, 1837)	BM ⁵⁰ CC ^{18,31,50} ET ⁵⁰ FB ⁵⁰ FD ^{27,41,50} FP ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	AMNH, ANSP, MNHN, MZUSP, UFMT
<i>Cantorchilus leucotis</i> (Lafresnaye, 1845)	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FD ^{27,50} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11,12		AMNH, MZUSP
Family Polioptilidae				
<i>Polioptila dumicola</i> (Vieillot, 1817)	BM ⁵⁰ CC ^{5,18} ET ⁵⁰ FB ⁵⁰ FD ^{41,50} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, CG, MNHN, MZUSP
Family Mimidae				
<i>Mimus saturninus</i> (M.H.C. Lichtenstein, 1823)	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,41} FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	ANSP, DMNS, UFMT
<i>Mimus triurus</i> (Vieillot, 1818)	FD ⁴¹ MC ¹²	8,9		ANSP
Family Turdidae				
<i>Turdus leucomelas</i> Vieillot, 1818	BM ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	1,2,3,4,5,6,7,8,9,10,11	WA	
<i>Turdus hauxwelli</i> Lawrence, 1869	FD ⁵⁰	9		MZUSP
<i>Turdus rufiventris</i> Vieillot, 1818	BM ⁵⁰ CC ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ^{9,41} FP ⁵⁰ FS ⁵⁰ MC ¹²	1,2,3,4,5,6,7,8,9,10,11,12	WA	ANSP, DMNS
<i>Turdus amaurochalinus</i> Cabanis, 1851	BM ⁵⁰ ET ⁵⁰ FB ⁵⁰ FD ⁵⁰ FP ⁵⁰ FS ⁵⁰ MC ¹² PL ⁴⁸	4,5,6,7,8,9,10,11	WA	MZUSP, UFMT

Sources: 1 - Albuquerque (1985); 2 - AMNH; 3 - Arruda (1938); 4 - Castelnu (1851); 5 - CG; 6 - Collar *et al.* (1992); 7 - Darrieu (1983); 8 - des Murs (1855); 9 - DMNS; 10 - DZUFMG; 11 - FMNH; 12 - Forrester (1993); 13 - Grantsau (1988); 14 - Greenwalt (1960); 15 - Hellmayr (1929); 16 - Hellmayr *et al.* (1918–1949); 17 - Melo & Santos-Filho (2007); 18 - Ménégau (1917); 19 - Meyer de Schauensee (1966); 20 - Miranda-Ribeiro (1920); 21 - Miranda-Ribeiro (1929); 22 - Miranda-Ribeiro (1931); 23 - Miranda-Ribeiro (1938); 24 - Miranda-Ribeiro & Soares (1920); 25 - MNRJ; 26 - MZUSP; 27 - Naumburg (1930); 28 - Novaes (1949); 29 - Oberholser (1931); 30 - Pinto (1938); 31 - Pinto (1944); 32 - Raposo & Höfling (2003); 33 - ROM; 34 - Ruschi (1951); 35 - Ruschi (1953); 36 - Ruschi (1955); 37 - Schubart *et al.* (1965); 38 - Sick (1960); 39 - Simon (1912); 40 - SMF; 41 - Stone & Roberts (1934); 42 - Tubelis & Tomas (2003); 43 - Vielliard (1989); 44 - Vielliard (1994); 45 - von Berlepsch (1887); 46 - von Berlepsch (1911); 47 - von Pelzeln (1868–1870); 48 - Willis & Oniki (1990); 49 - ZUEC; 50 - This study; 51 - Kantek & Onuma (2013).

APPENDIX II

SECONDARY LIST. Species with probable occurrence in the municipality of Cáceres, Mato Grosso, Brazil, but for which we are not confident about the reliability of the records available.

Tinamus tao: Reis-de-Magalhães (1994) reports specimens collected in “Fazenda Igara, municipality of Cáceres, high Rio Paraguai”. We were unable to locate those specimens, and failed to trace this locality. Silva & Oniki (1988) recorded the species in Serra das Araras. Given that these localities might not be inside the present day limits of the municipality, we opted to exclude this record from the main list.

Dendrocygna bicolor: a migratory and accidental species in the region (Forrester 1993).

Coccyua cinerea: an accidental species in the region (Forrester 1993).

Vultur gryphus: this species is said to visit the Rio Jauru in the beginning of the dry season (May/June) to feed on cattle carcasses deposited on the beaches of a river island named “Ilha dos Urubus” (Sick 1979), which we were unable to locate. This fact was noticed in 1974 by Arne Sucksdorff, a Sweden movie director who lived in Mato Grosso, where he produced some nature documentaries. There is no modern documented record of the species for Brazil, even though it is known from bone remains from the beginning of the Holocene of the Lagoa Santa region, Minas Gerais (Alvarenga 1998). The species is currently included in the secondary list of Brazilian birds (Piacentini *et al.* 2015).

Buteogallus coronatus: the single record of the species for Cáceres is presented by Stone & Roberts (1934), who said that “no specimens obtained or seen, but said to occur occasionally at Descalvados”.

Celeus flavus: an accidental species in the region (Forrester 1993).

Campephilus rubricollis: a scarce species in the region (Forrester 1993).

Cyanocorax chrysops: a scarce species in the region (Forrester 1993).

Leistes militaris: three specimens collected in the Fazenda Descalvados were referred to the species (Schubart *et al.* 1965, Aguirre & Aldrichi 1987). Nevertheless, we and several other collectors only recorded the congeneric *L. superciliaris* in Cáceres, with *L. militaris* being restricted to northern parts of Mato Grosso. We were unable to personally examine the specimens referred to *L. militaris* and preferred to exclude the species from the main list.

Cyanerpes caeruleus: reported to occur in Cáceres by Tubelis & Tomas (2003), based on an undocumented sight record attributed to F. M. D’Horta. Silva & Oniki (1988) recorded the species in Serra das Araras.

Sporophila nigrorufa: a doubtful record of this species for Porto Limão was presented elsewhere (Willis & Oniki 1990).

Sporophila hypochroma: a migratory species in the region (Forrester 1993).

Tangara mexicana: a scarce species in the region (Forrester 1993).

APPENDIX III

TERTIARY LIST. Species with records published for the municipality of Cáceres, Mato Grosso, Brazil, but whose documental evidence is invalid or occurrence in the area is unlikely.

Anhima cornuta: cited by Forrester (1993) as a historical record. Although the species occur near to Cáceres, we failed to find records of the species for the municipality in the sources consulted by the author.

Chaetura brachyura: an uncertain record of the species for Porto Limão was presented by Willis & Oniki (1990).

Anopetia gounellei: a record for Fazenda Descalvados (Naumburg 1930) is an identification mistake that should be reverted to *Phaethornis subochraceus* (Meyer de Schauensee 1966).

Phaethornis longuemareus: the alleged specimens from Caiçara (von Pelzeln 1868–1870) refer to *P. nattereri*, an undescribed species at that time (von Berlepsch 1887).

Phaethornis hispidus: cited as a historical record by Forrester (1993), there is no record for Cáceres in the references used by this author. Pinto (1978) includes Cáceres in the range of the species, but there is no specimen of *P. hispidus* from Cáceres in MZUSP and we were unable to trace the source of this record. Vitor Piacentini (pers. com.) suggested that Cáceres was included by mistake in the range of the species by Pinto (1978).

Taphrospilus hypostictus: the occurrence of the species in Cáceres (and the only occurrence for Brazil), was first presented by Meyer de Schauensee (1966), and since then reproduced by several authors without criticism. Pacheco (2000) presented convincing evidence that this occurrence is a mistake derived from a typographical error.

Amazilia versicolor millerii: an alleged male collected by Ruschi (1955) and deposited in MBML was subsequently reidentified as *A. fimbriata nigricauda* (Vielliard 1994). The subspecies *A. v. milleri* is restricted to the north of Rio Amazonas, and *A. v. kubtchecki* is the subspecies expected to be found in Cáceres (Dickinson & Remsen-Jr. 2013).

Hylocharis sapphirina: cited by Forrester (1993) as a historical record, we failed to find records of the species in the sources consulted by this author.

Glaucidium minutissimum: the alleged specimen from Caiçara cited elsewhere (von Pelzeln 1868–1870) refers to *G. hardyi*, an undescribed species at that time (Vielliard 1989).

Nystalus maculatus striatipectus: the subspecies that occur in Cáceres is the nomenclotypical one. This was a nomenclatural mistake of Tubelis & Tomas (2003).

Tolmomyias assimilis: a scarce species in the region accordingly to Forrester (1993).

Inezia subflava: an uncertain record of this species for Porto Limão was presented by Willis & Oniki (1990).

Serpophaga subcristata: an accidental species in the region accordingly to Forrester (1993).

Myiozetetes similis: recorded by Forrester (1993), this species seems to be extremely rare in Mato Grosso, where the similar looking *M. cayanaensis* is ubiquitous (Tubelis & Tomas 2003, Antas & Palo-Jr. 2009).

Cantorchilus guarayanus: recorded by Forrester (1993), it is probably a misinterpretation of the data presented by Lima (1920) and cited by Naumburg (1930). Lima (1920) commented on some specimens collected in Cáceres and Corumbá, without clearly pointing the exact locality in which each specimen was collected. Naumburg (1930) correctly pointed that the *C. guarayanus* specimens cited were collected in “Corumbá or São Luiz de Cáceres”. Forrester (1993), who probably did not check the original source, inadvertently assumed that these specimens were from Cáceres, when it is known that they came from Corumbá (Pinto 1944). There is a poor quality photograph attributed to the species in Wikiaves (WA 1666170), but that do not allow a safe identification of the species.