

BIRDS FROM FOUR LITTLE-KNOWN PROTECTED AREAS IN THE STATE OF SÃO PAULO, SOUTHEASTERN BRAZIL¹

AVES DE QUATRO UNIDADES DE CONSERVAÇÃO POUCO CONHECIDAS DO ESTADO DE SÃO PAULO, SUDESTE DO BRASIL¹

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ABSTRACT - An increasing number of ornithological studies has been carried out in recent decades in Integral Protected Areas (IPA) in the state of São Paulo, Southeastern Brazil, mostly concentrated within Eastern native habitats. However, in inland São Paulo, IPA are smaller, surrounded by fragmented landscapes and poorly covered by recent ornithological studies. We aimed to carry out rapid ornithological inventories in four IPA in inland São Paulo to characterize their avifauna and to make these IPA better-known, encouraging future scientific research. We visited IPA in the municipalities of Andradina, Marília, Paulo de Faria and São Simão. We used 10-species lists conducted during 1 - 3 days in each location, from September 2021 to January 2022. Overall, we recorded 278 species, of which five are endemic to the Cerrado, one to the Atlantic Forest, and five are threatened in the State. Past records from the same areas and adjacent regions indicate a total species richness of 358 species, with five of those being endemic to the Cerrado, nine to the Atlantic Forest, and 26 threatened in São Paulo. Such results demonstrate the importance of these IPA for maintaining bird species in natural environments of inland regions. They also suggest that the detection of species of conservation interests require a greater effort, or that such individuals may have been undetected in these locations. Our database can be used for future comparisons of the regional avifauna.

Keywords: Biological reserve; Ecological station; Protected habitats; Santa Maria.

RESUMO – Um número crescente de estudos ornitológicos tem sido desenvolvido nas últimas décadas em Unidades de Proteção Integral (UPI) do estado de São Paulo, mas estão concentrados em ambientes nativos da região leste. As UPI do interior paulista, no entanto, são menores, cercadas por paisagem fragmentada e pouco contempladas de forma abrangente por estudos ornitológicos recentes. Deste modo, nosso objetivo foi realizar inventários ornitológicos rápidos em quatro UPI do interior do estado de São Paulo para caracterizar suas avifaunas e divulgar estas importantes áreas protegidas, incentivando futuras pesquisas científicas. Foram visitadas UPI localizadas nos municípios de Andradina, Marília, Paulo de Faria e São Simão, e utilizadas listas de 10 espécies, conduzidas durante até três dias em cada localidade, entre setembro de 2021 e janeiro de 2022. Foram registradas 278 espécies no total, sendo cinco endêmicas do Cerrado, uma da Mata Atlântica e cinco ameaçadas de extinção no estado. Registros pretéritos das mesmas áreas e regiões adjacentes indicaram riqueza total de 358 espécies, sendo as mesmas cinco endêmicas do Cerrado, nove da Mata Atlântica e 26 ameaçadas de extinção em São Paulo. Tais resultados demonstram a importância destas UPI para a manutenção da riqueza de aves dos ambientes naturais do interior paulista. No entanto, também sugerem que as detecções de espécies de interesse conservacionista podem demandar maior esforço amostral, ou mesmo que tais espécies possuem populações de difícil detecção nestes locais. A base de dados do presente estudo poderá ser utilizada em futuras comparações sobre as avifaunas destas regiões.

Palavras-chave: Áreas protegidas; Estação Ecológica; Reserva Biológica; Santa Maria.

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1 INTRODUCTION

The state of São Paulo has ornithological records dating from the 1500s onwards, with the arrival of European explorers, but the greatest production of technical data on its avifauna began in 1808, with the participation of foreign naturalists (Pelzeln, 1868; Pinto, 1979; Willis and Oniki, 2003). Between the end of the 19th and the beginning of the 20th century, naturalists from Museu Paulista (currently Museu de Zoologia da Universidade de São Paulo) and collaborators from different regions, such as H. Pinder, R Krone, O. Dreher, A. Hempel, J. L. Lima (father and son), E. Garbe, E. Dente, A. Olalla, H. F. A. Camargo and O. M. O. Pinto, among others, began ornithological explorations (Pinto, 1945, 1979; Camargo, 1998; Grola, 2012). In recent decades, the production of ornithological knowledge in São Paulo has been expanded by ornithologists from universities, research institutes, as well as by the popularization of birdwatching, via online platforms, generating historical and current knowledge of 803 bird species in São Paulo (Willis and Oniki, 2003; Silveira and Uezu, 2011).

Naturalists and researchers covered much of São Paulo's territory during the early 1900s, but the rapid degradation of inland natural environments by human colonization and coffee monoculture directly and negatively reflected the current number and size of the current Integral Protected Areas (IPA) (Dean, 1997; Victor et al., 2005; Project Mapbiomas, 2020). As a result, recurrent ornithological studies started covering large natural areas in Eastern São Paulo (located in less suitable topographies for human occupation), such as Serra do Mar and Serra da Mantiqueira (Camargo, 1946; Pinto, 1978; Willis and Oniki, 2003). Consequently, the Eastern region of São Paulo presented a greater number of studied and inventoried locations regarding their avifauna, while inland areas, whether protected or not, were less visited for the same purposes (Willis and

Oniki, 2003; Hasui et al., 2018; Rodrigues et al., 2019).

For several years, researchers have systematically studied bird communities in few locations in inland São Paulo, such as a fragment in Rio Claro (Willis and Oniki, 2002) or in Itirapina Ecological Station (Motta-Junior et al., 2008; Willis, 2004). Others have compared historical and recent records, such as in the Caetetus Ecological Station (Cavarzere et al., 2009) and the Ipanema National Forest (Cavarzere et al., 2017). Other locations with published records represent sporadic or one-year-cycle studies (Dias, 2000; Pozza and Pires, 2003; Develey et al., 2006; Lucindo et al., 2015; Sementili-Cardoso et al., 2019; Prist et al., 2021) or locations inventoried for specific purposes (Gomes et al., 2018). There has also been a joint effort to initially characterize the bird communities of 14 IPA in São Paulo (Antunes et al., 2016). However, many areas, including IPA, remain with no basic ornithological data, or with dispersed, overlooked information, preventing their use in management and conservation actions (Silveira et al., 2010).

Based on this scenario, we organized and evaluated the information from different sources. We further produced new field data on the bird community of four IPA in inland São Paulo and their respective municipalities. Our main objective was to evaluate the knowledge available for little-known IPA in inland São Paulo and to make the data available for management, ecotourism, environmental education, and conservation actions.

2 MATERIAL AND METHODS

2.1 Study areas

This study included four IPA and their respective municipalities located in inland São Paulo (Figure 1).

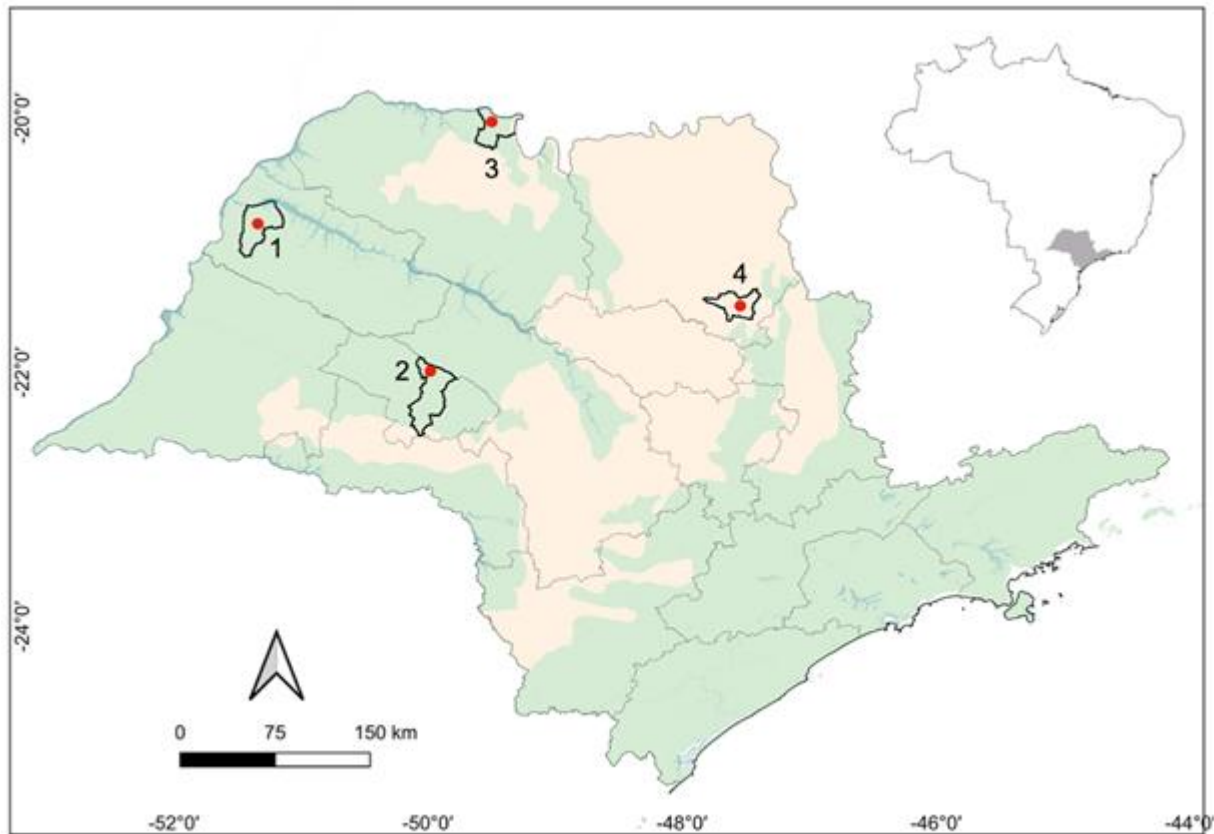


Figure 1. State of São Paulo, Southeastern Brazil, with the mesoregions and municipalities of inventoried localities: 1) Andradina - Andradina Biological Reserve, mesoregion of Araçatuba; 2) Marília - Marília Ecological Station, mesoregion of Marília; 3) Paulo de Faria - Paulo de Faria Ecological Station, mesoregion of São José do Rio Preto; 4) São Simão - Santa Maria Ecological Station, mesoregion of Ribeirão Preto. Red dots indicate the location of Integral Protected Areas. Green shadings correspond to the Atlantic Forest, and orange shadings correspond to the Cerrado.

Figura 1. Estado de São Paulo, sudeste do Brasil, com indicação das mesorregiões e municípios das localidades inventariadas: 1) Andradina - Reserva Biológica de Andradina, mesorregião de Araçatuba; 2) Marília - Estação Ecológica de Marília, mesorregião de Marília; 3) Paulo de Faria - Estação Ecológica de Paulo de Faria, mesorregião de São José do Rio Preto; 4) São Simão - Estação Ecológica de Santa Maria, mesorregião de Ribeirão Preto. Os pontos vermelhos indicam a localização das Unidades de Proteção Integral. Áreas em verde correspondem ao domínio da Mata Atlântica, e em laranja, ao domínio do Cerrado.

2.1.1 Andradina Biological Reserve

Located in the municipality of Andradina, with 168 ha, it was created on December 17, 1985. It is inserted within the Seasonal Semideciduous Forest, with areas in advanced stage of regeneration (Oliveira, 2009), in addition to anthropic areas, such as pastures and monocultures. According to Köppen's climate classification, Andradina Biological Reserve is Aw, tropical with dry winters (Alvares et al., 2013). Field sampling was carried out in two days with total duration of 16 h, covering all the boundaries of the IPA, as well as short trails in the forest fragment, totaling 23 km (Table 1).

2.1.2 Marília Ecological Station

Located in the municipality of Marília, with 607 ha, it was created on December 28, 2010. It is inserted within Montane Seasonal Semideciduous Forest (in interfluvial areas) and Alluvial Seasonal Semideciduous Forest along water courses. Montane forests occupy 167 ha (28%), with different stages of regeneration, while alluvial forests occupy 76 ha (13%), on the banks of the Tibiriçá River, with different heights and densities along the river. Pioneer formations comprise 100 ha (17%) of the Ecological Station and reforestation totals 136 ha (22%). Other environments constitute different types of vegetation, including degraded areas (Ivanauskas

et al., 2017). Compared to mappings from the 1970s, native vegetation has expanded, accounting for 66% of the IPA, although the exotic reforestation area has remained constant (Ivanauskas et al., 2017). A total of 302 species of vascular flora, 25 of which are exotic, have been reported (Ivanauskas et al., 2017). According to Köppen's climate classification, Marília Ecological Station is Cfa, humid subtropical with hot summers (Alvares et al., 2013). In Marília, the average annual precipitation is 1,428 mm, with a 23.5° C average temperature, ranging from 17.3° to 29.5° C (Cepagri, 2014 apud Ivanauskas et al., 2017). Areas on both sides of the BR-153 highway were visited along two days (8 h per day), covering the existing roads on the IPA limits, totaling 4 km (Table 1).

2.1.3 Paulo de Faria Ecological Station

Located in the municipality of Paulo de Faria, on the banks of the Grande River, in front of Água Vermelha Reservoir, on the border of the states of São Paulo and Minas Gerais, with 435.73 ha, it is the first Ecological Station created in São Paulo, established on September 23, 1981. It is inserted within Seasonal Semideciduous Forest, with 201 plant species (Stranghetti and Ranga, 1998). Climate has two seasons, a dry season from April to September (average rainfall of 167 mm), and a rainy season from October to March (average 978 mm). According to Köppen's climate classification, it is considered Aw, tropical with

dry winters (Alvares et al., 2013). Field sampling was carried out in four days totaling 16 h, covering 23 km from the Eastern and Western limits of the Ecological Station, as well as the trail that crosses it; the left bank of the Água Vermelha Reservoir was also visited, at 19°55'1.25"S and 49°32'0.44"W (Table 1).

2.1.4 Santa Maria Ecological Station

Located in the municipality of São Simão, with 1,300 ha, it was created on January 13, 2010. It is inserted within Cerrado, and the predominant vegetation occupies 510 ha of the Ecological Station, represented by cerradão woodlot, cerrado stricto sensu and campo sujo. Another 308 ha of native vegetation (totaling the 818 ha of native vegetation of this IPA) are represented by Alluvial, Deciduous and Semideciduous Seasonal Forests, in addition to other areas with pioneer formations and exotic vegetation (Antunes et al., 2016). According to Köppen's climate classification, it is considered Cwa, humid subtropical with dry winters and hot summers (Alvares et al., 2013). Field sampling was carried out in two days totaling 8 h, covering existing roads, as well as some trails, for a total of 5 km (Table 1).

3. RESULTS AND DISCUSSION

We recorded 233 species (four of those were classified only to genus level) of terrestrial vertebrates for the ASF (Figure 3).

Table 1. Locations (indicated chronologically by dates of visits) and coordinates, visit dates and sources of bird records from four protected areas in inland São Paulo State. Numbers correspond to localities in Figures 2-5.

Tabela 1. Localidades (indicadas em ordem cronológica de visitas) e coordenadas, datas de visitas e as fontes dos registros de aves de quatro unidades de conservação do interior do estado de São Paulo. Os números correspondem as localidades das Figuras 2-5.

| # | Locality | Date | Source | Latitude S | Longitude W |
|---|--|--------------------------|-------------------------|--------------|--------------|
| 1 | REBIO Andradina | May 2008 - April 2009 | Oliveira (2009) | - | - |
| 2 | Andradina-listas históricas | September 2021 | eBird | 20°51'30,51" | 51°21'42,98" |
| 3 | Rodovia Marechal Rondon, Andradina BR-SP | September 2021 | eBird | 20°51'41.84" | 51°25'31" |
| 4 | REBIO Andradina | September 13 and 14 2021 | This study | 20°49'45.07" | 51°20'24.54" |
| 5 | REBIO Andradina | September 13 and 14 2021 | This study | 20°50'0.01" | 51°20'1.66" |
| 6 | Brejo do rio Tibiriçá | October 1982 | Willis and Oniki (2003) | 22°5'0" | 49°53'0" |

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| # | Locality | Date | Source | Latitude S | Longitude W |
|----|--|---|-------------------------|--------------|--------------|
| 7 | Fazenda Santa Terezinha | January 1984 | Willis and Oniki (2003) | 22°6'0" | 49°58'0" |
| 8 | Marília | January 1986 | Silva e Silva (1996) | 22°13' | 49°56' |
| 9 | Marília-área urbana | October 2000 and February 2002 | eBird | 22°13'9.56" | 49°56'53.61" |
| 10 | Distrito de Dirceu | July 2007 | Xeno-canto | 22°8'21.1" | 49°54'51.86" |
| 11 | - | September 2018 | Xeno-canto | 22°14'57.48" | 49°57'58.68" |
| 12 | Mini Pantanal de Marília | October 2021 | eBird | 22°8'31.11" | 49°54'38.91" |
| 13 | 17560-000, Marília BR-SP | October and November 2021 | eBird | 22°14'17.13" | 49°52'18.2" |
| 14 | E.Ec. Marília | January 2 and 3 2022 | This study | 22°0'59.53" | 49°55'30.67" |
| 15 | E.Ec. Marília | January 2 and 3 2022 | This study | 22°0'58.3" | 49°53'51.12" |
| 16 | Cidade | Not informed | Willis and Oniki (2003) | 22°13'0" | 49°57'0" |
| 17 | E.Ec. Marília | January 22 - 24 2013 | Antunes et al. (2016) | 22°0'59.53" | 49°55'30.67" |
| 18 | E.Ec. Paulo de Faria | 1979 - 2004 | São Paulo (not dated) | - | - |
| 19 | Cidade | September 1984 | Willis and Oniki (2003) | 20°2'0" | 49°24'0" |
| 20 | Ilha do Marimbondo | September 1984; October 1987 | Willis and Oniki (2003) | 20°0'0" | 49°16'0" |
| 21 | E.Ec. Paulo de Faria | September 1984; October 1987 and 1996 | Willis and Oniki (2003) | 19°57'27.1" | 49°31'51.23" |
| 22 | Mata particular | September 1984 | Willis and Oniki (2003) | 19°59'0" | 49°33'0" |
| 23 | Reserva Estadual Paulo de Faria | 1987 | Hasui et al. (2018) | 19°56'0" | 49°32'0" |
| 24 | E.Ec. Paulo de Faria | December 1994; September and October 2020; July and December 2021 | eBird | 19°56'54.45" | 49°31'21.85" |
| 25 | Paulo de Faria-área geral | April 2018 | eBird | 20°1'55.87" | 49°23'52.73" |
| 26 | Paulo de Faria-Prainha (Balsa) | April 2018; December 2021 | eBird | 19°59'30.15" | 49°25'37.85" |
| 27 | Paulo de Faria-Fazenda Tangará | September 2018 | eBird | 19°59'38.94" | 49°18'20.3" |
| 28 | Paulo de Faria-Fazenda Tangará - Fragmento de mata | September 2018 | eBird | 19°59'31.02" | 49°19'42.5" |
| 29 | 15490, Paulo de Faria BR-SP | March 2020 | eBird | 19°56'7.57" | 49°34'54.71" |
| 30 | 15490, Paulo de Faria BR-SP | September 2020 | eBird | 19°55'45.93" | 49°35'0.9" |
| 31 | 15490, Paulo de Faria BR-SP | September 2020 | eBird | 19°59'4.45" | 49°19'47.61" |
| 32 | 15490, Paulo de Faria BR-SP | September 2020 | eBird | 19°59'49.26" | 49°17'11.07" |
| 33 | Represa Água Vermelha, Paulo de Faria BR-SP | September 2020 | eBird | 19°59'2.81" | 49°19'45.79" |
| 34 | 15490, Paulo de Faria BR-SP | July 2021 | eBird | 20°5'25.68" | 49°18'36.7" |
| 35 | E.Ec. Paulo de Faria | September 14 and 15 2021 and January 3 and 4 2022 | This study | 19°57'27.1" | 49°31'51.23" |
| 36 | E.Ec. Paulo de Faria | September 14 and 15 2021 and January 3 and 4 2022 | This study | 19°55'3.28" | 49°31'58.56" |

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| # | Locality | Date | Source | Latitude S | Longitude W |
|----|--|---|----------------------------|--------------|--------------|
| 37 | E.Ec. Paulo de Faria | Not informed | Hasui et al. (2018) | 19°56'0" | 49°32'0" |
| 38 | Ilha do Marimbondo | Not informed | Hasui et al. (2018) | 20°0'0" | 49°16'0" |
| 39 | Paulo de Faria | Not informed | Hasui et al. (2018) | 19°59'0" | 49°33'0" |
| 40 | Reserva Estadual | Not informed | Hasui et al. (2018) | 19°58'0" | 49°31'0" |
| 41 | Reserva Estadual Paulo de Faria | Not informed | Hasui et al. (2018) | 19°56'0" | 49°32'0" |
| 42 | - | Not informed | Hasui et al. (2018) | 20°6'0" | 49°32'0" |
| 43 | Fazenda Aretuzina | October 1998 | Willis (2002) | 21°26'0" | 47°35'0" |
| 44 | São Simão-área geral | October and November 2014, 2015 and 2016; November 2017; February, May, June and October 2018; March 2019 | eBird | 21°28'44" | 47°33'3" |
| 45 | São Simão-Cerradão do Assentamento Mario Covas | March 2020 | eBird | 21°25'41.24" | 47°35'46.74" |
| 46 | São Simão-Cerradão do Urubitinga | March 2020 | eBird | 21°30'38.66" | 47°26'45.07" |
| 47 | E.Ec. Santa Maria | January 6 and 7 2022 | This study | 21°24'4.31" | 47°36'15.17" |
| 48 | E.Ec. Santa Maria | January 6 and 7 2022 | This study | 21°23'59.95" | 47°37'38.27" |
| 49 | E.Ec. Santa Maria | January 6 and 7 2022 | This study | 21°22'17.16" | 47°38'39.48" |
| 50 | "Cerradão" | Not informed | Willis and Oniki (2003) | 21°25'0" | 47°36'0" |
| 51 | Estação Ferroviária Sucuri | Not informed | Willis and Oniki (2003) | 21°31'0" | 47°31'0" |
| 52 | Fazenda Aretuzina | Not informed | Willis and Oniki (2003) | 21°26'0" | 47°35'0" |
| 53 | Cerradão | Not informed | Hasui et al. (2018) | 21°25'0" | 47°36'0" |
| 54 | - | Not informed | Hasui et al. (2018) | 21°28'0" | 47°33'0" |
| 55 | E.Ec. Santa Maria | May 4 - 7 2015 | Antunes et al. (2016) | - | - |

2.2 Field data

We used 10-species lists, in which 10 species are annotated in sequence, without repetition, while observers walk along transects. Species that have already been detected can only be enrolled again in subsequent lists. Thus, sampling effort is given as the number of accumulated lists (Ribon, 2010). We also determined List Frequency Indexes (IFL, in Portuguese) for each species per locality, dividing the number of times each species was detected per location by the total number of lists accumulated in that location (Ribon, 2010). We started observations about 15 min before sunrise, and birds were visually identified with binoculars, and aurally. Inventories were carried out from September 14, 2021 to January 7, 2022, totaling 10 days and 40 h. The authors VC and FS conducted inventories within IPA between 2021 and 2022 (Table 1), while TVVC qualitatively collected

information over 10 years (2009 - 2019) within the municipality of Marília.

2.3 Secondary data

Secondary data were obtained by reviewing articles, books, book chapters, as well as technical documents. We used databases such as Directory of Open Access Journals – DOAJ, Google Scholar, Scielo, Scopus, JSTOR and Web of Knowledge, with combinations of words: birds, avifauna (both Portuguese and English), Andradina, Marília, Paulo de Faria, Santa Maria, and São Simão. We also consulted, until July 19, 2022, data available on online platforms such as eBird (www.ebird.org), iNaturalist (<https://www.inaturalist.org>), Global Biodiversity Information Facility – GBIF (<https://www.gbif.org>), and WikiAves

(www.wikiaves.com.br), and Xeno-Canto (www.xeno-canto.org).

2.4 Analyses

For taxonomy and phylogenetic sequences of bird species, recommendations of the Brazilian Committee of Ornithological Records (Pacheco et al., 2021) were followed. Species were classified as Cerrado (Silva, 1995) or Atlantic Forest (Vale et al., 2018) endemics. For threat levels we consulted red lists at state (São Paulo, 2018), national (Brasil, 2022) and global (IUCN, 2021) levels.

We constructed species accumulation curves in R (R Core Team, 2020), as well as calculated Chao2 non-parametric species estimator, which weighs the presence of rare species (Colwell and Coddington, 1994). We then generated heatmaps based on the number of species by location with QGIS (Qgis Development Team, 2019), with a 0.02° resolution.

3 RESULTS AND DISCUSSION

We found eight studies on birds that included the localities of interest, five of which were published (Silva e Silva, 1996; Willis, 2002; Willis and Oniki, 2003; Antunes et al., 2016; Hasui et al., 2018) and the remainder corresponded to management plans (São Paulo, not dated) or an unpublished thesis (Oliveira, 2009) developed within IPA. Of all records, we determined that 10 species corresponded to misidentification because they resemble species whose distribution is not congruent with the study areas. Such species, *Penelope obscura* Temminck, 1815, *Patagioenas plumbea* (Vieillot, 1818), *Aramides saracura* (Spix, 1825), *Himantopus mexicanus* (Statius Muller, 1776), *Picumnus cirratus* Temminck, 1825, *Brotogeris tirica* (Gmelin, 1788), *Anodorhynchus hyacinthinus* (Latham, 1790), *Grallaria varia* (Boddaert, 1783), *Cacicus cela* (Linnaeus, 1758) e *Coryphospingus pileatus* (Wied, 1821), therefore, were not included in this compendium as they deserve attention regarding their proper documentation.

Based on these studies and on ornithological platforms data, we determined that the four IPA and their respective municipalities have 358 bird species (26 orders and 65 families), five of which are endemic to the Cerrado (Silva, 1995) and nine, to the Atlantic Forest (Vale et al., 2018). This total corresponds to 45% of all bird species in the state of São Paulo (Silveira and Uezu, 2011). Of these, 25 are threatened according to the state red list, being *Coryphaspiza melanotis* (Temminck, 1822)

extinct in São Paulo. At the national level, two species are Endangered and another three are Vulnerable; at the global level, one species is Endangered and three are Vulnerable (Appendix 1).

Considering only IPA, our primary data resulted in 278 species (25 orders and 61 families), five of which are endemic to the Cerrado, four to the Atlantic Forest, and 16 threatened with extinction at the state level, four of which are Critically Endangered, two Endangered, and 10 Vulnerable (Appendix 1). For secondary data, 354 species were detected within IPA. Species recorded in municipalities and outside IPA were 316 (25 orders and 64 families), sharing the five Cerrado endemics and another six species endemic to the Atlantic Forest. There were 23 threatened species in São Paulo, six of them Critically Endangered, five Endangered, and 11 Vulnerable. One Regionally Extinct species was recorded only outside IPA. Species exclusively recorded within IPA accounted for 11% (38), while those exclusively recorded outside IPA totaled 76 (21%). All Cerrado endemic species had records inside and outside IPA, while five of the nine Atlantic Forest endemic species were only recorded outside them. Four out of the eight Critically Endangered species, two out of the five Endangered species, and 10 out of the 12 Vulnerable species in São Paulo, are found within IPA (Appendix 1).

3.1 Andradina

Andradina Biological Reserve was first inventoried between May 2008 and April 2009, when 100 species were recorded in 192 hours of observations (Oliveira, 2009). Our records (26 lists) detected 103 species (39 exclusive), of which 64 were common to both studies. Overall, this Biological Reserve had 139 species. Of these, *Antilophia galeata* (Lichtenstein, 1823) is the only endemic species (Cerrado) in the area. Three species are Vulnerable, and one of them, *Ara ararauna* (Linnaeus, 1758), was only recorded during the first inventory at the site. The same species was recorded by us, however, in an urban area of the municipality (Appendix 1). Notably, this locality does not have Atlantic Forest endemic species, since it is located less than 50 km Northeast of Valparaíso, where, in the 1950s, dozens of endemic species were collected (Pinto, 1978). Possibly, the de-characterization of the vegetation has resulted in the loss of such species over time (Ribon et al., 2003).

The other areas visited within Andradina had 80 species, none of these are endemic, one

Endangered and two Vulnerable. Because WikiAves platform, which contributed with 79 species, does not provide coordinates, only the records from the eBird platform could be inserted into the map of records of the municipality. Such records refer to two locations, each with one species (Figure 2A). The heatmap shows greater

species richness within the Biological Reserve due to the greater sampling effort accumulated therein (Figure 2B). In this case, although little studied, Andradina Biological Reserve has greater information compared to the other localities visited in the municipality.

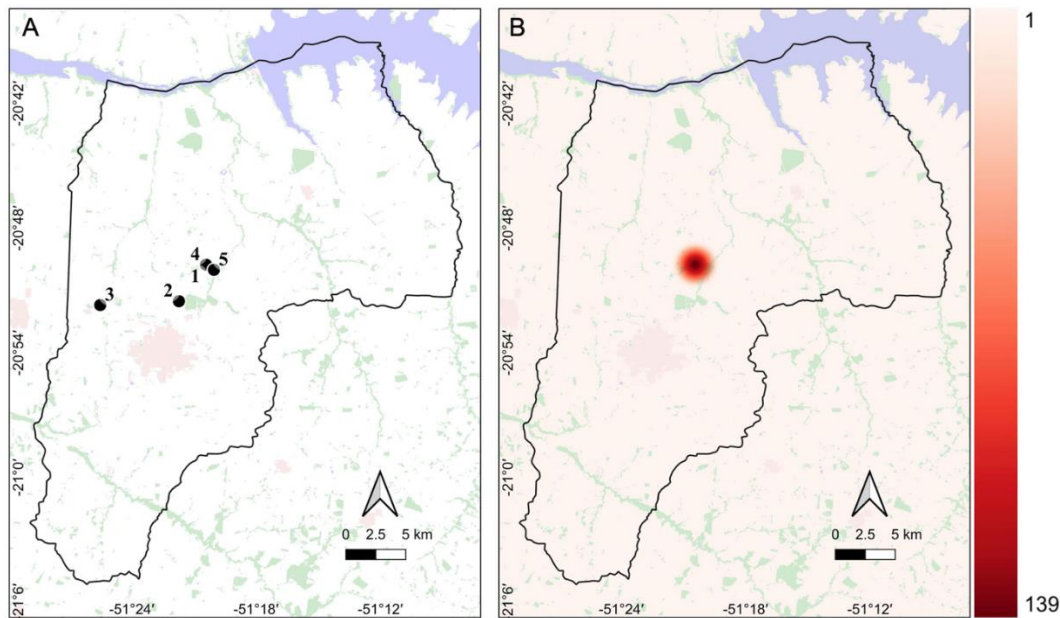


Figure 2. A) Localities where bird inventories were carried out in the municipality of Andradina, inland São Paulo State. B) Heatmap indicating the inventoried localities with the highest and lowest bird species richness in Andradina.

Figura 2. A) Localidades onde foram realizados inventários de aves no município de Andradina, interior do estado de São Paulo. B) Mapa de calor indicando os pontos amostrados com maiores e menores valores de riqueza de espécies de aves em Andradina.

3.2 Marília

Marília Ecological Station has been previously inventoried (Antunes et al., 2016). In that study, the authors recorded 143 species. In 10 lists, we recorded 102 species (16 exclusive), of which 86 were common to both studies. Overall, Marília Ecological Station had 159 species. Of these, *Cyanocorax cristatellus* (Temminck, 1823) is endemic to the Cerrado, and two species are endemic to the Atlantic Forest. One Vulnerable species, *Primolius maracana* (Vieillot, 1816), was only recorded during the first inventory at the site (Appendix 1). The most important population of this parrot is located approximately 50 km to the Southeast, in Caetetus Ecological Station (Nunes and Galetti, 2007). Within the same mesoregion, Caetetus is a well-preserved forest remnant, subject to earlier (Willis and Oniki, 1981;

Cavarzere et al., 2009), although with few, recent studies (Christianini, 2018).

The remaining areas visited within Marília had 236 species, three of which are endemic to the Cerrado and one to the Atlantic Forest; there were two Vulnerable species. WikiAves platform, which contributed with 230 species, does not provide coordinates. Therefore, the records of the eBird (128 species) and Xeno-canto (14 species) platforms, as well as other sources, included another nine localities, which could be inserted in the municipality map of records (Figure 3A). The heatmap shows the greatest species richness within Marília Ecological Station, but locations numbers 9, 11 and 13 stood out regarding their species richness (Figure 3B). Marília Ecological Station showed greater knowledge compared to the other localities visited within the municipality.

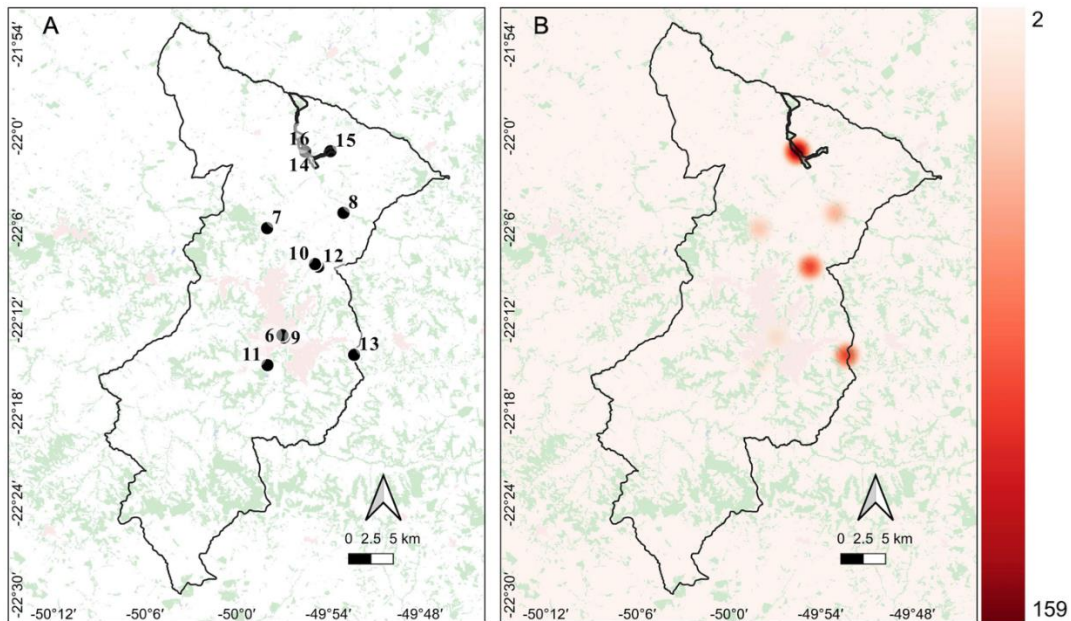


Figure 3. A) Localities where bird inventories were carried out in the municipality of Marília. B) Heatmap indicating inventoried localities with the highest and lowest bird species richness in Marília.

Figura 3. A) Localidades onde foram realizados inventários de aves no município de Marília. B) Mapa de calor indicando os pontos amostrados com maiores e menores valores de riqueza de espécies de aves em Marília.

3.3 Paulo de Faria

Paulo de Faria Ecological Station was mentioned in three references (Willis and Oniki, 2003; Hasui et al., 2018; São Paulo, not dated), which reported 1, 68 and 199 species, respectively. In 17 lists, we recorded 112 species (five unique). Overall, Paulo de Faria Ecological Station had 230 species. Of these, four species are endemic to the Atlantic Forest. One species, *Crax fasciolata* Spix, 1825, is Vulnerable at the global level, while three are Critically Endangered, two are Endangered and eight are Vulnerable at the state level. Our recent inventories detected only three Vulnerable species (Appendix 1). This Ecological Station still had fewer Atlantic Forest endemic species compared to the nearest well-preserved remnant, situated in the Municipality of Matão, ca. 160 km to the Southeast (Bispo et al., 2011).

During our first visit (September 2021), we witnessed a severe drought that had been lasting for several months, and that may have accounted for less records of birds. Nonetheless, the number of endemic species was higher compared to the other three IPA. We also noticed that the landscape around Paulo de Faria was not composed

exclusively of monocultures and pastures. Indeed, even pastures presented several isolated trees and small forest remnants (Vagner Cavarzere, personal communication), which may be associated with the percentage of forest cover necessary to minimize the effects of fragmentation on different spatial scales (Bhakti et al., 2018; Morante-Filho et al., 2021).

The remaining areas visited in Paulo de Faria had 207 species, one endemic to the Atlantic Forest, and one globally Critically Endangered species, in addition to three Critically Endangered, three Endangered and nine Vulnerable species in São Paulo. WikiAves platform, which contributed with 51 species, does not provide coordinates. Therefore, the records on the eBird platform (112 species), as well as the other references, added up to another 15 localities, which could be inserted in the municipality map of records (Figure 4A). The heatmap shows the greatest richness within the Paulo de Faria Ecological Station, also highlighting the high species richness on the banks of the Grande River, on the border with Minas Gerais (Figure 4B). Paulo de Faria Ecological Station has greater information compared to the other localities visited.

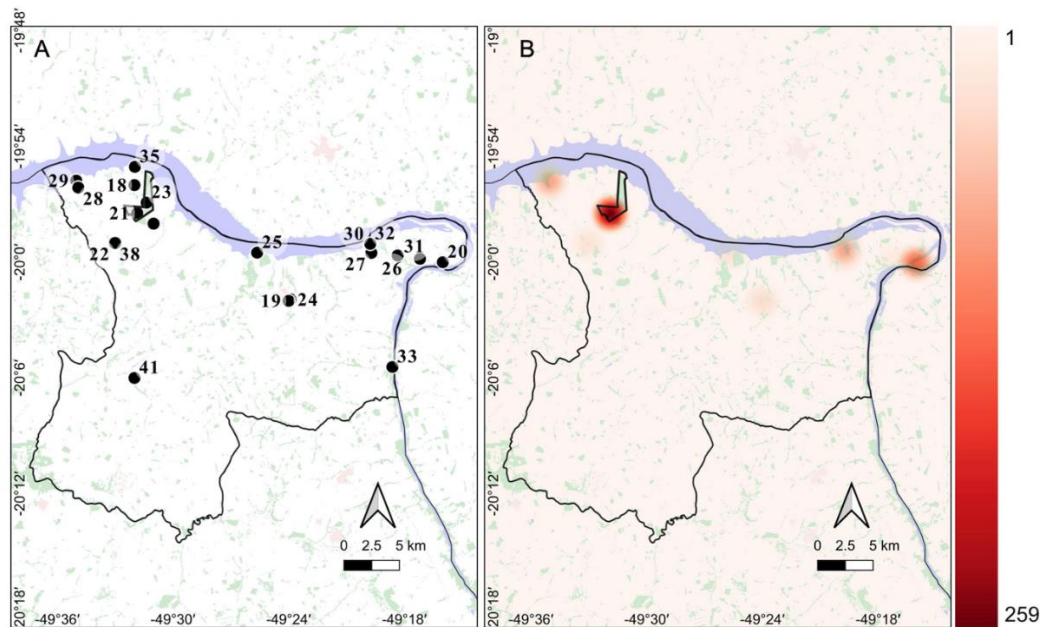


Figure 4. A) Localities where bird inventories were carried out in the municipality of Paulo de Faria. B) Heatmap indicating the inventoried localities with the highest and lowest bird species richness in Paulo de Faria.

Figura 4. A) Localidades onde foram realizados inventários de aves no município de Paulo de Faria. B) Mapa de calor indicando os pontos amostrados com maiores e menores valores de riqueza de espécies de aves em Paulo de Faria.

3.4 São Simão

Santa Maria Ecological Station was initially inventoried in 2015, when 119 species were mentioned (Antunes et al., 2016). In nine lists, we recorded 87 species (22 exclusive). Overall, Santa Maria Ecological Station had 141 species. Of these, five species are endemic to the Cerrado. *Laterallus xenopterus* Conover, 1934 is globally Vulnerable and nationally Endangered, whereas at the state level it is Critically Endangered. The Rufous-faced Crake has few records in the state and was first documented in the Itirapina region (Willis, 2004). It has few other published records, such as in Santa Bárbara Ecological Station (Lucindo et al., 2015). For Santa Maria, there is also a record of *Myiothlypis leucophrys* (Pelzeln, 1868), Vulnerable in São Paulo (Appendix 1), which is limited to the West by the right margin of the Tietê River (Willis and Oniki, 2003). This IPA is the only situated within the Cerrado, and the presence of savanna-endemic species were expected. It also suggests those five species are widely distributed in the municipality, and appropriate habitats are still found inside the Ecological Station. Our recent inventories, however, did not detect those species.

The remaining areas visited in São Simão had 215 species, five of which are endemic to the Cerrado and four to the Atlantic Forest (Willis, 2002; Willis and Oniki, 2003; Hasui et al., 2018). Five species are endemic to the Cerrado and another four to the Atlantic Forest. Two species are threatened, one is Endangered and one is Vulnerable at a global level, and in addition to these, four more species are threatened in Brazil. In São Paulo, three are Critically Endangered, one Endangered and two Vulnerable species. WikiAves platform, which contributed with 178 species, does not provide coordinates. Therefore, the records on the eBird platform (97 species), as well as the other sources, added up to another six localities, which could be inserted in the map of records of the municipality (Figure 5A). The heatmap shows similar species richness values inside and outside Santa Maria Ecological Station (Figure 5B). This suggests that representative remnants of distinct habitats may not be found within the Ecological Station. For example, cerradão woodlots (localities 45, 50 and 53), are all distributed outside this IPA's limits (Willis and Oniki, 2003; Hasui et al., 2018).

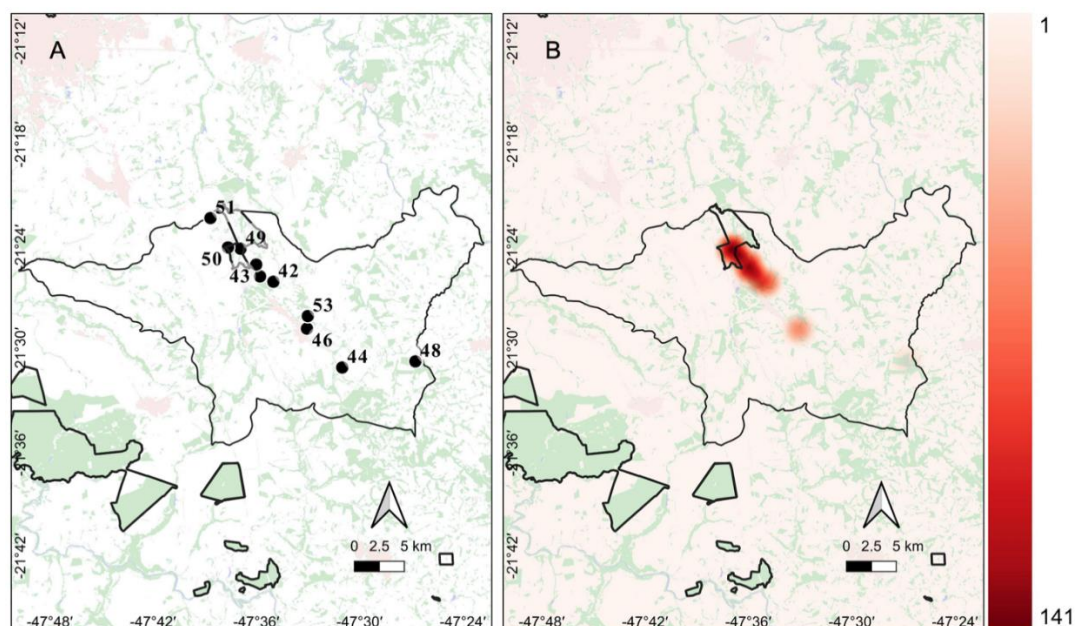


Figure 5. A) Localities where bird inventories were carried out in the municipality of São Simão. B) Heatmap indicating the inventoried localities with the highest and lowest bird species richness in São Simão.

Figura 5. A) Localidades onde foram realizados inventários de aves no município de São Simão. B) Mapa de calor indicando os pontos amostrados com maiores e menores valores de riqueza de espécies de aves em São Simão.

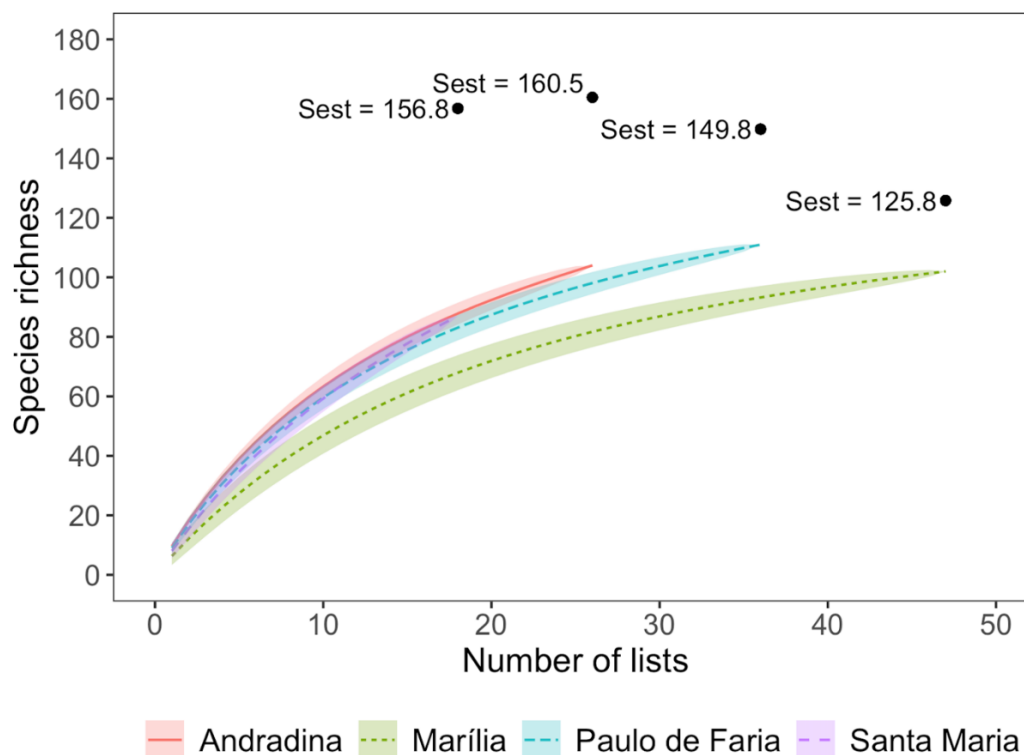


Figure 6. Species accumulation curve of the IPA based on the number of lists. Sest = number of estimated species according to the non-parametric Chao2 estimator. Shades around lines indicate standard deviation intervals.

Figura 6. Curva de acumulação de espécies das UPI amostradas com base em número de listas de espécies. Sest = número de espécies estimado segundo o estimador não paramétrico Chao2. Áreas ao redor das linhas indicam intervalos de desvio padrão.

Although many authors have conducted studies in IPA where the Atlantic Forest has remained partially unchanged due to the Serra do Mar relief, researchers have been less dedicated to the remnants of Midwest and Northeast São Paulo (Bispo et al, 2011; Antunes et al., 2016; Hasui et al., 2018; Rodrigues et al., 2019). Based on our results, it becomes clear why these regions need recent ornithological inventories and monitoring, since little is known about their respective bird communities. Our inventories are the first specifically devoted to address the bird communities of two of the four studied areas. In this context, E. O. Willis and Y. Oniki were the researchers who contributed the most to the ornithological knowledge of inland São Paulo, highlighting this lack of information 40 years ago (Willis and Oniki, 1981, 2003). Little has changed since then.

On the one hand, our results are significant for better characterizing the bird communities of the four IPA we visited. On the other hand, we caution that the bird diversity within those areas may already be considerably lost given we failed to find some endemic or threatened species. Clearly, imperfect detection plays an important role when considering species occupancy (MacKenzie et al., 2002). Even though, when analyzing past records, several Atlantic Forest endemic species were not detected at Andradina, Marília or Paulo de Faria. One can assume that early records in pristine forests might indicate how habitat modification acted in changing forest bird communities. The municipality of Valparaíso is one such place, as mentioned above (Pinto, 1978). Researchers who monitored fragments for decades also documented the loss of species and ecological guilds (Willis, 1979; Antunes, 2005). Furthermore, endemic species still occur in preserved and large forest fragments in inland São Paulo, such as Caetetus Ecological Station, Morro do Diabo State Park and a private forest in the municipality of Matão (Cavarzere et al., 2009; Bispo et al., 2011; Hasui et al., 2018). Once again, E. O. Willis and Y. Oniki were proven right, as they noticed such losses almost half a century ago (Willis and Oniki, 1992).

3.5 Threatened species with current records

Of the 26 species under threat categories in São Paulo, 15 were present within the four IPA, but we only recorded five of them. As the species accumulation curves failed to reach asymptotes, our sampling effort may have been insufficient to record more endangered species. However, one should not rule out the hypothesis that the

populations of such species may be reduced, making their detections less evident. Information on endangered species detected in the field is presented below.

Crypturellus undulatus (Vulnerable). We heard six individuals at Paulo de Faria Ecological Station. Usually, this species is found in riparian forests, and its presence indicates the preservation of this important environment (Sick, 1997). In the state of São Paulo, its main threat is habitat loss, forest fragmentation and hunting (Antunes, 2009a).

Phaetusa simplex (Vulnerable). We observed a small group, with five individuals, foraging and resting in Grande River, in front of Paulo de Faria Ecological Station. This is a typical species of rivers in inland São Paulo, it is threatened due to habitat modification, such as water bodies and beaches where it nests, in addition to the disordered recreational use of the rivers (Schunck, 2009).

Mosana nigrifrons (Vulnerable). We heard two, and about 10 individuals, along forest edges at Andradina Biological Reserve and Paulo de Faria Ecological Station, respectively. It is a typical species of riparian forests in the West and Northwest of São Paulo, threatened by habitat loss and forest fragmentation (Uezu, 2009).

Pteroglossus castanotis (Vulnerable). We heard one individual at Paulo de Faria Ecological Station. This species is found throughout inland São Paulo, but its populations seem to be less noticeable in fragments of the Midwest São Paulo when compared to inland Paraná State (e.g. Quagliato and Cavarzere, 2021). Its main threat is habitat loss and forest fragmentation (Figueiredo, 2009).

Ara ararauna (Vulnerable). We saw a pair flying over the urban area of Andradina. A typical species from inland São Paulo, it has disappeared from many regions in recent decades due to habitat degradation, forest fragmentation and capture for wild animal illegal trade (Antunes, 2009b).

However, recent records from online platforms (WikiAves, eBird) show a wider range than that observed until 2009 (Antunes, 2009b), indicating a possible population recovery of the species, reintroduction of the species in inland São Paulo, or a greater coverage of bird watchers. Such speculations are not mutually exclusive and demand further investigation.

4 CONCLUSIONS

The municipalities had few published bird inventories, and most of the information originated from online ornithological platforms. For one of the four inventoried IPA, we gathered as much

information from inside as from outside its boundaries and, generally, all of them remain with incipient information about their bird communities. Within IPA, we recently failed to detect 10 endangered species that had been recorded in the past. Thus, we reinforce the need to monitor these IPA, which represent the last fragments of preserved native vegetation in their respective municipalities.

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Appendix 1. List of bird species recorded in four municipalities of interior São Paulo state, Southeastern Brazil. MA = Atlantic Forest endemic species, CE = Cerrado endemic species. Species are classified according to state (SP), country (BR) and global (IUCN) threat. VU = vulnerable, EN = endangered, CR = critically endangered, RE = regionally extinct. Ornithological platforms: A = eBird, B = WikiAves, C = Xeno-canto. References: 1 = Willis (2002); 2 = Willis and Oniki (2003) – m: museum record, c: authors' own record, lit: literature until 1990; 3 = Oliveira (2009); 4 = Antunes (2018a); 5 = Hasui et al. (2018) – m: museum record, lit: literature record until 2017, obs: ornithologists' record; 6 = São Paulo (2019); 7 = this study – s: September 2021, j: January 2022; P = management plan (not dated).

Apêndice 1. Lista de espécies de aves registradas em quatro municípios do interior do estado de São Paulo, sudeste do Brasil. MA = espécie endêmica da Mata Atlântica, CE = espécie endêmica do Cerrado. As espécies estão classificadas de acordo com ameaças em nível de estado (SP), país (BR) e global (IUCN). VU = vulnerável, EN = em perigo, CR = criticamente em perigo, RE = regionalmente extinto. Plataformas ornitológicas: A = eBird, B = WikiAves, C = Xeno-canto. Referências: 1 = Willis (2002); 2 = Willis e Oniki (2003) – m: registro de museus, c: registro dos próprios autores, lit: literatura até 1990; 3 = Oliveira (2009); 4 = Antunes (2018a); 5 = Hasui et al. (2018) – m: registro de museus, lit: registro proveniente da literatura até 2017, obs: registros de ornitólogos; 6 = São Paulo (2019); 7 = este estudo – s: setembro de 2021, j: janeiro de 2022; P = plano de manejo (sem data).

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|---|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| Rheiformes | | | | | | | | |
| Rheidae | | | | | | | | |
| <i>Rhea americana</i> (Linnaeus, 1758) ^{SP(CR)} | | | | A,P | A,B | | | |
| Tinamiformes | | | | | | | | |
| Tinamidae | | | | | | | | |
| <i>Crypturellus undulatus</i> (Temminck, 1815) ^{SP(VU)} | | | | | A,P,2c,7j | A,B,5lit | | B |
| <i>Crypturellus parvirostris</i> (Wagler, 1827) | 7 | | 4,7 | A,B,2c | A,2c,7j | A,B,2c | 6,7 | A,B,2c |
| <i>Crypturellus tataupa</i> (Temminck, 1815) | | | | A,B,C | | A | | |
| <i>Rhynchotus rufescens</i> (Temminck, 1815) | 3 | | 4 | A,B,2c | A,2c | A,2c | | |
| <i>Nothura maculosa</i> (Temminck, 1815) | | | 4 | A,B,C,2c | A,2c | 2c | | |
| Anseriformes | | | | | | | | |
| Anhimidae | | | | | | | | |
| <i>Anhima cornuta</i> (Linnaeus, 1766) | 3 | B | 4,7 | B | | A | | A,B |
| Anatidae | | | | | | | | |
| <i>Dendrocygna viduata</i> (Linnaeus, 1766) | | | 4 | B | P,2c | 2lit | 7 | |

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Continuation – Appendix 1

Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|---|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Dendrocygna autumnalis</i> (Linnaeus, 1758) | 3,7 | B | | A,B | A,2c,7s,7j | A,2c | | |
| <i>Cairina moschata</i> (Linnaeus, 1758) | 3,7 | | 4,7 | A,B | 2c,7j | A,2c | 7 | 2c |
| <i>Sarkidiornis sylvicola</i> Ihering & Ihering, 1907 ^{SP(VU)} | | | | B | 2c | 2c | | |
| <i>Amazonetta brasiliensis</i> (Gmelin, 1789) | | B | 4,7 | A,B,2c | 2c | A,2c | | 2c |
| <i>Nomonyx dominicus</i> (Linnaeus, 1766) | | | | B | | | | |
| <i>Oxyura vittata</i> (Philippi, 1860) | | | | B | | | | |
| Galliformes | | | | | | | | |
| Cracidae | | | | | | | | |
| <i>Penelope superciliaris</i> Temminck, 1815 | | | | B | | | | |
| <i>Crax fasciolata</i> Spix, 1825 ^{SP(CR)} , IUCN (VU) | | | | | P,2c | A,B,5lit | | |
| Podicipediformes | | | | | | | | |
| Podicipedidae | | | | | | | | |
| <i>Tachybaptus dominicus</i> (Linnaeus, 1766) | | | | B | | 2c | | B |
| <i>Podilymbus podiceps</i> (Linnaeus, 1758) | | | | B | | | | |
| Columbiformes | | | | | | | | |
| Columbidae | | | | | | | | |
| <i>Columba livia</i> Gmelin, 1789 | | | | A,B | | A | 6 | B |
| <i>Patagioenas picazuro</i> (Temminck, 1813) | 3,7 | | 4,7 | A,B,2c | A,2c,7s,7j | A,2c | 6,7 | A,B,2c |
| <i>Patagioenas cayennensis</i> (Bonnaterre, 1792) | 7 | | 7 | B | A,P,2c,7s,7j | A,2c | 6,7 | B,2c |
| <i>Leptotila verreauxi</i> Bonaparte, 1855 | 7 | | 4,7 | A,B,2c | A,2c,7s,7j | A,2c | 6,7 | A,B,2c |

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Continuation – Appendix 1

Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|---|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Leptotila rufaxilla</i> (Richard & Bernard, 1792) | 7 | | | | A,P,7s,7j | | 7 | |
| <i>Zenaida auriculata</i> (Des Murs, 1847) | 3,7 | B | 4 | A,B,2c | A,P,2c,7s | A,B,2c,7s | 6,7 | B,2c |
| <i>Claravis pretiosa</i> (Ferrari-Perez, 1886) | | | | | 2c,7j | | | |
| <i>Columbina minuta</i> (Linnaeus, 1766) | 3 | | | | | | | |
| <i>Columbina talpacoti</i> (Temminck, 1811) | 3,7 | B | 4,7 | A,B,2c | A,P,2c,7s,7j | A,2c | 6,7 | A,B |
| <i>Columbina squammata</i> (Lesson, 1831) | 3,7 | | 4,7 | A,B,2c | P,2c,7s,7j | A,B,2c | 6,7 | B,2c |
| <i>Columbina picui</i> (Temminck, 1813) | | | 7 | | | | | |
| Cuculiformes | | | | | | | | |
| Cuculidae | | | | | | | | |
| <i>Guira guira</i> (Gmelin, 1788) | 3,7 | B | 4,7 | A,B,2c | A,P,2c,7s | A,2c | 6 | B,2c |
| <i>Crotophaga ani</i> Linnaeus, 1758 | 3,7 | B | 4,7 | A,B,2c | A,P,2c,7s,7j | 2c | 6,7 | B,2c |
| <i>Tapera naevia</i> (Linnaeus, 1766) | 3,7 | | 4 | B | 2c,7j | A,B,2c | | B,2c |
| <i>Dromococcyx pavoninus</i> Pelzeln, 1870 | | | | B,C | 7s | | | |
| <i>Coccyua minuta</i> (Vieillot, 1817) | | | | | | | | B |
| <i>Micrococcyx cinereus</i> (Vieillot, 1817) | | | | | 2c | 5lit | | |
| <i>Piaya cayana</i> (Linnaeus, 1766) | 3,7 | B | 4,7 | A,B | A,P,2c,7s,7j | A,2c,2m | 6 | A,B,2c |
| <i>Coccyzus melacoryphus</i> Vieillot, 1817 | | | 7 | B | A,2c,7j | | | |
| Nyctibiiformes | | | | | | | | |
| Nyctibiidae | | | | | | | | |
| <i>Nyctibius griseus</i> (Gmelin, 1789) | 7 | | 4 | | 2c | | 7 | B |
| Caprimulgiformes | | | | | | | | |
| Caprimulgidae | | | | | | | | |
| <i>Antrostomus rufus</i> (Boddaert, 1783) | | | | | A,2c,7s | | | 2c |
| <i>Lurocalis semitorquatus</i> (Gmelin, 1789) | | | | | A,2c,7s,7j | | | 2c |
| <i>Nyctidromus albicollis</i> (Gmelin, 1789) | 7 | | 4,7 | B | A,P,2c,7s,7j | B,2c | 7 | B,2c |

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Continuation – Appendix 1

Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|--|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Hydropsalis parvula</i> (Gould, 1837) | 7 | | | | 2c,7s | 2c | | B |
| <i>Hydropsalis maculicaudus</i> (Lawrence, 1862) ^{SP(EN)} | | B | | | | | | |
| <i>Hydropsalis torquata</i> (Gmelin, 1789) | | B | | | | 2c | | |
| <i>Podager nacunda</i> (Vieillot, 1817) | | | 4 | 2c | 2c | 2c | | A,B |
| <i>Chordeiles minor</i> (Forster, 1771) | | | | | 2c | 2c | | |
| Apodiformes | | | | | | | | |
| Apodidae | | | | | | | | |
| <i>Cypseloides fumigatus</i> (Streubel, 1848) | | | | | | | | 2c |
| <i>Streptoprocne zonaris</i> (Shaw, 1796) | | | | A,B | | | | |
| <i>Chaetura meridionalis</i> Hellmayr, 1907 | | | 4,7 | A,B | | | | 2c |
| <i>Tachornis squamata</i> (Cassin, 1853) | | | | B | A | | | B |
| Trochilidae | | | | | | | | |
| <i>Florisuga fusca</i> (Vieillot, 1817) | | | | B | | | | 1,2c |
| <i>Phaethornis pretrei</i> (Lesson & Delattre, 1839) | 7 | | 4,7 | B | 2c,7s | 2c | 6,7 | B,1,2c |
| <i>Colibri serrirostris</i> (Vieillot, 1816) | | | | B | | | | |
| <i>Anthracothorax nigricollis</i> (Vieillot, 1817) | 3 | | 4 | B | 2c | 2c | | 1,2c |
| <i>Heliomaster squamosus</i> (Temminck, 1823) | | | | B | | | 6 | B,1,2c |
| <i>Chlorostilbon lucidus</i> (Shaw, 1812) | 3 | | 4,7 | A,B | | A | 6,7 | A,B,1,2c |
| <i>Eupetomena macroura</i> (Gmelin, 1788) | 3 | B | 7 | A,B | 2c | A | 6,7 | A,B,1,2c |
| <i>Aphantochroa cirrochloris</i> (Vieillot, 1818) | | | | B | | | | |
| <i>Chrysuronia versicolor</i> (Vieillot, 1818) | 7 | | | | | | | |
| <i>Chionomesa fimbriata</i> (Gmelin, 1788) | | | | | 2c | B | | |
| <i>Chionomesa lactea</i> (Lesson, 1832) | | | | B | | | 6,7 | A,B,1,2c |
| <i>Hylocharis chrysura</i> (Shaw, 1812) | 3,7 | | 4,7 | A,B,C | A,2c,7j | A | 7 | A,B,1,2c |

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Continuation – Appendix 1

Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|---|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| Gruiformes | | | | | | | | |
| Aramidae | | | | | | | | |
| <i>Aramus guaraúna</i> (Linnaeus, 1766) | 3,7 | | 4 | B | 2c | A,2c | | B |
| Rallidae | | | | | | | | |
| <i>Porphyrio martinica</i> (Linnaeus, 1766) | | B | 4 | B | | A,2c | | |
| <i>Rufirallus viridis</i> (Statius Muller, 1776) | | | | | 2c | A,2c | | A,B |
| <i>Laterallus melanophaius</i> (Vieillot, 1819) | | | 4 | | 2c | | | |
| <i>Laterallus xenopterus</i> Conover, 1934 ^{SP(CR)} , BR(EN), IUCN(VU) | | | | | | | 6 | |
| <i>Mustelirallus albicollis</i> (Vieillot, 1819) | 7 | | 4,7 | A,B,C | 2c,2m | A,2c | 6 | 2c |
| <i>Pardirallus nigricans</i> (Vieillot, 1819) | 7 | | 4,7 | A,B,2c | 2c | | 6 | |
| <i>Amaurolimnas concolor</i> (Gosse, 1847) | | | | | A | | | |
| <i>Aramides cajaneus</i> (Statius Muller, 1776) | 3,7 | | | A,B | 2c | | 6 | 2c |
| <i>Gallinula galeata</i> (Lichtenstein, 1818) | | | 4 | B | | | | |
| Heliornithidae | | | | | | | | |
| <i>Heliornis fulica</i> (Boddaert, 1783) ^{SP(EN)} | | | | | | 2c,5lit | | |
| Charadriiformes | | | | | | | | |
| Charadriidae | | | | | | | | |
| <i>Pluvialis dominica</i> (Statius Muller, 1776) | | | | | | 2c | | |
| <i>Vanellus chilensis</i> (Molina, 1782) | 3,7 | B | 4,7 | A,B,2c | A,P,2c,7s,7j | A,2c,2m | 6 | A,B,2c |
| <i>Charadrius collaris</i> Vieillot, 1818 | | | | | | 2m | | |
| Recurvirostridae | | | | | | | | |
| <i>Himantopus melanurus</i> Vieillot, 1817 | | | | B | 2c | 2c | | |
| Scolopacidae | | | | | | | | |
| <i>Bartramia longicauda</i> (Bechstein, 1812) ^{SP(VU)} | | | | | | 2c | | |
| <i>Calidris melanotos</i> (Vieillot, 1819) | | | | | | 2c | | |
| <i>Gallinago paraguayiae</i> (Vieillot, 1816) | | | 4 | A,B,2c | 2c | 2c | | |

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Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|---|--------------------|--------------|--------------------|--------------|--------------------|-----------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Tringa solitaria</i> Wilson, 1813 | | | | B | 2c | 2c | | A,B |
| <i>Tringa flavipes</i> (Gmelin, 1789) | | | | B | | 2c | | |
| Jacaniidae | | | | | | | | |
| <i>Jacana jacana</i> (Linnaeus, 1766) | 3,7 | | 4 | A,B,2c | 2c,7j | A,2c | | A,B,2c |
| Laridae | | | | | | | | |
| <i>Rynchops niger</i> Linnaeus, 1758 | | | | | | 2c | | |
| <i>Phaetusa simplex</i> (Gmelin, 1789) ^{SP(VU)} | | | | | 7j | A,2c | | |
| Ciconiiformes | | | | | | | | |
| Ciconiidae | | | | | | | | |
| <i>Ciconia maguari</i> (Gmelin, 1789) ^{SP(VU)} | | | | | | A | | |
| <i>Jabiru mycteria</i> (Lichtenstein, 1819) | 7 | | | | | A,B,2c ,5lit | | A,B |
| <i>Mycteria americana</i> Linnaeus, 1758 | | B | | B | | A,B,2c ,5lit | | B |
| Anhingidae | | | | | | | | |
| <i>Anhinga anhinga</i> (Linnaeus, 1766) | | | | | A,2c | 2c | | |
| Phalacrocoracidae | | | | | | | | |
| <i>Nannopterum brasilianum</i> (Gmelin, 1789) | 3 | | | A,B | A,2c,7j | A,2c | | B |
| Pelecaniformes | | | | | | | | |
| Ardeidae | | | | | | | | |
| <i>Tigrisoma lineatum</i> (Boddaert, 1783) | | | 4 | B | 2c | A,2c | | B,2c |
| <i>Botaurus pinnatus</i> (Wagler, 1829) | | | | | | 2c | | |
| <i>Nycticorax nycticorax</i> (Linnaeus, 1758) | | | | B | | B,2c | | B |
| <i>Butorides striata</i> (Linnaeus, 1758) | 3 | | 4,7 | B,2c | | B,2c | | B,2c |
| <i>Bubulcus ibis</i> (Linnaeus, 1758) | 3 | B | 7 | A,B | 2c | A | 6 | B |
| <i>Ardea cocoi</i> Linnaeus, 1766 | 3 | | 4 | B | A,2c | A,2c | | B,2c |
| <i>Ardea alba</i> Linnaeus, 1758 | 3 | | | A,B | P,2c,7j | A,2c | 6 | B,2c |
| <i>Syrigma sibilatrix</i> (Temminck, 1824) | 3 | B | 4,7 | A,B | 2c,7s | A | | B |
| <i>Egretta thula</i> (Molina, 1782) | | | | A,B | P,2c,7j | A,2c | | |

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Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|--|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| Threskiornithidae | | | | | | | | |
| <i>Mesembrinibis cayennensis</i> (Gmelin, 1789) | 3,7 | | 4 | A,B | | | | B,2c |
| <i>Phimosus infuscatus</i> (Lichtenstein, 1823) | | | 4,7 | A,B | | | | B |
| <i>Theristicus caudatus</i> (Boddaert, 1783) | | | | A,B | 2c,7s,7j | A | 6,7 | A,B |
| <i>Platalea ajaja</i> Linnaeus, 1758 | | | | B | | B,2c | | |
| Cathartiformes | | | | | | | | |
| Cathartidae | | | | | | | | |
| <i>Sarcoramphus papa</i> (Linnaeus, 1758) | | | | B | A,P,2c,5lit | | | B |
| <i>Coragyps atratus</i> (Bechstein, 1793) | 3,7 | B | 4,7 | A,B | A,P,2c,7s,7j | 2c | 6,7 | A,B,2c |
| <i>Cathartes aura</i> (Linnaeus, 1758) | 3 | | 7 | B | | | 6 | A,B |
| Accipitriformes | | | | | | | | |
| Pandionidae | | | | | | | | |
| <i>Pandion haliaetus</i> (Linnaeus, 1758) | | B | | | 7j | B | | |
| Accipitridae | | | | | | | | |
| <i>Gampsonyx swainsonii</i> Vigors, 1825 | | B | | A,B | | | 6 | A,B |
| <i>Elanus leucurus</i> (Vieillot, 1818) | | | | B | 2c | | 6 | B |
| <i>Leptodon cayanensis</i> (Latham, 1790) | | | | A,B | A,2c | | | |
| <i>Elanoides forficatus</i> (Linnaeus, 1758) | | | | B | | B | | |
| <i>Busarellus nigricollis</i> (Latham, 1790) | | | | B | | | | |
| <i>Rostrhamus sociabilis</i> (Vieillot, 1817) | | B | | A,B | 2c | A,2c | | A,B |
| <i>Ictinia plumbea</i> (Gmelin, 1788) | | | 4,7 | A,B | A | A,B | | A,B,2c |
| <i>Hieraspiza superciliosa</i> (Linnaeus, 1766) | 3 | | | | | | | |
| <i>Accipiter striatus</i> Vieillot, 1808 | | | | | | | | B,2c |
| <i>Geranospiza caerulescens</i> (Vieillot, 1817) | 7 | | | B | 2c | | | B |
| <i>Heterospizias meridionalis</i> (Latham, 1790) | | B | | A,B | A,P,2c,7s,7j | A,B,2c | 6,7 | A,B,2c |

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Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|--|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Urubitinga urubitinga</i> (Gmelin, 1788) | | | | A,B | P | | | A,B |
| <i>Urubitinga coronata</i> (Vieillot, 1817) ^{SP(CR)} , BR(EN), IUCN(EN) | | | | | | | | A,B |
| <i>Rupornis magnirostris</i> (Gmelin, 1788) | 3,7 | | 4,7 | A,B | A,2c | A | 6,7 | A,B,2c |
| <i>Geranoaetus albicaudatus</i> (Vieillot, 1816) | 3 | | | B | | B | | A,B |
| <i>Buteo nitidus</i> (Latham, 1790) | | | | | 2c | B,5obs | | |
| <i>Buteo brachyurus</i> Vieillot, 1816 | | | 4 | A,B | | | | A,B |
| Strigiformes | | | | | | | | |
| Tytonidae | | | | | | | | |
| <i>Tyto furcata</i> (Temminck, 1827) | | | 4 | | | | | B |
| Strigidae | | | | | | | | |
| <i>Megascops choliba</i> (Vieillot, 1817) | 3,7 | B | 4 | B | 2c | | 7 | A,B |
| <i>Pulsatrix perspicillata</i> (Latham, 1790) ^{SP(CR)} | | | | | | B | | |
| <i>Pulsatrix koeniswaldiana</i> (Bertoni & Bertoni, 1901) ^{MA} | | | | | | | | B |
| <i>Bubo virginianus</i> (Gmelin, 1788) | | | | | A,7j | B | | B |
| <i>Glaucidium brasilianum</i> (Gmelin, 1788) | 7 | | | | A,2c,7s,7j | A | | B |
| <i>Athene cunicularia</i> (Molina, 1782) | 3 | B | 4 | A,B,2c | A,7s,7j | A | 6 | A,B,2c |
| <i>Aegolius harrisi</i> (Cassin, 1849) | | | | | | B | | |
| <i>Asio clamator</i> (Vieillot, 1808) | | | | B | | | | |
| <i>Asio stygius</i> (Wagler, 1832) | | | | | | | | B |
| Trogoniformes | | | | | | | | |
| Trogonidae | | | | | | | | |
| <i>Trogon surrucura</i> Vieillot, 1817 | | | | | A,2c | | | |
| Coraciiformes | | | | | | | | |
| Momotidae | | | | | | | | |
| <i>Baryphthengus ruficapillus</i> (Vieillot, 1818) ^{MA} | | | 4 | | A | | | |

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Continuation – Appendix 1

Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|---|--------------------|--------------|--------------------|--------------|--------------------|----------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Momotus momota</i> (Linnaeus, 1766) | 7 | | 7 | | A,2c,7j | A | | |
| Alcedinidae | | | | | | | | |
| <i>Megaceryle torquata</i> (Linnaeus, 1766) | 3,7 | | 4 | B | A,2c,7j | 2c | | B |
| <i>Chloroceryle amazona</i> (Latham, 1790) | 3 | | | B | P,2c | A,2c | | 2c |
| <i>Chloroceryle americana</i> (Gmelin, 1788) | | | 4 | B | | A | | B,2c |
| Galbuliformes | | | | | | | | |
| Galbulidae | | | | | | | | |
| <i>Galbula ruficauda</i> Cuvier, 1816 | 7 | B | 4,7 | B | | A,B | 6,7 | A,B,2c |
| Bucconidae | | | | | | | | |
| <i>Monasa nigrifrons</i> (Spix, 1824) ^{SP(VU)} | 7 | | | | A,2c,2m,7j | A,B,2c,5lit,7j | | |
| <i>Malacoptila striata</i> (Spix, 1824) ^{MA} | | | | | | | | B |
| <i>Notharchus swainsoni</i> (Gray, 1846) ^{MA} | | | | | 2c | B | | |
| <i>Nystalus chacuru</i> (Vieillot, 1816) | 3 | | 4,7 | A,B,2c | A,2c | 2c | | A,B |
| Piciformes | | | | | | | | |
| Ramphastidae | | | | | | | | |
| <i>Ramphastos toco</i> Statius Muller, 1776 | 3,7 | B | 4,7 | A,B | A,2c,7s,7j | A,B,2c | 6 | A,B,2c |
| <i>Pteroglossus castanotis</i> Gould, 1834 ^{SP(VU)} | 3,7 | B | | | A,2c,7j | A,B | | |
| Picidae | | | | | | | | |
| <i>Picumnus albosquamatus</i> d'Orbigny, 1840 | 3,7 | | 4,7 | A,B | A,2c,7s,7j | A,2c | 6,7 | A,B,2c |
| <i>Melanerpes candidus</i> (Otto, 1796) | 3,7 | B | 4,7 | A,B,2c | A,2c,7s | 2c,7s | 6,7 | B,2c |
| <i>Melanerpes flavifrons</i> (Vieillot, 1818) ^{MA} | | | | | A,2c,7s,7j | | | |
| <i>Veniliornis passerinus</i> (Linnaeus, 1766) | 3,7 | B | 4,7 | A,B,C | A,2c,7s,7j | A,B,2c,2m | 6 | A,B,2c |
| <i>Campephilus melanoleucos</i> (Gmelin, 1788) | 3 | B | 7 | B | A,2c,7j | A,B,2m,7j | 7 | A,B,2c |
| <i>Dryocopus lineatus</i> (Linnaeus, 1766) | 3,7 | B | 4,7 | B | A,P,2c,7s,7j | A,2c | 6 | B,2c |
| <i>Celeus flavescens</i> (Gmelin, 1788) | | | | B | 2c | | | 2c |
| <i>Colaptes melanochloros</i> (Gmelin, 1788) | 3 | B | 4 | A,B | A,2c,7s | A,2m | 6 | B,2c |

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Continuation – Appendix 1

Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|---|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Colaptes campestris</i> (Vieillot, 1818) | 3,7 | | 4,7 | A,B,2c | A,P,2c,7s,7j | A,2c | 6,7 | B,2c |
| Cariamidae | | | | | | | | |
| Cariamiformes | | | | | | | | |
| <i>Cariama cristata</i> (Linnaeus, 1766) | 3,7 | B | 4,7 | A,B,2c | A,P,2c,7s,7j | A,2c | 6,7 | B |
| Falconiformes | | | | | | | | |
| Falconidae | | | | | | | | |
| <i>Herpetotheres cachinnans</i> (Linnaeus, 1758) | | | 4 | A,B | A,2c,7j | | 6 | A,B,2c |
| <i>Micrastur semitorquatus</i> (Vieillot, 1817) | | | | | A | B | | |
| <i>Caracara plancus</i> (Miller, 1777) | 3,7 | B | 4,7 | A,B | A,2c,7s,7j | A,B,2c | 6,7 | A,B,2c |
| <i>Milvago chimachima</i> (Vieillot, 1816) | 3,7 | B | 4,7 | A,B,2c | A,P,2c | 2c | 6,7 | A,B,2c |
| <i>Falco sparverius</i> Linnaeus, 1758 | 3 | | 4 | B | A,2c,7j | 2c | 6 | B,2c |
| <i>Falco femoralis</i> Temminck, 1822 | 7 | | | A,B | | 2c | | B,2c |
| <i>Falco peregrinus</i> Tunstall, 1771 | | | | B,0,2lit | | | | |
| Psittaciformes | | | | | | | | |
| Psittacidae | | | | | | | | |
| <i>Brotogeris chiriri</i> (Vieillot, 1818) | 3,7 | B | 4,7 | A,B | A,P,2c,7s,7j | A,2c,2m | 6,7 | A,B,2c |
| <i>Pionus maximiliani</i> (Kuhl, 1820) | | | 4,7 | | P | | | |
| <i>Amazona aestiva</i> (Linnaeus, 1758) | 3,7 | B | 7 | | A,2c,7s,7j | A,5lit | | |
| <i>Amazona amazonica</i> (Linnaeus, 1766) | 3,7 | | 7 | | A,2c,7s,7j | A,2c,5lit | | |
| <i>Forpus xanthopterygius</i> (Spix, 1824) | 3,7 | | 4,7 | A,B | A,P,2c,7j | A | 6,7 | 2c |
| <i>Eupsittula aurea</i> (Gmelin, 1788) | 7 | B | 4,7 | A,B | A,P,2c,7s | A,2c | 6,7 | A,B,2c |
| <i>Aratinga auricapillus</i> (Kuhl, 1820) | | B | 7 | B | A,2c,7s,7j | A,2c,5lit | 7 | A,B |
| <i>Primolius maracana</i> (Vieillot, 1816) ^{SP(VU)} | | | 4 | A,B | | | | |
| <i>Ara ararauna</i> (Linnaeus, 1758) ^{SP(VU)} | 3 | A,B,7 | | | A,P,7s | | | |
| <i>Ara chloropterus</i> Gray, 1859 ^{SP(VU)} | | | | | P | | | |
| <i>Psittacara leucophthalmus</i> (Statius Muller, 1776) | 3,7 | B | 4,7 | A,B,2c | A,2c,7s,7j | 2c | 6,7 | B,2c |

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Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|--|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| Passeriformes | | | | | | | | |
| Thamnophilidae | | | | | | | | |
| <i>Formicivora rufa</i> (Wied, 1831) | | B | | B | | | 6,7 | B,2c |
| <i>Dysithamnus mentalis</i> (Temminck, 1823) | | | | | | | | 2c |
| <i>Herpsilochmus longirostris</i> Pelzeln, 1868 ^{CE} | | | | | | | 7 | B |
| <i>Herpsilochmus atricapillus</i> Pelzeln, 1868 | 7 | | 4 | B | 2c | | 6 | A,B,2c |
| <i>Thamnophilus doliatus</i> (Linnaeus, 1764) | 3,7 | B | 4,7 | A,B,C | A,2c | 2c,2m | 6 | A,B,2c |
| <i>Thamnophilus pelzelni</i> Hellmayr, 1924 | 7 | | 4,7 | A,B | A,2c,7s,7j | A | 6,7 | A,B,2c |
| <i>Thamnophilus caeruleus</i> Vieillot, 1816 | | | | A,B | | | | |
| <i>Taraba major</i> (Vieillot, 1816) | 7 | B | 4,7 | A,B,C | A,P,2c,7s,7j | A,2c,2m | 6 | A,B,2c |
| <i>Drymophila ferruginea</i> (Temminck, 1822) ^{MA} | | | | B | | | | |
| Dendrocolaptidae | | | | | | | | |
| <i>Dendrocolaptes platyrostris</i> Spix, 1825 | | | | B | A,2c,7j | A,2m | | |
| <i>Lepidocolaptes angustirostris</i> (Vieillot, 1818) | 3,7 | B | 4,7 | A,B | A,7s,7j | A,2c | 6,7 | A,B,2c |
| Xenopidae | | | | | | | | |
| <i>Xenops rutilans</i> Temminck, 1821 | | | | B | | | | 2m |
| Furnariidae | | | | | | | | |
| <i>Furnarius figulus</i> (Lichtenstein, 1823) | | | | | | | | A |
| <i>Furnarius rufus</i> (Gmelin, 1788) | 3,7 | B | 4,7 | A,B,2c | A,P,2c,7s | A,2c | 6 | A,B,2c |
| <i>Automolus leucophthalmus</i> (Wied, 1821) ^{MA} | | | | | | | | 2m |
| <i>Phacellodomus rufifrons</i> (Wied, 1821) | | | | | | | 7 | |
| <i>Phacellodomus ruber</i> (Vieillot, 1817) | 7 | | | | 2c,7j | A,2c,2m | | |
| <i>Phacellodomus ferrugineigula</i> (Pelzeln, 1858) ^{MA} | | | | | | | | 2c |
| <i>Anumbius annumbi</i> (Vieillot, 1817) | | | | | A,P | | 6 | |

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Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|---|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Cranioleuca vulpina</i> (Pelzeln, 1856) | | | | B | 2c | 2c | 6 | B |
| <i>Certhiaxis cinnamomeus</i> (Gmelin, 1788) | | | 4 | B | A,2c | B,2c,2m | 6 | B,2c |
| <i>Schoeniophylax phryganophilus</i> (Vieillot, 1817) | 3 | B | | | | | | |
| <i>Synallaxis scutata</i> Sclater, 1859 ^{SP(EN)} | | | | | 2c | 5lit | | |
| <i>Synallaxis hypospodia</i> Sclater, 1874 ^{SP(VU)} | | | | | 2c | B | | |
| <i>Synallaxis spixi</i> Sclater, 1856 | | | | B | | | 6 | |
| <i>Synallaxis albescens</i> Temminck, 1823 | | B | 4 | B | A,2c,7s,7j | 2c,2m,7s,7j | 6,7 | B,2c |
| <i>Synallaxis frontalis</i> Pelzeln, 1859 | 3,7 | | 4 | B | A,P,2c,7s,7j | A | 6,7 | A,B,2c |
| Pipridae | | | | | | | | |
| <i>Neopelma pallescens</i> (Lafresnaye, 1853) | | | | B | | | | A,B |
| <i>Antilophia galeata</i> (Lichtenstein, 1823) ^{CE} | 7 | | | A,B | | | 6,7 | A,B |
| <i>Manacus manacus</i> (Linnaeus, 1766) | | | | B | | | | |
| Tityridae | | | | | | | | |
| <i>Tityra inquisitor</i> (Lichtenstein, 1823) | | | 7 | B | A,2c | | | |
| <i>Tityra cayana</i> (Linnaeus, 1766) | | | 4 | | A,2c | | | |
| <i>Pachyramphus viridis</i> (Vieillot, 1816) | | | | | | | | B |
| <i>Pachyramphus castaneus</i> (Jardine & Selby, 1827) | | | | | A | | | |
| <i>Pachyramphus polychopterus</i> (Vieillot, 1818) | | | | A | 2c,7j | | 7 | |
| <i>Pachyramphus validus</i> (Lichtenstein, 1823) | 7 | | 4 | B | A,P,2c | 2c,2m | | |
| Rhynchocyclidae | | | | | | | | |
| <i>Leptopogon amaurocephalus</i> Tschudi, 1846 | | | 4 | B | A,2c | B | 6 | 2c |
| <i>Corythopis delalandi</i> (Lesson, 1830) | | | | B | | | | A,B |
| <i>Tolmomyias sulphurescens</i> (Spix, 1825) | | | | | A | B | 7 | A,B |
| <i>Todirostrum cinereum</i> (Linnaeus, 1766) | 3,7 | B | 4,7 | A,B | A,P,2c | A,2c | 6,7 | A,B |

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Continuation – Appendix 1

Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|--|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Poecilatriccus latirostris</i> (Pelzeln, 1868) | 7 | | 4,7 | | A,2c,7s,7j | A,B,2c | | A |
| <i>Myiornis auricularis</i> (Vieillot, 1818) ^{MA} | | | 4 | | 2c | | | |
| <i>Hemitriccus margaritaceiventer</i> (d'Orbigny & Lafresnaye, 1837) | 7 | | | A,B,C | 2c | | | 2c |
| Tyrannidae | | | | | | | | |
| <i>Hirundinea ferruginea</i> (Gmelin, 1788) | | | 4 | A,B | | | | B |
| <i>Euscarthmus meloryphus</i> Wied, 1831 | | | | A | 7j | | | 2c |
| <i>Camptostoma obsoletum</i> (Temminck, 1824) | 7 | | 4,7 | B | A,2c,7s | B,2c,7s | 6,7 | A,B,2c |
| <i>Elaenia flavogaster</i> (Thunberg, 1822) | 3,7 | | 4,7 | A,B,2c | A,P,2c | 2c | 6,7 | A,B,2c |
| <i>Elaenia spectabilis</i> Pelzeln, 1868 | 7 | B | | | 2c | A,2c | | A,B |
| <i>Elaenia parvirostris</i> Pelzeln, 1868 | | | | B | | | | |
| <i>Elaenia mesoleuca</i> (Deppe, 1830) | | | | B | | | | |
| <i>Elaenia cristata</i> Pelzeln, 1868 | | | | | | A | | |
| <i>Suiriri suiriri</i> (Vieillot, 1818) | | | | | 2c | | 7 | |
| <i>Myiopagis gaimardii</i> (d'Orbigny, 1839) ^{SP(EN)} | | | | | 2c | 5lit | | |
| <i>Myiopagis caniceps</i> (Swainson, 1835) | | | | | A,P,2c,7s,7j | 2c | | |
| <i>Myiopagis viridicata</i> (Vieillot, 1817) | | | | | P,2c,7j | A | | 2c |
| <i>Legatus leucophaius</i> (Vieillot, 1818) | 3 | | | | | | | |
| <i>Myiarchus swainsoni</i> Cabanis & Heine, 1859 | | | | B | A,2c | A | | |
| <i>Myiarchus ferox</i> (Gmelin, 1789) | 7 | | 4,7 | A,B | 2c,7s | A,2m | 6,7 | A,B,2c |
| <i>Myiarchus tyrannulus</i> (Statius Muller, 1776) | 7 | | 4,7 | A,B | A,2c,7s,7j | A,B,2c | 6,7 | A,B,2c |
| <i>Sirystes sibilator</i> (Vieillot, 1818) | | | | | A | | | |
| <i>Casiornis rufus</i> (Vieillot, 1816) | | | | | A,2c,7s,7j | A | | A,B,2c,2m |

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Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|---|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Capsiempis flaveola</i> (Lichtenstein, 1823) | | | | | 2c | | | |
| <i>Phaeomyias murina</i> (Spix, 1825) | | | | | | | | A |
| <i>Serpophaga subcristata</i> (Vieillot, 1817) | | | | A,B | 2c | | 6,7 | |
| <i>Pitangus sulphuratus</i> (Linnaeus, 1766) | 3,7 | B | 4,7 | A,B,C | A,P,2c,7s,7j | A,2c | 6,7 | B,2c |
| <i>Philohydor lictor</i> (Lichtenstein, 1823) | 7 | | | | P | | | |
| <i>Machetornis rixosa</i> (Vieillot, 1819) | 3 | | 4,7 | A,B | | A | 6 | B,2c |
| <i>Myiodynastes maculatus</i> (Statius Muller, 1776) | 3,7 | B | 4,7 | A,B | A,P,2c,7s,7j | 2c | 7 | B,2c |
| <i>Megarynchus pitangua</i> (Linnaeus, 1766) | 3,7 | | 4,7 | A,B | A,2c,7s,7j | A | 6,7 | A,B,2c |
| <i>Myiozetetes cayanensis</i> (Linnaeus, 1766) | | | | | 2c | A | | |
| <i>Myiozetetes similis</i> (Spix, 1825) | 7 | | 4 | B | A,2c | A,2c,2m | 6,7 | A,B,2c |
| <i>Tyrannus albogularis</i> Burmeister, 1856 | 7 | A | | B | 2c | | | A,B |
| <i>Tyrannus savana</i> Daudin, 1802 | 3,7 | B | 4,7 | A,B,2c | A,P,2c,7j | 2c | 7 | A,B,2c |
| <i>Griseotyrannus aurantioatrocristatus</i> (d'Orbigny & Lafresnaye, 1837) | | | | B | 2c | | 7 | B |
| <i>Empidonomus varius</i> (Vieillot, 1818) | 3,7 | | 4,7 | A,B | 2c | 2c | 7 | A,B,2c |
| <i>Colonia colonus</i> (Vieillot, 1818) | 7 | | 4 | B | 2c | | 6 | B |
| <i>Arundinicola leucocephala</i> (Linnaeus, 1764) | 3 | | 4 | B | | A,2c,2m | 6 | B |
| <i>Fluvicola albiventer</i> (Spix, 1825) | | | | | 2c | A,B,2c | | |
| <i>Fluvicola nengeta</i> (Linnaeus, 1766) | | B | | B | 7j | A | 6 | A,B |
| <i>Pyrocephalus rubinus</i> (Boddaert, 1783) | 3,7 | B | | B | | | 6 | |
| <i>Gubernetes yetapa</i> (Vieillot, 1818) | 3 | B | 4,7 | A,B,2c | 2c | A,2c,2m | 6 | B,2c |
| <i>Myiophobus fasciatus</i> (Statius Muller, 1776) | | | | B | 2c,7s | A | 6 | |
| <i>Cnemotriccus fuscatus</i> (Wied, 1831) | 7 | | 4 | B,C | A,2c,7s,7j | 2c | 7 | A,2c |
| <i>Lathrotriccus euleri</i> (Cabanis, 1868) | | | | B | | | | 2c |
| <i>Satrapa icterophrys</i> (Vieillot, 1818) | | | | B | | | | |

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| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|---|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Knipolegus cyanirostris</i> (Vieillot, 1818) | | | | | | B | | |
| <i>Xolmis velatus</i> (Lichtenstein, 1823) | 3 | B | 4 | A,B | A,P,2c,7s,7j | 2c | 6 | B |
| <i>Nengetus cinereus</i> (Vieillot, 1816) | | | | B | A,P,2c | 2c | 6 | B |
| Vireonidae | | | | | | | | |
| <i>Cyclarhis gujanensis</i> (Gmelin, 1789) | 3,7 | B | 4,7 | A,B,2c | A,P,2c,7s,7j | A,2c | 6,7 | B,2c |
| <i>Vireo chivi</i> (Vieillot, 1817) | | | 4 | A,B | 2c,7j | 2c | | B,2c |
| Corvidae | | | | | | | | |
| <i>Cyanocorax cristatellus</i> (Temminck, 1823) ^{CE} | | | 4 | B | | | 6,7 | B,2c |
| <i>Cyanocorax chrysops</i> (Vieillot, 1818) | 3 | | 4 | A,B,C | A,P,2c,7s,7j | A,B,2c | 6,7 | A,B,2c |
| Hirundinidae | | | | | | | | |
| <i>Pygochelidon cyanoleuca</i> (Vieillot, 1817) | 3,7 | | 4,7 | A,B | A,P | A | 6,7 | A,2c |
| <i>Alopochelidon fucata</i> (Temminck, 1822) | | | | A,B | | | | |
| <i>Stelgidopteryx ruficollis</i> (Vieillot, 1817) | 3,7 | B | 4,7 | A,B,2c | A,P,2c,7s | A,2c | 6 | B,2c |
| <i>Progne tapera</i> (Linnaeus, 1766) | | B | 4,7 | A,B | A,P,2c | A,2c,2m | | 2c |
| <i>Progne chalybea</i> (Gmelin, 1789) | | | 7 | A,B,2c | A,2c | A,B | 7 | B |
| <i>Tachycineta albiventer</i> (Boddaert, 1783) | | | | B | P,2c | A,2c | | |
| <i>Tachycineta leucorrhoa</i> (Vieillot, 1817) | | | 4,7 | A,B,2c | A,2c | A,B,2c | 6 | B,2c |
| <i>Riparia riparia</i> (Linnaeus, 1758) | 3 | | | | | 2c | | |
| <i>Hirundo rustica</i> Linnaeus, 1758 | | | 7 | | A,2c | 2c | | |
| <i>Petrochelidon pyrrhonota</i> (Vieillot, 1817) | | | | | A | | | |
| Troglodytidae | | | | | | | | |
| <i>Troglodytes musculus</i> Naumann, 1823 | 3,7 | | 4,7 | A,B,2c | 2c | 2c | 6,7 | A,B,2c |
| <i>Cantorchilus leucotis</i> (Lafresnaye, 1845) | | | | | A,2c | 2c | 6,7 | A,B,2c |
| Poliophtilidae | | | | | | | | |
| <i>Poliophtila dumicola</i> (Vieillot, 1817) | 3,7 | B | | B | A,P,2c | B,2c | | A |

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| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|---|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| Donacobiidae | | | | | | | | |
| <i>Donacobius atricapilla</i> (Swainson, 1831) | | | 4,7 | B,2c | 2c | A,2c,2m | | A,B,2c |
| Turdidae | | | | | | | | |
| <i>Turdus leucomelas</i> Vieillot, 1818 | 3,7 | B | 4,7 | A,B | A,2c,7s,7j | A,2c | 6,7 | A,B,2c |
| <i>Turdus rufiventris</i> Vieillot, 1818 | | | | B | A,P | | | 2c |
| <i>Turdus amaurochalinus</i> Cabanis, 1850 | | | 4 | A,B,2c | A,P,2c | A,B,2c | | B,2c |
| <i>Turdus subalaris</i> (Seebohm, 1887) | | | | | | | | 2c |
| Mimidae | | | | | | | | |
| <i>Mimus saturninus</i> (Lichtenstein, 1823) | 3,7 | B | 4,7 | A,B,2c | A,P,2c | A,2c,2m | 6,7 | A,B,2c |
| Estrildidae | | | | | | | | |
| <i>Estrilda astrild</i> (Linnaeus, 1758) | | | | | | | | B |
| Passeridae | | | | | | | | |
| <i>Passer domesticus</i> (Linnaeus, 1758) | 3 | B | 4 | A,B | A,7j | A | 6 | B |
| Motacillidae | | | | | | | | |
| <i>Anthus chii</i> Vieillot, 1818 | 7 | | | A,B | A,P,2c,7s | A,B,2c,2m | 6 | B |
| Fringillidae | | | | | | | | |
| <i>Cyanophonia cyanocephala</i> (Vieillot, 1818) | | B | | | | | | |
| <i>Euphonia chlorotica</i> (Linnaeus, 1766) | 3,7 | B | 4,7 | A,B | A,P,2c,7s | A,2m | 6,7 | A,B,2c |
| <i>Euphonia violacea</i> (Linnaeus, 1758) | | | | B | | | | |
| <i>Ammodramus humeralis</i> (Bosc, 1792) | 3,7 | B | 4,7 | A,B,2c | A,P,2c,7s,7j | A,B,2c | 6,7 | B,2c |
| <i>Arremon flavirostris</i> Swainson, 1838 | | | 4 | A,B | | | | A,B,2c |
| <i>Arremon polionotus</i> Bonaparte, 1850 | | | | B,C | | | | |
| <i>Zonotrichia capensis</i> (Statius Muller, 1776) | | | 4,7 | A,B,2c | P | | 6,7 | A,B,2c |
| <i>Leistes supercilii</i> (Bonaparte, 1850) | 3,7 | | 4 | A,B,2c | A,P | A,2c | 6 | B |
| <i>Cacicus haemorrhous</i> (Linnaeus, 1766) | | | 7 | B | A,P,2c | A,2m | | |
| <i>Icterus jamacaii</i> (Gmelin, 1788) | | | | | | B | | |
| <i>Icterus pyrrhopterus</i> (Vieillot, 1819) | 3,7 | B | 4,7 | A,B | A,2c,7j | A,2m | 6 | A,B,2c |

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Continuation – Appendix 1

Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|--|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Molothrus rufoaxillaris</i> Cassin, 1866 | | | 4 | 2c | A,2c,7s | 2c | | |
| <i>Molothrus oryzivorus</i> (Gmelin, 1788) | | | | | 2c | 5lit | | |
| <i>Molothrus bonariensis</i> (Gmelin, 1789) | 3 | | 4,7 | A,B,2c | P,2c | A,2c,2m | | 2c |
| <i>Amblyramphus holosericeus</i> (Scopoli, 1786) | | | 4 | A,B,2c | | | | |
| <i>Gnorimopsar chopi</i> (Vieillot, 1819) | | | 4 | 2c | A,P,2c,7s,7j | A,2c | 6 | |
| Icteridae | | | | | | | | |
| <i>Agelasticus atroolivaceus</i> (Wied-Neuwied, 1831) | | | | B | 2c | 2c,2m | | |
| <i>Chrysomus ruficapillus</i> (Vieillot, 1819) | | | 4,7 | B | | B,2c | | B,2c |
| <i>Pseudoleistes guirahuro</i> (Vieillot, 1819) | 3 | B | 4,7 | A,B,2c | 2c | 2m | 6,7 | A,B,2c |
| Parulidae | | | | | | | | |
| <i>Geothlypis aequinoctialis</i> (Gmelin, 1789) | | | | B | 2c,7j | 2c | 7 | A,B,2c |
| <i>Setophaga pitiayumi</i> (Vieillot, 1817) | | | | | A,P,2c | | | |
| <i>Myiothlypis leucophrys</i> (Pelzeln, 1868) ^{SP(EN) CE} | | | | | | | 6 | 2m |
| <i>Myiothlypis flaveola</i> Baird, 1865 | 7 | | 4,7 | A,B | A,P,2c,7s,7j | 2c | 6,7 | A,B,2c |
| <i>Basileuterus culicivorus</i> (Deppe, 1830) | | | | A,B,C | A,2c | 5m | 6 | A,B,2c |
| Cardinalidae | | | | | | | | |
| <i>Piranga flava</i> (Vieillot, 1822) | | | | | | | | B |
| <i>Habia rubica</i> (Vieillot, 1817) | 3 | | | | | | | |
| <i>Cyanoloxia glaucocaeerulea</i> (d'Orbigny & Lafresnaye, 1837) | | | | B | | | | |
| Thraupidae | | | | | | | | |
| <i>Nemosia pileata</i> (Boddaert, 1783) | 3,7 | B | 7 | A,B | A,P,2c | | 6,7 | B,2c |
| <i>Coryphaspiza melanotis</i> (Temminck, 1822) ^{SP(RE), BR(VU), IUCN(VU)} | | | | | | | | 2m,5lit,5 |

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Continuation – Appendix 1

Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|--|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Emberizoides herbicola</i> (Vieillot, 1817) | 3,7 | | 4 | A,B | 2c | | 6 | 2m |
| <i>Hemithraupis guira</i> (Linnaeus, 1766) | | | | B | A,2c,7s,7j | | | |
| <i>Tersina viridis</i> (Illiger, 1811) | 3,7 | | 4,7 | A,B | | | 6 | A,B,2c |
| <i>Dacnis cayana</i> (Linnaeus, 1766) | | | | A,B | 2c | | 6 | A,B,2c |
| <i>Saltatricula atricollis</i> (Vieillot, 1817) ^{CE} | | | | B | | | 6,7 | B |
| <i>Saltator similis</i> d'Orbigny & Lafresnaye, 1837 | | | 4 | 2c | 2c | | | 2c |
| <i>Coereba flaveola</i> (Linnaeus, 1758) | | | | A,B | | | | B |
| <i>Volatinia jacarina</i> (Linnaeus, 1766) | 3,7 | | 4,7 | A,B,2c | A,P,2c,7s,7j | 2c | 6,7 | A,B,2c |
| <i>Eucometis penicillata</i> (Spix, 1825) | | | | | A,2c,7s,7j | | | |
| <i>Coryphospingus cucullatus</i> (Statius Muller, 1776) | | B | 4,7 | A,B | A,2c,7s,7j | | 6,7 | A,B,2c |
| <i>Tachyphonus rufus</i> (Boddaert, 1783) | | | | | 2c | | | |
| <i>Ramphocelus carbo</i> (Pallas, 1764) | | | 4 | A,B | 2c | 2m | 6 | A,B,2c,2m |
| <i>Sporophila lineola</i> (Linnaeus, 1758) | | | 4,7 | B | | | 6,7 | B |
| <i>Sporophila collaris</i> (Boddaert, 1783) | | B | 4 | B | 2c | A,2c,2m | | |
| <i>Sporophila nigricollis</i> (Vieillot, 1823) | | | | | 2c | | | |
| <i>Sporophila ardesiaca</i> (Dubois, 1894) | | | 4 | | | | | |
| <i>Sporophila caerulescens</i> (Vieillot, 1823) | 3,7 | B | 4,7 | A,B,2c | A,P,2c,7j | 2c | 6,7 | A,2c |
| <i>Sporophila leucoptera</i> (Vieillot, 1817) | 3 | B | | B | 2c | | 7 | |
| <i>Sporophila bouvreuil</i> (Statius Muller, 1776) SP(VU) | | | | | 2c | 2c,5lit | | |
| <i>Sporophila hypoxantha</i> Cabanis, 1851 SP(CR), BR(VU) | | | | | | | | B |
| <i>Sporophila melanogaster</i> (Pelzeln, 1870) SP(CR), BR(VU) | | | | | | | | B |
| <i>Sporophila angolensis</i> (Linnaeus, 1766) | | | | A,B | | | | |

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CAVARZERE, V.; COSTA, T.V.; SCHUNCK, F. Birds from four protected areas in inland São Paulo State

Continuation – Appendix 1

Continuação – Apêndice 1

| Taxa | Andradina | | Marília | | Paulo de Faria | | São Simão | |
|--|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|
| | Biological Reserve | Municipality | Ecological Station | Municipality | Ecological Station | Municipality | Ecological Station | Municipality |
| <i>Thlypopsis sordida</i> (d'Orbigny & Lafresnaye, 1837) | | | | | | | | B |
| <i>Cypsnagra hirundinacea</i> (Lesson, 1831) ^{SP(EN)} | | | | | | | | B |
| <i>Conirostrum speciosum</i> (Temminck, 1824) | | B | 4,7 | A,B | A,P,2c,7s | A | 6 | A,B,2c |
| <i>Sicalis citrina</i> Pelzeln, 1870 | | | | | | | | A,B |
| <i>Sicalis flaveola</i> (Linnaeus, 1766) | 3 | B | 4,7 | A,B | A,P,2c,7s,7j | A,2m | 6,7 | A,B |
| <i>Sicalis luteola</i> (Sparrman, 1789) | | B | | A,B | A,7j | | 6 | |
| <i>Pipraeidea melanonota</i> (Vieillot, 1819) | | | | B | | | | |
| <i>Rauenia bonariensis</i> (Gmelin, 1789) | | | | B | | | | |
| <i>Cissopsis leverianus</i> (Gmelin, 1788) | | | | | 2c | | | |
| <i>Paroaria capitata</i> (d'Orbigny & Lafresnaye, 1837) | | B | | | | | | |
| <i>Thraupis sayaca</i> (Linnaeus, 1766) | 3,7 | B | 4,7 | A,B,2c | A,P,2c,7s,7j | A,2c | 6,7 | A,B,2c |
| <i>Thraupis palmarum</i> (Wied, 1821) | | | | B | | A | | B |
| <i>Stilpnia cayana</i> (Linnaeus, 1766) | | B | 4,7 | A,B | 2c | A,2c | 6,7 | A,B,2c |

Appendix 2. Frequency in Lists Indexes (IFL) for bird species recorded in four Protected Areas in interior São Paulo state, southeastern Brazil.

Apêndice 2. Índices de Frequência em Listas (IFL) para espécies de aves registradas em quatro Unidades de Conservação no interior do estado de São Paulo, sudeste do Brasil.

| Locality | Species | IFL |
|-----------------|--|-------|
| REBIO Andradina | <i>Crypturellus parvirostris</i> (Wagler, 1827) | 0.038 |
| REBIO Andradina | <i>Dendrocygna autumnalis</i> (Linnaeus, 1758) | 0.077 |
| REBIO Andradina | <i>Cairina moschata</i> (Linnaeus, 1758) | 0.077 |
| REBIO Andradina | <i>Patagioenas picazuro</i> (Temminck, 1813) | 0.077 |
| REBIO Andradina | <i>Patagioenas cayennensis</i> (Bonnaterre, 1792) | 0.077 |
| REBIO Andradina | <i>Leptotila verreauxi</i> Bonaparte, 1855 | 0.038 |
| REBIO Andradina | <i>Leptotila rufaxilla</i> (Richard & Bernard, 1792) | 0.038 |
| REBIO Andradina | <i>Zenaida auriculata</i> (Des Murs, 1847) | 0.038 |
| REBIO Andradina | <i>Columbina talpacoti</i> (Temminck, 1811) | 0.423 |
| REBIO Andradina | <i>Columbina squammata</i> (Lesson, 1831) | 0.038 |
| REBIO Andradina | <i>Guira guira</i> (Gmelin, 1788) | 0.077 |
| REBIO Andradina | <i>Crotophaga ani</i> Linnaeus, 1758 | 0.077 |
| REBIO Andradina | <i>Tapera naevia</i> (Linnaeus, 1766) | 0.115 |
| REBIO Andradina | <i>Piaya cayana</i> (Linnaeus, 1766) | 0.038 |
| REBIO Andradina | <i>Nyctibius griseus</i> (Gmelin, 1789) | 0.115 |
| REBIO Andradina | <i>Nyctidromus albicollis</i> (Gmelin, 1789) | 0.038 |
| REBIO Andradina | <i>Hydropsalis parvula</i> (Gould, 1837) | 0.038 |
| REBIO Andradina | <i>Phaethornis pretrei</i> (Lesson & Delattre, 1839) | 0.038 |
| REBIO Andradina | <i>Chrysuronia versicolor</i> (Vieillot, 1818) | 0.115 |
| REBIO Andradina | <i>Hylocharis chrysura</i> (Shaw, 1812) | 0.115 |
| REBIO Andradina | <i>Aramus guarauna</i> (Linnaeus, 1766) | 0.038 |
| REBIO Andradina | <i>Mustelirallus albicollis</i> (Vieillot, 1819) | 0.115 |
| REBIO Andradina | <i>Pardirallus nigricans</i> (Vieillot, 1819) | 0.269 |
| REBIO Andradina | <i>Aramides cajaneus</i> (Statius Muller, 1776) | 0.038 |
| REBIO Andradina | <i>Vanellus chilensis</i> (Molina, 1782) | 0.115 |
| REBIO Andradina | <i>Jacana jacana</i> (Linnaeus, 1766) | 0.115 |
| REBIO Andradina | <i>Jabiru mycteria</i> (Lichtenstein, 1819) | 0.077 |
| REBIO Andradina | <i>Mesembrinibis cayennensis</i> (Gmelin, 1789) | 0.038 |
| REBIO Andradina | <i>Coragyps atratus</i> (Bechstein, 1793) | 0.038 |
| REBIO Andradina | <i>Geranospiza caerulescens</i> (Vieillot, 1817) | 0.192 |
| REBIO Andradina | <i>Rupornis magnirostris</i> (Gmelin, 1788) | 0.038 |
| REBIO Andradina | <i>Megascops choliba</i> (Vieillot, 1817) | 0.038 |
| REBIO Andradina | <i>Glaucidium brasilianum</i> (Gmelin, 1788) | 0.077 |
| REBIO Andradina | <i>Momotus momota</i> (Linnaeus, 1766) | 0.038 |
| REBIO Andradina | <i>Megaceryle torquata</i> (Linnaeus, 1766) | 0.038 |

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continuation Apendix 2
 continuação Apêndice 2

| Locality | Species | IFL |
|-----------------|--|-------|
| REBIO Andradina | <i>Galbula ruficauda</i> Cuvier, 1816 | 0.038 |
| REBIO Andradina | <i>Monasa nigrifrons</i> (Spix, 1824) | 0.038 |
| REBIO Andradina | <i>Ramphastos toco</i> Statius Muller, 1776 | 0.038 |
| REBIO Andradina | <i>Pteroglossus castanotis</i> Gould, 1834 | 0.154 |
| REBIO Andradina | <i>Picumnus albosquamatus</i> d'Orbigny, 1840 | 0.077 |
| REBIO Andradina | <i>Melanerpes candidus</i> (Otto, 1796) | 0.077 |
| REBIO Andradina | <i>Veniliornis passerinus</i> (Linnaeus, 1766) | 0.038 |
| REBIO Andradina | <i>Dryocopus lineatus</i> (Linnaeus, 1766) | 0.077 |
| REBIO Andradina | <i>Colaptes campestris</i> (Vieillot, 1818) | 0.038 |
| REBIO Andradina | <i>Cariama cristata</i> (Linnaeus, 1766) | 0.038 |
| REBIO Andradina | <i>Caracara plancus</i> (Miller, 1777) | 0.038 |
| REBIO Andradina | <i>Milvago chimachima</i> (Vieillot, 1816) | 0.154 |
| REBIO Andradina | <i>Falco femoralis</i> Temminck, 1822 | 0.154 |
| REBIO Andradina | <i>Brotogeris chiriri</i> (Vieillot, 1818) | 0.308 |
| REBIO Andradina | <i>Amazona aestiva</i> (Linnaeus, 1758) | 0.038 |
| REBIO Andradina | <i>Amazona amazonica</i> (Linnaeus, 1766) | 0.038 |
| REBIO Andradina | <i>Forpus xanthopterygius</i> (Spix, 1824) | 0.154 |
| REBIO Andradina | <i>Eupsittula aurea</i> (Gmelin, 1788) | 0.077 |
| REBIO Andradina | <i>Ara ararauna</i> (Linnaeus, 1758) | 0.038 |
| REBIO Andradina | <i>Psittacara leucophthalmus</i> (Statius Muller, 1776) | 0.038 |
| REBIO Andradina | <i>Herpsilochmus atricapillus</i> Pelzeln, 1868 | 0.038 |
| REBIO Andradina | <i>Thamnophilus doliatus</i> (Linnaeus, 1764) | 0.077 |
| REBIO Andradina | <i>Thamnophilus pelzelni</i> Hellmayr, 1924 | 0.231 |
| REBIO Andradina | <i>Taraba major</i> (Vieillot, 1816) | 0.115 |
| REBIO Andradina | <i>Lepidocolaptes angustirostris</i> (Vieillot, 1818) | 0.038 |
| REBIO Andradina | <i>Furnarius rufus</i> (Gmelin, 1788) | 0.077 |
| REBIO Andradina | <i>Phacellodomus ruber</i> (Vieillot, 1817) | 0.154 |
| REBIO Andradina | <i>Synallaxis frontalis</i> Pelzeln, 1859 | 0.115 |
| REBIO Andradina | <i>Antilophia galeata</i> (Lichtenstein, 1823) | 0.115 |
| REBIO Andradina | <i>Pachyramphus validus</i> (Lichtenstein, 1823) | 0.077 |
| REBIO Andradina | <i>Todirostrum cinereum</i> (Linnaeus, 1766) | 0.038 |
| REBIO Andradina | <i>Poecilatriccus latirostris</i> (Pelzeln, 1868) | 0.115 |
| REBIO Andradina | <i>Hemitriccus margaritaceiventer</i> (d'Orbigny & Lafresnaye, 1837) | 0.077 |
| REBIO Andradina | <i>Camptostoma obsoletum</i> (Temminck, 1824) | 0.038 |

to be continued
 continua

continuation Apendix 2
 continuação Apêndice 2

| Locality | Species | IFL |
|-----------------|--|-------|
| REBIO Andradina | <i>Elaenia flavogaster</i> (Thunberg, 1822) | 0.038 |
| REBIO Andradina | <i>Elaenia spectabilis</i> Pelzeln, 1868 | 0.115 |
| REBIO Andradina | <i>Myiarchus ferox</i> (Gmelin, 1789) | 0.269 |
| REBIO Andradina | <i>Myiarchus tyrannulus</i> (Statius Muller, 1776) | 0.038 |
| REBIO Andradina | <i>Pitangus sulphuratus</i> (Linnaeus, 1766) | 0.115 |
| REBIO Andradina | <i>Machetornis rixosa</i> (Vieillot, 1819) | 0.115 |
| REBIO Andradina | <i>Myiodynastes maculatus</i> (Statius Muller, 1776) | 0.077 |
| REBIO Andradina | <i>Megarynchus pitangua</i> (Linnaeus, 1766) | 0.231 |
| REBIO Andradina | <i>Myiozetetes similis</i> (Spix, 1825) | 0.308 |
| REBIO Andradina | <i>Tyrannus albogularis</i> Burmeister, 1856 | 0.038 |
| REBIO Andradina | <i>Tyrannus melancholicus</i> Vieillot, 1819 | 0.154 |
| REBIO Andradina | <i>Tyrannus savana</i> Daudin, 1802 | 0.038 |
| REBIO Andradina | <i>Empidonomus varius</i> (Vieillot, 1818) | 0.038 |
| REBIO Andradina | <i>Colonia colonus</i> (Vieillot, 1818) | 0.038 |
| REBIO Andradina | <i>Pyrocephalus rubinus</i> (Boddaert, 1783) | 0.154 |
| REBIO Andradina | <i>Cnemotriccus fuscatus</i> (Wied, 1831) | 0.115 |
| REBIO Andradina | <i>Cyclarhis gujanensis</i> (Gmelin, 1789) | 0.038 |
| REBIO Andradina | <i>Pygochelidon cyanoleuca</i> (Vieillot, 1817) | 0.115 |
| REBIO Andradina | <i>Stelgidopteryx ruficollis</i> (Vieillot, 1817) | 0.038 |
| REBIO Andradina | <i>Troglodytes musculus</i> Naumann, 1823 | 0.038 |
| REBIO Andradina | <i>Poliptila dumicola</i> (Vieillot, 1817) | 0.038 |
| REBIO Andradina | <i>Turdus leucomelas</i> Vieillot, 1818 | 0.192 |
| REBIO Andradina | <i>Mimus saturninus</i> (Lichtenstein, 1823) | 0.154 |
| REBIO Andradina | <i>Anthus chii</i> Vieillot, 1818 | 0.154 |
| REBIO Andradina | <i>Euphonia chlorotica</i> (Linnaeus, 1766) | 0.154 |
| REBIO Andradina | <i>Ammodramus humeralis</i> (Bosc, 1792) | 0.077 |
| REBIO Andradina | <i>Leistes supercilialis</i> (Bonaparte, 1850) | 0.115 |
| REBIO Andradina | <i>Icterus pyrrhopterus</i> (Vieillot, 1819) | 0.308 |
| REBIO Andradina | <i>Myiothlypis flaveola</i> Baird, 1865 | 0.038 |
| REBIO Andradina | <i>Nemosia pileata</i> (Boddaert, 1783) | 0.115 |
| REBIO Andradina | <i>Emberizoides herbicola</i> (Vieillot, 1817) | 0.038 |
| REBIO Andradina | <i>Tersina viridis</i> (Illiger, 1811) | 0.154 |
| REBIO Andradina | <i>Volatinia jacarina</i> (Linnaeus, 1766) | 0.115 |
| REBIO Andradina | <i>Sporophila caeruleascens</i> (Vieillot, 1823) | 0.154 |
| REBIO Andradina | <i>Thraupis sayaca</i> (Linnaeus, 1766) | 0.038 |

to be continued
 continua

continuation Apendix 2
 continuação Apêndice 2

| Locality | Species | IFL |
|----------------|--|-----|
| EEc de Marília | <i>Crypturellus parvirostris</i> (Wagler, 1827) | 0.1 |
| EEc de Marília | <i>Anhima cornuta</i> (Linnaeus, 1766) | 0.2 |
| EEc de Marília | <i>Cairina moschata</i> (Linnaeus, 1758) | 0.1 |
| EEc de Marília | <i>Amazonetta brasiliensis</i> (Gmelin, 1789) | 0.7 |
| EEc de Marília | <i>Patagioenas picazuro</i> (Temminck, 1813) | 0.1 |
| EEc de Marília | <i>Patagioenas cayennensis</i> (Bonnaterre, 1792) | 0.5 |
| EEc de Marília | <i>Leptotila verreauxi</i> Bonaparte, 1855 | 1.6 |
| EEc de Marília | <i>Columbina talpacoti</i> (Temminck, 1811) | 0.1 |
| EEc de Marília | <i>Columbina squammata</i> (Lesson, 1831) | 0.1 |
| EEc de Marília | <i>Columbina picui</i> (Temminck, 1813) | 0.2 |
| EEc de Marília | <i>Guira guira</i> (Gmelin, 1788) | 0.2 |
| EEc de Marília | <i>Crotophaga ani</i> Linnaeus, 1758 | 0.2 |
| EEc de Marília | <i>Piaya cayana</i> (Linnaeus, 1766) | 0.4 |
| EEc de Marília | <i>Coccyzus melacoryphus</i> Vieillot, 1817 | 0.2 |
| EEc de Marília | <i>Nyctidromus albicollis</i> (Gmelin, 1789) | 0.2 |
| EEc de Marília | <i>Chaetura meridionalis</i> Hellmayr, 1907 | 0.1 |
| EEc de Marília | <i>Phaethornis pretrei</i> (Lesson & Delattre, 1839) | 0.1 |
| EEc de Marília | <i>Chlorostilbon lucidus</i> (Shaw, 1812) | 0.3 |
| EEc de Marília | <i>Eupetomena macroura</i> (Gmelin, 1788) | 0.3 |
| EEc de Marília | <i>Hylocharis chrysura</i> (Shaw, 1812) | 0.2 |
| EEc de Marília | <i>Mustelirallus albicollis</i> (Vieillot, 1819) | 0.3 |
| EEc de Marília | <i>Pardirallus nigricans</i> (Vieillot, 1819) | 0.1 |
| EEc de Marília | <i>Vanellus chilensis</i> (Molina, 1782) | 0.6 |
| EEc de Marília | <i>Butorides striata</i> (Linnaeus, 1758) | 0.9 |
| EEc de Marília | <i>Bubulcus ibis</i> (Linnaeus, 1758) | 0.4 |
| EEc de Marília | <i>Syrigma sibilatrix</i> (Temminck, 1824) | 0.4 |
| EEc de Marília | <i>Phimosus infuscatus</i> (Lichtenstein, 1823) | 0.2 |
| EEc de Marília | <i>Coragyps atratus</i> (Bechstein, 1793) | 0.6 |
| EEc de Marília | <i>Cathartes aura</i> (Linnaeus, 1758) | 0.4 |
| EEc de Marília | <i>Ictinia plumbea</i> (Gmelin, 1788) | 0.5 |
| EEc de Marília | <i>Rupornis magnirostris</i> (Gmelin, 1788) | 0.2 |
| EEc de Marília | <i>Momotus momota</i> (Linnaeus, 1766) | 0.1 |
| EEc de Marília | <i>Galbula ruficauda</i> Cuvier, 1816 | 0.3 |
| EEc de Marília | <i>Nystalus chacuru</i> (Vieillot, 1816) | 0.4 |
| EEc de Marília | <i>Ramphastos toco</i> Statius Muller, 1776 | 0.5 |

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| Locality | Species | IFL |
|----------------|---|-----|
| EEc de Marília | <i>Picumnus albosquamatus</i> d'Orbigny, 1840 | 0.6 |
| EEc de Marília | <i>Melanerpes candidus</i> (Otto, 1796) | 0.4 |
| EEc de Marília | <i>Veniliornis passerinus</i> (Linnaeus, 1766) | 0.4 |
| EEc de Marília | <i>Campephilus melanoleucos</i> (Gmelin, 1788) | 0.4 |
| EEc de Marília | <i>Dryocopus lineatus</i> (Linnaeus, 1766) | 0.1 |
| EEc de Marília | <i>Colaptes campestris</i> (Vieillot, 1818) | 0.6 |
| EEc de Marília | <i>Cariama cristata</i> (Linnaeus, 1766) | 0.2 |
| EEc de Marília | <i>Caracara plancus</i> (Miller, 1777) | 0.5 |
| EEc de Marília | <i>Milvago chimachima</i> (Vieillot, 1816) | 0.2 |
| EEc de Marília | <i>Brotogeris chiriri</i> (Vieillot, 1818) | 0.7 |
| EEc de Marília | <i>Pionus maximiliani</i> (Kuhl, 1820) | 0.1 |
| EEc de Marília | <i>Amazona aestiva</i> (Linnaeus, 1758) | 0.4 |
| EEc de Marília | <i>Amazona amazonica</i> (Linnaeus, 1766) | 0.5 |
| EEc de Marília | <i>Forpus xanthopterygius</i> (Spix, 1824) | 0.1 |
| EEc de Marília | <i>Eupsittula aurea</i> (Gmelin, 1788) | 0.3 |
| EEc de Marília | <i>Aratinga auricapillus</i> (Kuhl, 1820) | 0.1 |
| EEc de Marília | <i>Psittacara leucophthalmus</i> (Statius Muller, 1776) | 0.1 |
| EEc de Marília | <i>Thamnophilus doliatus</i> (Linnaeus, 1764) | 0.4 |
| EEc de Marília | <i>Thamnophilus pelzelni</i> Hellmayr, 1924 | 0.1 |
| EEc de Marília | <i>Taraba major</i> (Vieillot, 1816) | 0.2 |
| EEc de Marília | <i>Lepidocolaptes angustirostris</i> (Vieillot, 1818) | 0.2 |
| EEc de Marília | <i>Furnarius rufus</i> (Gmelin, 1788) | 0.3 |
| EEc de Marília | <i>Tityra inquisitor</i> (Lichtenstein, 1823) | 0.5 |
| EEc de Marília | <i>Todirostrum cinereum</i> (Linnaeus, 1766) | 0.4 |
| EEc de Marília | <i>Poecilatriccus latirostris</i> (Pelzeln, 1868) | 0.7 |
| EEc de Marília | <i>Camptostoma obsoletum</i> (Temminck, 1824) | 0.2 |
| EEc de Marília | <i>Elaenia flavogaster</i> (Thunberg, 1822) | 0.2 |
| EEc de Marília | <i>Myiarchus ferox</i> (Gmelin, 1789) | 0.3 |
| EEc de Marília | <i>Myiarchus tyrannulus</i> (Statius Muller, 1776) | 0.2 |
| EEc de Marília | <i>Pitangus sulphuratus</i> (Linnaeus, 1766) | 0.1 |
| EEc de Marília | <i>Machetornis rixosa</i> (Vieillot, 1819) | 0.8 |
| EEc de Marília | <i>Myiodynastes maculatus</i> (Statius Muller, 1776) | 0.2 |
| EEc de Marília | <i>Megarynchus pitangua</i> (Linnaeus, 1766) | 0.1 |
| EEc de Marília | <i>Tyrannus melancholicus</i> Vieillot, 1819 | 0.3 |
| EEc de Marília | <i>Tyrannus savana</i> Daudin, 1802 | 0.3 |

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| Locality | Species | IFL |
|-----------------------|---|-------|
| EEc de Marília | <i>Empidonomus varius</i> (Vieillot, 1818) | 0.1 |
| EEc de Marília | <i>Gubernetes yetapa</i> (Vieillot, 1818) | 0.5 |
| EEc de Marília | <i>Cyclarhis gujanensis</i> (Gmelin, 1789) | 0.1 |
| EEc de Marília | <i>Pygochelidon cyanoleuca</i> (Vieillot, 1817) | 0.2 |
| EEc de Marília | <i>Stelgidopteryx ruficollis</i> (Vieillot, 1817) | 0.5 |
| EEc de Marília | <i>Progne tapera</i> (Linnaeus, 1766) | 0.3 |
| EEc de Marília | <i>Progne chalybea</i> (Gmelin, 1789) | 1.1 |
| EEc de Marília | <i>Tachycineta leucorrhoa</i> (Vieillot, 1817) | 0.1 |
| EEc de Marília | <i>Hirundo rustica</i> Linnaeus, 1758 | 0.1 |
| EEc de Marília | <i>Troglodytes musculus</i> Naumann, 1823 | 0.4 |
| EEc de Marília | <i>Donacobius atricapilla</i> (Linnaeus, 1766) | 0.6 |
| EEc de Marília | <i>Turdus leucomelas</i> Vieillot, 1818 | 0.6 |
| EEc de Marília | <i>Mimus saturninus</i> (Lichtenstein, 1823) | 0.8 |
| EEc de Marília | <i>Euphonia chlorotica</i> (Linnaeus, 1766) | 0.5 |
| EEc de Marília | <i>Ammodramus humeralis</i> (Bosc, 1792) | 0.2 |
| EEc de Marília | <i>Zonotrichia capensis</i> (Statius Muller, 1776) | 0.3 |
| EEc de Marília | <i>Cacicus haemorrhous</i> (Linnaeus, 1766) | 0.1 |
| EEc de Marília | <i>Icterus pyrrhopterus</i> (Vieillot, 1819) | 0.1 |
| EEc de Marília | <i>Molothrus bonariensis</i> (Gmelin, 1789) | 0.1 |
| EEc de Marília | <i>Chrysomus ruficapillus</i> (Vieillot, 1819) | 0.2 |
| EEc de Marília | <i>Pseudoleistes guirahuro</i> (Vieillot, 1819) | 0.5 |
| EEc de Marília | <i>Myiothlypis flaveola</i> Baird, 1865 | 0.5 |
| EEc de Marília | <i>Nemosia pileata</i> (Boddaert, 1783) | 0.5 |
| EEc de Marília | <i>Tersina viridis</i> (Illiger, 1811) | 0.4 |
| EEc de Marília | <i>Volatinia jacarina</i> (Linnaeus, 1766) | 0.5 |
| EEc de Marília | <i>Coryphospingus cucullatus</i> (Statius Muller, 1776) | 0.5 |
| EEc de Marília | <i>Sporophila lineola</i> (Linnaeus, 1758) | 0.5 |
| EEc de Marília | <i>Sporophila caerulea</i> (Vieillot, 1823) | 0.2 |
| EEc de Marília | <i>Conirostrum speciosum</i> (Temminck, 1824) | 0.5 |
| EEc de Marília | <i>Sicalis flaveola</i> (Linnaeus, 1766) | 0.4 |
| EEc de Marília | <i>Thraupis sayaca</i> (Linnaeus, 1766) | 0.8 |
| EEc de Marília | <i>Stilpnia cayana</i> (Linnaeus, 1766) | 0.3 |
| EEc de Paulo de Faria | <i>Crypturellus undulatus</i> (Temminck, 1815) | 0.412 |
| EEc de Paulo de Faria | <i>Crypturellus parvirostris</i> (Wagler, 1827) | 0.235 |
| EEc de Paulo de Faria | <i>Dendrocygna autumnalis</i> (Linnaeus, 1758) | 0.353 |

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| Locality | Species | IFL |
|-----------------------|--|-------|
| EEc de Paulo de Faria | <i>Cairina moschata</i> (Linnaeus, 1758) | 0.059 |
| EEc de Paulo de Faria | <i>Patagioenas picazuro</i> (Temminck, 1813) | 0.118 |
| EEc de Paulo de Faria | <i>Patagioenas cayennensis</i> (Bonnaterre, 1792) | 0.059 |
| EEc de Paulo de Faria | <i>Leptotila verreauxi</i> Bonaparte, 1855 | 0.353 |
| EEc de Paulo de Faria | <i>Leptotila rufaxilla</i> (Richard & Bernard, 1792) | 0.059 |
| EEc de Paulo de Faria | <i>Zenaida auriculata</i> (Des Murs, 1847) | 0.176 |
| EEc de Paulo de Faria | <i>Claravis pretiosa</i> (Ferrari-Perez, 1886) | 0.176 |
| EEc de Paulo de Faria | <i>Columbina talpacoti</i> (Temminck, 1811) | 0.059 |
| EEc de Paulo de Faria | <i>Columbina squammata</i> (Lesson, 1831) | 0.059 |
| EEc de Paulo de Faria | <i>Guira guira</i> (Gmelin, 1788) | 0.059 |
| EEc de Paulo de Faria | <i>Crotophaga ani</i> Linnaeus, 1758 | 0.118 |
| EEc de Paulo de Faria | <i>Tapera naevia</i> (Linnaeus, 1766) | 0.353 |
| EEc de Paulo de Faria | <i>Dromococcyx pavoninus</i> Pelzeln, 1870 | 0.294 |
| EEc de Paulo de Faria | <i>Piaya cayana</i> (Linnaeus, 1766) | 0.235 |
| EEc de Paulo de Faria | <i>Coccyzus melacoryphus</i> Vieillot, 1817 | 0.059 |
| EEc de Paulo de Faria | <i>Antristomus rufus</i> (Boddaert, 1783) | 0.118 |
| EEc de Paulo de Faria | <i>Lurocalis semitorquatus</i> (Gmelin, 1789) | 0.059 |
| EEc de Paulo de Faria | <i>Nyctidromus albicollis</i> (Gmelin, 1789) | 0.118 |
| EEc de Paulo de Faria | <i>Hydropsalis parvula</i> (Gould, 1837) | 0.059 |
| EEc de Paulo de Faria | <i>Phaethornis pretrei</i> (Lesson & Delattre, 1839) | 0.176 |
| EEc de Paulo de Faria | <i>Hylocharis chrysura</i> (Shaw, 1812) | 0.118 |
| EEc de Paulo de Faria | <i>Vanellus chilensis</i> (Molina, 1782) | 0.118 |
| EEc de Paulo de Faria | <i>Jacana jacana</i> (Linnaeus, 1766) | 0.118 |
| EEc de Paulo de Faria | <i>Phaetusa simplex</i> (Gmelin, 1789) | 0.118 |
| EEc de Paulo de Faria | <i>Nannopterum brasilianum</i> (Gmelin, 1789) | 0.118 |
| EEc de Paulo de Faria | <i>Ardea alba</i> Linnaeus, 1758 | 0.235 |
| EEc de Paulo de Faria | <i>Syrigma sibilatrix</i> (Temminck, 1824) | 0.176 |
| EEc de Paulo de Faria | <i>Egretta thula</i> (Molina, 1782) | 0.235 |
| EEc de Paulo de Faria | <i>Theristicus caudatus</i> (Boddaert, 1783) | 0.412 |
| EEc de Paulo de Faria | <i>Coragyps atratus</i> (Bechstein, 1793) | 0.176 |
| EEc de Paulo de Faria | <i>Pandion haliaetus</i> (Linnaeus, 1758) | 0.882 |
| EEc de Paulo de Faria | <i>Heterospizias meridionalis</i> (Latham, 1790) | 0.059 |
| EEc de Paulo de Faria | <i>Bubo virginianus</i> (Gmelin, 1788) | 0.176 |
| EEc de Paulo de Faria | <i>Glaucidium brasilianum</i> (Gmelin, 1788) | 0.059 |
| EEc de Paulo de Faria | <i>Athene cunicularia</i> (Molina, 1782) | 0.118 |

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| Locality | Species | IFL |
|-----------------------|---|-------|
| EEc de Paulo de Faria | <i>Momotus momota</i> (Linnaeus, 1766) | 0.118 |
| EEc de Paulo de Faria | <i>Megaceryle torquata</i> (Linnaeus, 1766) | 0.059 |
| EEc de Paulo de Faria | <i>Monasa nigrifrons</i> (Spix, 1824) | 0.059 |
| EEc de Paulo de Faria | <i>Ramphastos toco</i> Stadius Muller, 1776 | 0.059 |
| EEc de Paulo de Faria | <i>Pteroglossus castanotis</i> Gould, 1834 | 0.059 |
| EEc de Paulo de Faria | <i>Picumnus albosquamatus</i> d'Orbigny, 1840 | 0.059 |
| EEc de Paulo de Faria | <i>Melanerpes candidus</i> (Otto, 1796) | 0.059 |
| EEc de Paulo de Faria | <i>Melanerpes flavifrons</i> (Vieillot, 1818) | 0.235 |
| EEc de Paulo de Faria | <i>Veniliornis passerinus</i> (Linnaeus, 1766) | 0.294 |
| EEc de Paulo de Faria | <i>Campephilus melanoleucos</i> (Gmelin, 1788) | 0.059 |
| EEc de Paulo de Faria | <i>Dryocopus lineatus</i> (Linnaeus, 1766) | 0.176 |
| EEc de Paulo de Faria | <i>Colaptes melanochloros</i> (Gmelin, 1788) | 0.059 |
| EEc de Paulo de Faria | <i>Colaptes campestris</i> (Vieillot, 1818) | 0.176 |
| EEc de Paulo de Faria | <i>Cariama cristata</i> (Linnaeus, 1766) | 0.059 |
| EEc de Paulo de Faria | <i>Herpetotheres cachinnans</i> (Linnaeus, 1758) | 0.294 |
| EEc de Paulo de Faria | <i>Caracara plancus</i> (Miller, 1777) | 0.176 |
| EEc de Paulo de Faria | <i>Falco sparverius</i> Linnaeus, 1758 | 0.059 |
| EEc de Paulo de Faria | <i>Brotogeris chiriri</i> (Vieillot, 1818) | 0.235 |
| EEc de Paulo de Faria | <i>Amazona aestiva</i> (Linnaeus, 1758) | 0.235 |
| EEc de Paulo de Faria | <i>Amazona amazonica</i> (Linnaeus, 1766) | 0.941 |
| EEc de Paulo de Faria | <i>Forpus xanthopterygius</i> (Spix, 1824) | 0.118 |
| EEc de Paulo de Faria | <i>Eupsittula aurea</i> (Gmelin, 1788) | 0.059 |
| EEc de Paulo de Faria | <i>Aratinga auricapillus</i> (Kuhl, 1820) | 0.353 |
| EEc de Paulo de Faria | <i>Ara ararauna</i> (Linnaeus, 1758) | 0.059 |
| EEc de Paulo de Faria | <i>Psittacara leucophthalmus</i> (Stadius Muller, 1776) | 0.412 |
| EEc de Paulo de Faria | <i>Thamnophilus pelzelni</i> Hellmayr, 1924 | 0.118 |
| EEc de Paulo de Faria | <i>Taraba major</i> (Vieillot, 1816) | 0.059 |
| EEc de Paulo de Faria | <i>Dendrocolaptes platyrostris</i> Spix, 1825 | 0.176 |
| EEc de Paulo de Faria | <i>Lepidocolaptes angustirostris</i> (Vieillot, 1818) | 0.059 |
| EEc de Paulo de Faria | <i>Furnarius rufus</i> (Gmelin, 1788) | 0.235 |
| EEc de Paulo de Faria | <i>Phacellodomus ruber</i> (Vieillot, 1817) | 0.235 |
| EEc de Paulo de Faria | <i>Synallaxis albescens</i> Temminck, 1823 | 0.235 |
| EEc de Paulo de Faria | <i>Synallaxis frontalis</i> Pelzeln, 1859 | 0.176 |
| EEc de Paulo de Faria | <i>Pachyramphus polychopterus</i> (Vieillot, 1818) | 0.059 |
| EEc de Paulo de Faria | <i>Poecilatriccus latirostris</i> (Pelzeln, 1868) | 0.176 |

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| Locality | Species | IFL |
|-----------------------|---|-------|
| EEc de Paulo de Faria | <i>Camptostoma obsoletum</i> (Temminck, 1824) | 0.059 |
| EEc de Paulo de Faria | <i>Myiopagis caniceps</i> (Swainson, 1835) | 0.118 |
| EEc de Paulo de Faria | <i>Myiopagis viridicata</i> (Vieillot, 1817) | 0.059 |
| EEc de Paulo de Faria | <i>Myiarchus ferox</i> (Gmelin, 1789) | 0.235 |
| EEc de Paulo de Faria | <i>Myiarchus tyrannulus</i> (Statius Muller, 1776) | 0.059 |
| EEc de Paulo de Faria | <i>Casiornis rufus</i> (Vieillot, 1816) | 0.647 |
| EEc de Paulo de Faria | <i>Pitangus sulphuratus</i> (Linnaeus, 1766) | 0.235 |
| EEc de Paulo de Faria | <i>Myiodynastes maculatus</i> (Statius Muller, 1776) | 0.059 |
| EEc de Paulo de Faria | <i>Megarynchus pitangua</i> (Linnaeus, 1766) | 0.059 |
| EEc de Paulo de Faria | <i>Tyrannus melancholicus</i> Vieillot, 1819 | 0.176 |
| EEc de Paulo de Faria | <i>Tyrannus savana</i> Daudin, 1802 | 0.353 |
| EEc de Paulo de Faria | <i>Fluvicola nengeta</i> (Linnaeus, 1766) | 0.353 |
| EEc de Paulo de Faria | <i>Myiophobus fasciatus</i> (Statius Muller, 1776) | 0.235 |
| EEc de Paulo de Faria | <i>Cnemotriccus fuscatus</i> (Wied, 1831) | 0.941 |
| EEc de Paulo de Faria | <i>Xolmis velatus</i> (Lichtenstein, 1823) | 0.176 |
| EEc de Paulo de Faria | <i>Cyclarhis gujanensis</i> (Gmelin, 1789) | 0.059 |
| EEc de Paulo de Faria | <i>Vireo chivi</i> (Vieillot, 1817) | 0.353 |
| EEc de Paulo de Faria | <i>Cyanocorax chrysops</i> (Vieillot, 1818) | 0.118 |
| EEc de Paulo de Faria | <i>Stelgidopteryx ruficollis</i> (Vieillot, 1817) | 0.059 |
| EEc de Paulo de Faria | <i>Turdus leucomelas</i> Vieillot, 1818 | 0.176 |
| EEc de Paulo de Faria | <i>Passer domesticus</i> (Linnaeus, 1758) | 0.059 |
| EEc de Paulo de Faria | <i>Anthus chii</i> Vieillot, 1818 | 0.235 |
| EEc de Paulo de Faria | <i>Euphonia chlorotica</i> (Linnaeus, 1766) | 0.588 |
| EEc de Paulo de Faria | <i>Ammodramus humeralis</i> (Bosc, 1792) | 0.059 |
| EEc de Paulo de Faria | <i>Icterus pyrrhopterus</i> (Vieillot, 1819) | 0.235 |
| EEc de Paulo de Faria | <i>Molothrus rufoaxillaris</i> Cassin, 1866 | 0.353 |
| EEc de Paulo de Faria | <i>Gnorimopsar chopi</i> (Vieillot, 1819) | 0.412 |
| EEc de Paulo de Faria | <i>Geothlypis aequinoctialis</i> (Gmelin, 1789) | 0.353 |
| EEc de Paulo de Faria | <i>Myiothlypis flaveola</i> Baird, 1865 | 0.118 |
| EEc de Paulo de Faria | <i>Hemithraupis guira</i> (Linnaeus, 1766) | 0.118 |
| EEc de Paulo de Faria | <i>Volatinia jacarina</i> (Linnaeus, 1766) | 0.059 |
| EEc de Paulo de Faria | <i>Eucometis penicillata</i> (Spix, 1825) | 0.059 |
| EEc de Paulo de Faria | <i>Coryphospingus cucullatus</i> (Statius Muller, 1776) | 0.118 |
| EEc de Paulo de Faria | <i>Sporophila caerulescens</i> (Vieillot, 1823) | 0.176 |
| EEc de Paulo de Faria | <i>Coniostreum speciosum</i> (Temminck, 1824) | 0.059 |

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| Locality | Species | IFL |
|-----------------------|--|-------|
| EEc de Paulo de Faria | <i>Sicalis flaveola</i> (Linnaeus, 1766) | 0.176 |
| EEc de Paulo de Faria | <i>Sicalis luteola</i> (Sparman, 1789) | 0.118 |
| EEc de Paulo de Faria | <i>Thraupis sayaca</i> (Linnaeus, 1766) | 0.059 |
| EEc de Santa Maria | <i>Crypturellus parvirostris</i> (Wagler, 1827) | 0.333 |
| EEc de Santa Maria | <i>Dendrocygna viduata</i> (Linnaeus, 1766) | 0.111 |
| EEc de Santa Maria | <i>Cairina moschata</i> (Linnaeus, 1758) | 0.111 |
| EEc de Santa Maria | <i>Patagioenas picazuro</i> (Temminck, 1813) | 0.111 |
| EEc de Santa Maria | <i>Patagioenas cayennensis</i> (Bonnaterre, 1792) | 0.111 |
| EEc de Santa Maria | <i>Leptotila verreauxi</i> Bonaparte, 1855 | 0.111 |
| EEc de Santa Maria | <i>Leptotila rufaxilla</i> (Richard & Bernard, 1792) | 0.222 |
| EEc de Santa Maria | <i>Zenaida auriculata</i> (Des Murs, 1847) | 0.111 |
| EEc de Santa Maria | <i>Columbina talpacoti</i> (Temminck, 1811) | 0.111 |
| EEc de Santa Maria | <i>Columbina squammata</i> (Lesson, 1831) | 0.111 |
| EEc de Santa Maria | <i>Crotophaga ani</i> Linnaeus, 1758 | 0.111 |
| EEc de Santa Maria | <i>Nyctibius griseus</i> (Gmelin, 1789) | 0.111 |
| EEc de Santa Maria | <i>Nyctidromus albicollis</i> (Gmelin, 1789) | 0.222 |
| EEc de Santa Maria | <i>Phaethornis pretrei</i> (Lesson & Delattre, 1839) | 0.111 |
| EEc de Santa Maria | <i>Chlorostilbon lucidus</i> (Shaw, 1812) | 0.111 |
| EEc de Santa Maria | <i>Eupetomena macroura</i> (Gmelin, 1788) | 0.556 |
| EEc de Santa Maria | <i>Chionomesa lactea</i> (Lesson, 1832) | 0.222 |
| EEc de Santa Maria | <i>Hylocharis chrysura</i> (Shaw, 1812) | 0.222 |
| EEc de Santa Maria | <i>Theristicus caudatus</i> (Boddaert, 1783) | 0.111 |
| EEc de Santa Maria | <i>Coragyps atratus</i> (Bechstein, 1793) | 0.444 |
| EEc de Santa Maria | <i>Heterospizias meridionalis</i> (Latham, 1790) | 0.111 |
| EEc de Santa Maria | <i>Rupornis magnirostris</i> (Gmelin, 1788) | 0.111 |
| EEc de Santa Maria | <i>Megascops choliba</i> (Vieillot, 1817) | 0.111 |
| EEc de Santa Maria | <i>Galbula ruficauda</i> Cuvier, 1816 | 0.667 |
| EEc de Santa Maria | <i>Picumnus albosquamatus</i> d'Orbigny, 1840 | 0.333 |
| EEc de Santa Maria | <i>Melanerpes candidus</i> (Otto, 1796) | 0.111 |
| EEc de Santa Maria | <i>Campephilus melanoleucos</i> (Gmelin, 1788) | 0.222 |
| EEc de Santa Maria | <i>Colaptes campestris</i> (Vieillot, 1818) | 0.222 |
| EEc de Santa Maria | <i>Cariama cristata</i> (Linnaeus, 1766) | 0.222 |
| EEc de Santa Maria | <i>Caracara plancus</i> (Miller, 1777) | 0.111 |
| EEc de Santa Maria | <i>Milvago chimachima</i> (Vieillot, 1816) | 0.111 |
| EEc de Santa Maria | <i>Brotogeris chiriri</i> (Vieillot, 1818) | 0.111 |

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| Locality | Species | IFL |
|--------------------|--|-------|
| EEc de Santa Maria | <i>Forpus xanthopterygius</i> (Spix, 1824) | 0.111 |
| EEc de Santa Maria | <i>Eupsittula aurea</i> (Gmelin, 1788) | 0.111 |
| EEc de Santa Maria | <i>Aratinga auricapillus</i> (Kuhl, 1820) | 0.333 |
| EEc de Santa Maria | <i>Psittacara leucophthalmus</i> (Statius Muller, 1776) | 0.111 |
| EEc de Santa Maria | <i>Formicivora rufa</i> (Wied, 1831) | 0.111 |
| EEc de Santa Maria | <i>Herpsilochmus longirostris</i> Pelzeln, 1868 | 0.333 |
| EEc de Santa Maria | <i>Thamnophilus pelzelni</i> Hellmayr, 1924 | 0.111 |
| EEc de Santa Maria | <i>Lepidocolaptes angustirostris</i> (Vieillot, 1818) | 0.222 |
| EEc de Santa Maria | <i>Phacellodomus rufifrons</i> (Wied, 1821) | 0.222 |
| EEc de Santa Maria | <i>Synallaxis albescens</i> Temminck, 1823 | 0.111 |
| EEc de Santa Maria | <i>Synallaxis frontalis</i> Pelzeln, 1859 | 0.111 |
| EEc de Santa Maria | <i>Antilophia galeata</i> (Lichtenstein, 1823) | 0.111 |
| EEc de Santa Maria | <i>Pachyramphus polychopterus</i> (Vieillot, 1818) | 0.111 |
| EEc de Santa Maria | <i>Tolmomyias sulphurescens</i> (Spix, 1825) | 0.111 |
| EEc de Santa Maria | <i>Todirostrum cinereum</i> (Linnaeus, 1766) | 0.333 |
| EEc de Santa Maria | <i>Camptostoma obsoletum</i> (Temminck, 1824) | 0.222 |
| EEc de Santa Maria | <i>Elaenia flavogaster</i> (Thunberg, 1822) | 0.222 |
| EEc de Santa Maria | <i>Suiriri suiriri</i> (Vieillot, 1818) | 0.111 |
| EEc de Santa Maria | <i>Serpophaga subcristata</i> (Vieillot, 1817) | 0.444 |
| EEc de Santa Maria | <i>Myiarchus ferox</i> (Gmelin, 1789) | 0.222 |
| EEc de Santa Maria | <i>Myiarchus tyrannulus</i> (Statius Muller, 1776) | 0.111 |
| EEc de Santa Maria | <i>Pitangus sulphuratus</i> (Linnaeus, 1766) | 0.222 |
| EEc de Santa Maria | <i>Myiodynastes maculatus</i> (Statius Muller, 1776) | 0.111 |
| EEc de Santa Maria | <i>Megarynchus pitangua</i> (Linnaeus, 1766) | 0.444 |
| EEc de Santa Maria | <i>Myiozetetes similis</i> (Spix, 1825) | 0.111 |
| EEc de Santa Maria | <i>Tyrannus melancholicus</i> Vieillot, 1819 | 0.111 |
| EEc de Santa Maria | <i>Tyrannus savana</i> Daudin, 1802 | 0.111 |
| EEc de Santa Maria | <i>Griseotyrannus aurantioatrocristatus</i> (d'Orbigny & Lafresnaye, 1837) | 0.333 |
| EEc de Santa Maria | <i>Empidonomus varius</i> (Vieillot, 1818) | 0.111 |
| EEc de Santa Maria | <i>Cnemotriccus fuscatus</i> (Wied, 1831) | 0.111 |
| EEc de Santa Maria | <i>Cyclarhis gujanensis</i> (Gmelin, 1789) | 1.444 |
| EEc de Santa Maria | <i>Cyanocorax cristatellus</i> (Temminck, 1823) | 0.111 |
| EEc de Santa Maria | <i>Cyanocorax chrysops</i> (Vieillot, 1818) | 0.111 |
| EEc de Santa Maria | <i>Pygochelidon cyanoleuca</i> (Vieillot, 1817) | 0.222 |

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| Locality | Species | IFL |
|--------------------|---|-------|
| EEc de Santa Maria | <i>Progne chalybea</i> (Gmelin, 1789) | 0.111 |
| EEc de Santa Maria | <i>Troglodytes musculus</i> Naumann, 1823 | 0.111 |
| EEc de Santa Maria | <i>Cantorchilus leucotis</i> (Lafresnaye, 1845) | 0.333 |
| EEc de Santa Maria | <i>Turdus leucomelas</i> Vieillot, 1818 | 0.111 |
| EEc de Santa Maria | <i>Mimus saturninus</i> (Lichtenstein, 1823) | 0.111 |
| EEc de Santa Maria | <i>Euphonia chlorotica</i> (Linnaeus, 1766) | 0.222 |
| EEc de Santa Maria | <i>Ammodramus humeralis</i> (Bosc, 1792) | 0.222 |
| EEc de Santa Maria | <i>Zonotrichia capensis</i> (Statius Muller, 1776) | 0.222 |
| EEc de Santa Maria | <i>Pseudoleistes guirahuro</i> (Vieillot, 1819) | 0.222 |
| EEc de Santa Maria | <i>Geothlypis aequinoctialis</i> (Gmelin, 1789) | 0.111 |
| EEc de Santa Maria | <i>Myiothlypis flaveola</i> Baird, 1865 | 0.222 |
| EEc de Santa Maria | <i>Nemosia pileata</i> (Boddaert, 1783) | 0.222 |
| EEc de Santa Maria | <i>Saltatricula atricollis</i> (Vieillot, 1817) | 0.111 |
| EEc de Santa Maria | <i>Volatinia jacarina</i> (Linnaeus, 1766) | 0.111 |
| EEc de Santa Maria | <i>Coryphospingus cucullatus</i> (Statius Muller, 1776) | 0.222 |
| EEc de Santa Maria | <i>Sporophila lineola</i> (Linnaeus, 1758) | 0.222 |
| EEc de Santa Maria | <i>Sporophila caerulescens</i> (Vieillot, 1823) | 0.556 |
| EEc de Santa Maria | <i>Sporophila leucoptera</i> (Vieillot, 1817) | 0.222 |
| EEc de Santa Maria | <i>Sicalis flaveola</i> (Linnaeus, 1766) | 0.444 |
| EEc de Santa Maria | <i>Thraupis sayaca</i> (Linnaeus, 1766) | 0.667 |
| EEc de Santa Maria | <i>Stilpnia cayana</i> (Linnaeus, 1766) | 0.667 |