

# The birds of Serra da Canastra National Park and adjacent areas, Minas Gerais, Brazil

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É apresentada uma listagem da avifauna do Parque Nacional da Serra da Canastra e regiões próximas, e complementada com observações realizadas por outros autores. São relatadas algumas observações sobre espécies ameaçadas ou pouco conhecidas, bem como a extensão de distribuição para outras.

## Introduction

Located in the south-west part of Minas Gerais state, south-east Brazil, Serra da Canastra National Park (SCNP, 71,525 ha<sup>8</sup>, 20°15'S 46°37'W)<sup>9</sup> is regularly visited by birders as it is a well-known area in which to see cerrado specialities and a site for Brazilian Merganser *Mergus octosetaceus*. However, Forrester's<sup>6</sup> checklist constitutes the only major compilation of records from the area. Here, I list the species recorded at Serra da Canastra National Park and surrounding areas (Appendix 1), with details of threatened birds and range extensions for some species.

## Material and methods

The dominant vegetation of Serra da Canastra National Park is cerrado *sensu lato*, but more than 90% of its total area is covered by subdivisions of this formation, known as *campo limpo* and *campo sujo*; the park has small portions of *campo rupestre*, and cerrado *sensu stricto*, and patches of gallery forest with Atlantic forest characteristics<sup>8</sup>. The relief is undulating, with streams in the valleys. The climate has a marked seasonality, with a rainy season in September–February and a dry season in March–August<sup>8</sup>.

I studied the avifauna during February 1996–February 1998, with most fieldwork conducted in April–December 1996, when I undertook population surveys and investigated the habitat requirements of Brazilian Merganser<sup>17</sup>. This project's methodology involved considerable activity in gallery forest adjacent to watercourses apparently suitable for *Mergus octosetaceus*. Over c.45 km of the river São Francisco—from its source as far as the village of Vargem Bonita—were surveyed. Downstream of the village, water conditions and environmental degradation have made the area unsuitable for Brazilian Merganser. Observations were made in both of the area's major drainage systems—the rios São Francisco and Paraná—within and outside the park. I also undertook an avifaunal inventory, documenting most species re-

corded with photographs or tape-recordings, using a Sony TCM 5000EV and Sennheiser ME 66 directional microphone. Tape-recordings are deposited at Arquivo Sonoro Elias Pacheco Coelho, in the Universidade Federal do Rio de Janeiro, Brazil (ASEC).

A problem with many avifaunal lists concerns the evidence of a species' presence in a given area. Many species are similar in plumage and vocalisations, resulting in identification errors and making avifaunal lists the subject of some criticism<sup>1</sup>. Several ornithologists or experienced birders have presented such lists without specifying the evidence attached to each record—in many cases it is unknown if a species was tape-recorded, or a specimen or photograph taken. However, Hayes<sup>7</sup> provides a source for all species recorded in Paraguay, and in Brazil, Cohn-Haft *et al.*<sup>3</sup> explicitly provided evidence for species' occurrences north of Manaus. These lists class evidence according to rank, the highest being a specimen and the lowest being a heard-only record. I did not collect specimens at Canastra, although this is undoubtedly the most surefire method of identification (and a specimen has considerable additional value<sup>12</sup>). In the list presented here, I rank evidence as follows: the highest evidence is a species cited in Forrester<sup>6</sup> (1) also observed by me (two independent records), followed by a tape-recording (R), a photo which conclusively identifies a species (P), a sight observation (O) and, the lowest category, a record based only on a vocalisation and not tape-recorded (H) (Appendix 1). For some species more than one type of evidence is available, increasing the value of the record, if it was made only by me (e.g. Small-billed Tinamou *Crypturellus parvirostris* was observed and tape-recorded). I accessed unpublished data from other ornithologists (see Appendix 1) who visited SCNP, and species recorded by more than one of these observers or for which specific documentation exists were included in the main list. Thirty-four species were recorded by only one author (26 in Forrester<sup>6</sup>—see Table 1) and these were considered hypothetical



1



2



3



4



5



6

1. Cock-tailed Tyrant *Alecturus tricolor*
  2. Ochre-breasted Pipit *Anthus nattereri*
  3. Brasilia Tapaculo *Scytalopus novacapitalis*
  4. Brazilian Merganser *Mergus octosetaceus*
  5. Lesser Nothura *Nothura minor*
  6. Grey-backed Tachuri *Polystictus superciliosus*
- (All photos by Edson Endrigo)

because specific evidence was unavailable. Many hypothetical species are almost certainly present in the area, but better documentation is required.

Species recorded were classified with respect to threatened status<sup>5</sup> or relative abundance (in suitable habitat), which was determined subjectively, and changes can be expected through further research. The taxonomy and species sequence follows Sick 1997<sup>16</sup>, except *Aratinga auricapilla*, which follows Collar *et al.*<sup>4</sup>.

### Results and species accounts

Forrester<sup>6</sup>, through compilation of various unpublished reports, presents a list of 260 species recorded from Serra da Canastra National Park. The list presented here for the Serra da Canastra region includes 282 species (Appendix 1) for which some evidence for its occurrence is available.

Twelve species are endemic to the cerrado *sensu latu*<sup>16</sup> and 13 species are endemic to Brazil<sup>15</sup>. Twenty-one species recorded in the region are classified as threatened or near-threatened<sup>4</sup>, nine of which occur in one of three categories: Critically Endangered (Brazilian Merganser), Endangered (Ochre-breasted Pipit *Anthus nattereri*) and Vulnerable (seven, e.g. Lesser Nothura *Nothura minor*, Dwarf Tinamou *Taoniscus nanus* and Crowned Eagle *Harpyhaliaetus coronatus*). According Wege & Long<sup>18</sup>, SCNP is one of the most important sites harbouring threatened species of the campos and cerrados of Brazil (habitats disappearing rapidly yet receiving comparatively little attention by conservationists, and which require urgent protection, as noted by Parker & Willis<sup>10</sup>).

**Table 1.** Species recorded by only one author, and thus regarded as hypothetical at Serra da Canastra.

|                                |     |
|--------------------------------|-----|
| <i>Podilymbus podiceps</i>     | WDB |
| <i>Leptodon cayanensis</i>     | BCF |
| <i>Accipiter striatus</i>      | BCF |
| <i>Spizastur melanoleucus</i>  | WDB |
| <i>Micrastur semitorquatus</i> | BCF |
| <i>Falco ruficularis</i>       | BCF |
| <i>Bartramia longicauda</i>    | RAR |
| <i>Gallinago undulata</i>      | BCF |
| <i>Columba speciosa</i>        | BCF |
| <i>Columba plumbea</i>         | BCF |
| <i>Columbina picui</i>         | BCF |
| <i>Brotogeris tirica</i>       | BCF |
| <i>Asio flammeus</i>           | BCF |
| <i>Caprimulgus parvulus</i>    | RAR |
| <i>Polytmus guainumbi</i>      | BCF |
| <i>Veniliornis spilogaster</i> | BCF |

|                                       |     |
|---------------------------------------|-----|
| <i>Furnarius figulus</i>              | BCF |
| <i>Xiphocolaptes albicollis</i>       | BCF |
| <i>Hemitrircus margaritaceiventer</i> | BCF |
| <i>Myiopagis gaimardii</i>            | BCF |
| <i>Todirostrum plumbeiceps</i>        | BCF |
| <i>Knipolegus cyanostris</i>          | BCF |
| <i>Arundinicola leucocephala</i>      | RAR |
| <i>Casiornis rufa</i>                 | BCF |
| <i>Myiarchus tuberculifer</i>         | BCF |
| <i>Schiffornis virescens</i>          | JFP |
| <i>Turdus subalaris</i>               | RAR |
| <i>Hemithraupis guira</i>             | BCF |
| <i>Tachyphonus rufus</i>              | BCF |
| <i>Pipraeidea melanonota</i>          | BCF |
| <i>Euphonia cyanocephala</i>          | RAR |
| <i>Oryzoborus maximiliani</i>         | BCF |
| <i>Oryzoborus angolensis</i>          | BCF |
| <i>Coryphospingus cucullatus</i>      | BCF |

Observers are coded as follows: BCF = Bruce C. Forrester<sup>6</sup>; JFP = José Fernando Pacheco (pers. comm.); RAR = Rose Ann Rowlett (pers. comm); and WDB = Wolf Dieter Bartmann<sup>2</sup>.

### Species accounts

Species accounts are presented for those taxa for which I obtained new information from within SCNP or nearby. Each species is coded as follows: (C) = Critical; (E) = Endangered; (V) = Vulnerable; (NT) = near-threatened<sup>4</sup>; and (RE) = range extension.

**Brazilian Merganser** *Mergus octosetaceus* (C). My research at SCNP commenced with a population census of this species: six mature pairs and 22 individuals were found along the main rivers and streams of the region<sup>17</sup>. Below, I present observations on the six pairs found in the study area. Breeding in SCNP occurs in July<sup>2</sup>. *Mergus octosetaceus* has two significant ecological requirements which limit its distribution: one is a lack of suitable trees, in much of the gallery forest, with holes of a sufficient size for the species to use for nesting. Some pairs studied since 1996 have not bred, probably because there are no suitable trees in the gallery forest adjoining their territories. The second requirement has meant a lack of vacant territories for juveniles to occupy. *Mergus octosetaceus* is a highly territorial species, and each pair requires a minimum of 8 km of river with high water quality (Silveira & Bartmann in prep.). Such conditions exist in few areas, all occupied by mature pairs. It is unknown what happens to fledged young. Other potential areas are disturbed by diamond mining and ecological tourism; local farmers are renting

properties by the São Francisco river to tourists who increase water pollution and disturb the environment.

Pair 1. Studied by Bartmann<sup>2</sup>, this pair occupies a territory on the São Francisco river, above the Casca d'Anta waterfall. Bartmann and I observed this pair with four small ducklings in September 1996. In February 1997, Henrique R. Nobre (pers. comm.) observed the same pair and its young in this area. I returned to the territory in April–June 1997 and failed to find any birds there, but in July 1998, Juan Mazar Barnett (pers. comm.) found the pair with two ducklings in the same place and I was also able to observe them there during 21–23 August 1998.

Pair 2. Also studied by Bartmann<sup>2</sup>, this pair occupies a territory on the São Francisco river, between the Casca d'Anta waterfall and a point near São José do Barreiro village. Breeding was not recorded in 1996–1997.

Pair 3. A newly discovered pair on the São Francisco river which occupy a territory between São José do Barreiro to c.4 km downstream of there. No breeding records in 1996–1997.

Pair 4. Studied by Bartmann<sup>2</sup>, this pair occupies a territory in an area known as Retiro das Pedras. In August 1997, the pair had four ducklings, and was seen regularly in this area.

Pair 5. Another newly discovered pair, which occupy the Ribeirão das Posses stream, part of the Paraná drainage basin. No breeding records.

Pair 6. This pair occupies a territory c.8 km downstream of pair 5; it had two ducklings in October 1996.

**Brasília Tapaculo** *Scytalopus novacapitalis* (V). Occurs in almost all humid forest where the fern *Blechnum* sp. is found, in densities of 1–2 pairs per patch. In October–December, pairs sing throughout the day (males and females have different songs), and are easily attracted to playback. *S. novacapitalis* is very common in and outside the park in areas with other typical cerrado species, e.g. *Herpsilochmus longirostris* and *Antilophia galeata*.

**Dusky-tailed Antbird** *Drymophila malura* (RE). Although mapped in Minas Gerais<sup>14</sup>, I have found no published records of the species from the state. Unpublished records have been made at several localities in Serra da Mantiqueira, e.g. a male tape-recorded at Fazenda São Francisco do Jordão, near Delfim Moreira (22°30'S 45°16'W), in April 1994

(Flávio C. T. Lima pers. comm.). The species has been regularly recorded at Caraça Natural Park (20°08'S 43°30'W), Santa Bárbara municipality (J. F. Pacheco pers. comm.), and I have found it at Tripuí Ecological Station (20°17'S 43°30'W), where it is fairly common in secondary forest. At SCNP, I tape-recorded a pair in a gallery forest near Ribeirão das Posses in September 1996. This record represents a range extension of c.350 km west from Tripuí, the nearest traceable locality, and demonstrates the need to publish records clarifying the status and distribution of common birds.

**Sharp-tailed Tyrant** *Culicivora caudacuta* (NT) and **Cock-tailed Tyrant** *Alectrurus tricolor* (NT). *C. caudacuta* is easily found year-round, in small groups of 3–7 birds in tall grass. In December 1996, a family group with two dependent young was found. The young were similar in shape to that briefly described in Parker & Willis<sup>10</sup>. I have never seen *Culicivora caudacuta* in mixed groups of cerrado species, as noted by the last-named authors. *Alectrurus tricolor* is a migrant, arriving in mid-August–September and leaving in December–January. In December 1996, a female was noted feeding two young with small fruits. The structure of the immature birds was very similar to that of the female. In SCNP, Cock-tailed Tyrant utilises *campo sujo* and *campo limpo*, where the males perform the territorial displays described by Sick<sup>15</sup>.

**Southern Bristle-tyrant** *Phylloscartes eximius* (NT, RE). Inhabits mid-strata of humid forests in south-east Brazil, Argentina and Paraguay<sup>14</sup>. There are few recent records of *P. eximius* in Brazil (Silveira & Develey in prep.). In Minas Gerais, Pinto<sup>11</sup> documented a pair obtained by A. M. Olalla in Fazenda Boa Esperança, north of São José da Lagoa (now Nova Era, 19°45'S 43°03'W, at 530 m) in September 1940. Another pair was obtained in March 1926 by Snethlage at Fazenda Taveira, Mariana municipality (20°22'S 43°24'W, at 712 m) (retained at Museu Nacional do Rio de Janeiro: J. F. Pacheco pers. comm.). I found two pairs in the Atlantic forest below Casca d'Anta waterfall, in September 1996 and on all visits in 1997–1998. They were very responsive to playback (remaining in an upright position) different to typical *Phylloscartes*. Ridgely & Tudor<sup>14</sup> draw attention to the fact that *P. eximius* may be declining substantially due to deforestation throughout its range, but many ornithologists are unfamiliar with this species' vocalisations. I have never recorded it following mixed-species flocks, and it often perches quietly and unobtrusively. More records will almost

certainly be made once its voice becomes more widely known amongst fieldworkers in the region. The records at SCNP extend its known range c.300 km west. It is interesting to note that other typical Atlantic forest species occur at SCNP, e.g. *Pyroderus scutatus* and *Ilicura militaris*.

**Ochre-breasted Pipit** *Anthus nattereri* (E) (RE). This scarce species is known in Minas Gerais from Monte Belo (21°19'S 46°22'W), Alfenas (21°25'S 45°46'W) and Morro do Ferro, Poços de Caldas municipality (21°47'S 46°33'W)<sup>4</sup>. This record extends its distribution by c.100 km north-west from Monte Belo, the nearest locality. The species was identified by Juan Mazar Barnett, on 16 December 1997, and we tape-recorded at least three birds in a grassy field near the source of the São Francisco river. Following this, I found *A. nattereri* in other areas of the park. The species is easily identified by its vocalisations and display, which differ from those of *A. lutescens* and *A. hellmayri*, which are also present here. Displaying Ochre-breasted Pipit perform a spiralling descent while singing, unlike *A. lutescens*, which descends in a near-straight line, and *A. hellmayri*, which also makes a spiral descent but with a more open helix than *A. nattereri*. I also observed this phenomenon at Ibitipoca State Park (21°33'S 43°55'W) in January 1997. The three species' songs are easily recognisable. Open areas inhabited by *A. nattereri* are threatened by the development of pasture and agriculture<sup>10</sup>. Following grass-burning, Ochre-breasted Pipit would disappear, but was one of the first species to return once the grass had regenerated. Parker & Willis<sup>10</sup> have also noted the species' preference for recently burnt areas. The area in SCNP where *A. nattereri* was recorded for the first time also supports other near-threatened species: *Taoniscus nanus*, *Coryphaspsiza melanotis*, *Culicivora caudacuta* and *Alectrurus tricolor*.

**Rufous-rumped Seedeater** *Sporophila hypochroma* (NT). In Brazil, this species was previously known from just two localities in the centre-west of the country<sup>4</sup>. I observed two males in a mixed flock of *Sporophila bouvreuil* and *S. melanogaster* (see below) in October 1996, when seeds are abundant. Important field marks are the rump and belly coloration, more rufous than in *S. hypoxantha* (the colour in Rufous-rumped is similar to that in *S. b. saturata*: specimens at Museu de Zoologia da Universidade de São Paulo) and providing more of a contrast with the greyish upperparts. It is interesting to note that the other Brazilian records were also in October<sup>4</sup>, and the

birds I recorded did not vocalise. This suggests that Rufous-rumped Seedeater is an austral migrant in Brazil, as noted by Ridgely & Tudor<sup>13</sup>, and illustrates the conservation importance of grasslands in central-east Brazil, which are rapidly disappearing and are very important areas for migrant seedeaters.

**Black-bellied Seedeater** *Sporophila melanogaster* (NT). Sick<sup>15</sup> recorded the species from three localities in Minas Gerais: Campanha (21°50'S 45°24'W)<sup>9</sup> and Poços de Caldas (21°47'S 46°33'W)<sup>9</sup>, without additional data, and Pirapora (17°20'S 44°56'W)<sup>9</sup>, in September. I saw four adult males in October 1996 in the same mixed flock with the *S. hypochroma* noted above. Mixed *Sporophila* flocks are frequent at SCNP in October, and always include resident *S. bouvreuil*. An additional record of *S. melanogaster* was one mist-netted (with two others seen) at Várzea do Rio Jacaré, near Morro do Ferro village (20°46'S 44°34'W), Minas Gerais, on 27 December 1997. This bird possessed significant abdominal fat, a clear sign of a migrant. Migration routes of *Sporophila* in Brazil require more accurate study before effective conservation measures can be designed.

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### References

- Argel-de-Oliveira, M. M. (1993) Publicar ou não publicar? Listas de espécies são necessárias? *Bol. CEO* 9: 36–41.
- Bartmann, W. (1988) New observations on the Brazilian Merganser. *Wildfowl* 39: 7–14.
- Cohn-Haft, M., Whittaker, A. & Stouffer, P. C. (1997) A new look at the "species-poor" central Amazon: the avifauna north of Manaus, Brazil. *Orn. Monogr.* 48: 205–236.
- Collar, N. J., Gonzaga, L. G., Krabbe, N., Madroño Nieto, A., Naranjo, L. G., Parker, T. A. & Wege, D. C. (1992) *Threatened birds of the Americas: the ICBP/IUCN Red Data Book*. Cambridge, UK: International Council for Bird Preservation.
- Collar, N. J., Crosby, M. J. & Stattersfield, A. J. (1994) *Birds to watch 2: the world list of threatened birds*. Cambridge, UK: BirdLife International (Conservation Series 4).
- Forrester, B. C. (1993) *Birding Brazil: a checklist and site guide*. Irvine: John Geddes.
- Hayes, F. E. (1995) *Status, distribution and biogeography of the birds of Paraguay*. Colorado Springs: American Birding Association (Mon. Field Ornithol. 1).
- Instituto Brasileiro de Desenvolvimento Florestal (IBDF) & Fundação Brasileira para a Conservação da Natureza (1981) *Plano de manejo: Parque Nacional da Serra da Canastra*. Brasília, DF: Editora Gráfica Brasileira Ltda.
- Instituto Brasileiro de Geografia e Estatística (IBGE) (1995) *Cidades e vilas do Brasil*. Computer diskette.
- Parker T. A. & Willis, E. O. (1997) Notes on three tiny grassland flycatchers, with comments on the disappearance of South American fire-diversified savannas. *Orn. Monogr.* 48: 549–556.
- Pinto, O. M. O. (1944) *Catálogo das aves do Brasil e lista dos exemplares existentes na coleção do Departamento de Zoologia*, 2. São Paulo: Secretaria da Agricultura, Indústria e Comércio.
- Rensen, J. V. (1995) The importance of continued collecting of bird specimens to ornithology and bird conservation. *Bird Conserv. Internatn.* 5: 145–180.
- Ridgely, R. S. & Tudor, G. (1989) *The birds of South America*, 1. Austin: University of Texas Press.
- Ridgely, R. S. & Tudor, G. (1994) *The birds of South America*, 2. Austin: University of Texas Press.
- Sick, H. (1997) *Ornitologia brasileira*. Rio de Janeiro: Ed. Nova Fronteira.
- Silva, J. M. C. (1995) Birds of the cerrado region, South America. *Steenstrupia* 21: 69–92.
- Silveira, L. F. (1997) Population density and habitats requirements investigation of the Brazilian Merganser *Mergus octosetaceus* at Serra da Canastra National Park, Brazil. Unpublished report to Zoologische Gesellschaft Frankfurt.
- Wege, D. C. & Long, A. J. (1995) *Key Areas for threatened birds in the Neotropics*. Cambridge, UK: BirdLife International (Conservation Series 5).

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### Appendix 1. Species recorded in Serra da Canastra National Park and adjacent areas

| Family/Subfamily                                      | Status | Evidence | Rel. Ab. |
|---|--------|----------|----------|
| <b>TINAMIDAE (7)</b>                                  |        |          |          |
| <i>Crypturellus obsoletus</i> Brown Tinamou           |        | H, R, I  | U        |
| <i>Crypturellus parvirostris</i> Small-billed Tinamou |        | O, R     | C        |
| <i>Crypturellus tataupa</i> Tataupa Tinamou           |        | H, I     | U        |
| <i>Rhynchotus rufescens</i> Red-winged Tinamou        |        | P, R, I  | C        |
| <i>Nothura minor</i> <sup>bk</sup> Lesser Nothura     | V      | O, H, I  | R        |
| <i>Nothura maculosa</i> Spotted Nothura               |        | O, R, I  | C        |
| <i>Taoniscus nanus</i> Dwarf Tinamou                  | V      | R        | R        |
| <b>RHEIDAE (1)</b>                                    |        |          |          |
| <i>Rhea americana</i> Greater Rhea                    | NT     | P, I     | FC       |
| <b>PODICIPEDIDAE (1)</b>                              |        |          |          |
| <i>Tachybaptus dominicus</i> Least Grebe              |        | O, I     | FC       |

|   |              |                   |   |           |            |
|---|--------------|-------------------|---|-----------|------------|
| PHALACROCORACIDAE (1)                                       |              | SCOLOPACIDAE (1)  |   |           |            |
| <i>Phalacrocorax brasilianus</i> Neotropic Cormorant        | O, I         | FC                | <i>Gallinago paraguaiæ</i> Common Snipe                               | O, H, I   | U          |
| ANHINGIDAE (1)  |              | COLUMBIDAE (9)    |   |           |            |
| <i>Anhinga anhinga</i> Anhinga                              | O, I         | U                 | <i>Columba livia</i> Rock Dove  |           | O C        |
|   |              |                   | <i>Columba picazuro</i> Picazuro Pigeon                               | O, I      | C          |
|   |              |                   | <i>Columba cayennensis</i> Pale-vented Pigeon                         | O, R, I   | C          |
|   |              |                   | <i>Zenaida auriculata</i> Eared Dove                                  | O, I      | FC         |
|   |              |                   | <i>Columbina minuta</i> Plain-breasted Ground-dove                    | O, I      | R          |
|   |              |                   | <i>Columbina talpacoti</i> Ruddy Ground-dove                          | O, I      | C          |
|   |              |                   | <i>Scardafella squammata</i> Scaled Dove                              | O, R, I   | C          |
|   |              |                   | <i>Leptotila verreauxi</i> White-tipped Dove                          | O, R, I   | C          |
|   |              |                   | <i>Leptotila rufaxilla</i> Grey-fronted Dove                          | R, I      | FC         |
| THRESKIORNITHIDAE (1)                                       |              | PSITTACIDAE (8)   |   |           |            |
| <i>Theristicus caudatus</i> Buff-necked Ibis                | O, R, I      | FC                | <i>Propyrrhura maracana</i> Blue-winged Macaw                         | V O, R, I | R          |
|   |              |                   | <i>Aratinga leucophthalmus</i> White-eyed Parakeet                    | O, R, I   | C          |
|   |              |                   | <i>Aratinga auricapilla</i> <sup>sk</sup> Golden-capped Parakeet      | V O, R, I | C          |
|   |              |                   | <i>Aratinga aurea</i> Peach-fronted Parakeet                          | O, R, I   | C          |
|   |              |                   | <i>Pyrrhura frontalis</i> Reddish-bellied Parakeet                    | O, R, I   | C          |
|   |              |                   | <i>Forpus xanthopterygius</i> Blue-winged Parrotlet                   | O, R, I   | C          |
|   |              |                   | <i>Brotogeris chiriri</i> Yellow-chevroned Parakeet                   | O, R, I   | C          |
|   |              |                   | <i>Pionus maximiliani</i> Scaly-headed Parrot                         | O, R, I   | FC         |
| CICONIIDAE (1)  |              | CUCULIDAE (4)     |   |           |            |
| <i>Mycteria americana</i> Wood Stork                        |              | P R               | <i>Piaya cayana</i> Squirrel Cuckoo                                   |           | O, I C     |
|   |              |                   | <i>Crotaphaga ani</i> Smooth-billed Ani                               |           | O, H, I C  |
|   |              |                   | <i>Guira guira</i> Guira Cuckoo                                       |           | O, H, I C  |
|   |              |                   | <i>Tapera naevia</i> Striped Cuckoo                                   |           | O, R, I FC |
| CATHARTIDAE (3)   |              | TYTONIDAE (1)     |   |           |            |
| <i>Sarcoramphus papa</i> King Vulture                       |              | P, I C            | <i>Tyto alba</i> Barn Owl   |           | O FC       |
| <i>Coragyps atratus</i> Black Vulture                       |              | O, I C            |   |           |            |
| <i>Cathartes aura</i> Turkey Vulture                        |              | O, I C            |   |           |            |
| ANATIDAE (4)  |              | STRIGIDAE (4)     |   |           |            |
| <i>Dendrocygna viduata</i> White faced Whistling-duck       |              | O, R, I FC        | <i>Otus choliba</i> Tropical Screech-owl                              |           | H FC       |
| <i>Amazonetta brasiliensis</i> Brazilian Duck               |              | O, I FC           | <i>Bubo virginianus</i> Great Horned Owl                              |           | R, I U     |
| <i>Cairina moschata</i> Muscovy Duck                        |              | O R               | <i>Glaucidium brasilianum</i> Ferruginous Pygmy-owl                   |           | O, R, I C  |
| <i>Mergus octoseptaceus</i> Brazilian Merganser             | C P, R, I, 3 | FC                | <i>Speotyto cunicularia</i> Burrowing Owl                             |           | P, H, I C  |
| ACCIPITRIDAE (11)   |              | NYCTIBIIDAE (1)   |   |           |            |
| <i>Elanus leucurus</i> White-tailed Kite                    |              | O, I C            | <i>Nyctibius griseus</i> Common Potoo                                 |           | H U        |
| <i>Ictinia plumbea</i> Plumbeous Kite                       |              | O R               |   |           |            |
| <i>Geranoaetus melanoleucus</i> Black-chested Buzzard-eagle |              | P, I FC           |   |           |            |
| <i>Buteo albicaudatus</i> White-tailed Hawk                 |              | O, I C            |   |           |            |
| <i>Buteo brachyurus</i> Short-tailed Hawk                   |              | O, I FC           |   |           |            |
| <i>Rupornis magnirostris</i> Roadside Hawk                  |              | O, R, I C         |   |           |            |
| <i>Parabuteo unicinctus</i> Harris's Hawk                   |              | O, I R            |   |           |            |
| <i>Buteogallus meridionalis</i> Savanna Hawk                |              | O, I C            |   |           |            |
| <i>Buteogallus urubitinga</i> Great Black-hawk              |              | I, 5 -            |   |           |            |
| <i>Harpyhaliaetus coronatus</i> Crowned Eagle               |              | V O R             |   |           |            |
| <i>Circus buffoni</i> Long-winged Harrier                   |              | O, I R            |   |           |            |
| FALCONIDAE (6)  |              | CAPRIMULGIDAE (6) |   |           |            |
| <i>Herpetotheres cachinnans</i> Laughing Falcon             |              | O, R, I, 4 C      | <i>Chordeiles pusillus</i> Least Nighthawk                            |           | O, I FC    |
| <i>Milvago chimachima</i> Yellow-headed Caracara            |              | O, I C            | <i>Podager nacunda</i> Nacunda Nighthawk                              |           | O, I U     |
| <i>Milvago chimango</i> Chimango Caracara                   |              | O, I R            | <i>Nyctidromus albicollis</i> Pauraque                                |           | O, R, I C  |
| <i>Polyborus plancus</i> Crested Caracara                   |              | P, I C            | <i>Caprimulgus maculicaudus</i> Spot-tailed Nightjar                  |           | O, I U     |
| <i>Falco femoralis</i> Aplomado Falcon                      |              | O, I FC           | <i>Hydropsalis brasiliæna</i> Scissor-tailed Nightjar                 |           | O, I FC    |
| <i>Falco sparverius</i> American Kestrel                    |              | O, I C            | <i>Eleothreptus anomalus</i> Sickle-winged Nightjar                   | NT        | P R        |
| CRACIDAE (1)  |              | APODIDAE (4)      |   |           |            |
| <i>Penelope superciliosus</i> Rusty-margined Guan           |              | O, I U            | <i>Streptoprocne zonaris</i> White-collared Swift                     |           | O, R, I C  |
|   |              |                   | <i>Cypseloides senex</i> Great Dusky Swift                            |           | O, I U     |
|   |              |                   | <i>Cypseloides fumigatus</i> Sooty Swift                              |           | O, I U     |
|   |              |                   | <i>Chaetura andrei</i> Ashy-tailed Swift                              |           | O, I FC    |
| RALLIDAE (3)  |              | TROCHILIDAE (10)  |   |           |            |
| <i>Rallus nigricans</i> Blackish Rail                       |              | R U               | <i>Phaethornis pretrei</i> Planalto Hermit                            |           | O, R, I C  |
| <i>Aramides cajanea</i> Grey-necked Wood-rail               |              | O, R, I C         | <i>Eupetomena macroura</i> Swallow-tailed Hummingbird                 |           | O, I C     |
| <i>Gallinula chloropus</i> Common Moorhen                   |              | O, I FC           | <i>Colibri serrirostris</i> White-vented Violetear                    |           | O, R, I C  |
|   |              |                   | <i>Lophornis magnifica</i> <sup>sk</sup> Frilled Coquette             |           | O R        |
|   |              |                   | <i>Chlorostilbon aureoventris</i> Glittering-bellied Emerald          |           | O, I FC    |
|   |              |                   | <i>Thalurania furcata</i> Fork-tailed Woodnymph                       |           | O, I FC    |
|   |              |                   | <i>Thalurania glaucopsis</i> Violet-capped Woodnymph                  |           | I, 5 -     |
|   |              |                   | <i>Amazilia fimbriata</i> Glittering-throated Emerald                 |           | O U        |
|   |              |                   | <i>Heliomaster squamosus</i> <sup>sk</sup> Stripe-breasted Starthroat |           | O, I U     |
|   |              |                   | <i>Calliphlox amethystina</i> Amethyst Woodstar                       |           | O FC       |
| CHARADRIIDAE (1)  |              |                   |   |           |            |
| <i>Vanellus chilensis</i> Southern Lapwing                  |              | O, H, I C         |   |           |            |

|  |            |    |  |  |         |         |    |
|--|------------|----|--|--|---------|---------|----|
| TROGONIDAE (1)   |            |    |  | DENDROCOLAPTIDAE (4)   |         |         |    |
| <i>Trogon surrucura</i> Surucua Trogon                                 | R, P, I    | C  |  | <i>Sittasomus griseicapillus</i> Olivaceous Woodcreeper                      | O, R, I | C       |    |
| ALCEDINIDAE (3)  |            |    |  | <i>Dendrocolaptes platyrostris</i> Planalto Woodcreeper                      | O, I    | FC      |    |
| <i>Ceryle torquata</i> Ringed Kingfisher                               | O, I       | FC |  | <i>Lepidocolaptes angustirostris</i> Narrow-billed Woodcreeper               | O, R, I | C       |    |
| <i>Chloroceryle amazona</i> Amazon Kingfisher                          | O, R, I    | C  |  | <i>Lepidocolaptes squamatus</i> Scaled Woodcreeper                           | O, I    | U       |    |
| <i>Chloroceryle americana</i> Green Kingfisher                         | O, R, I    | C  |  | TYRANNIDAE (54)  |         |         |    |
| MOMOTIDAE (1)  |            |    |  | <i>Phyllomyias fasciatus</i> Planalto Tyrannulet                             | O, H    | U       |    |
| <i>Baryphthengus ruficapillus</i> Rufous-capped Motmot                 | O, I       | U  |  | <i>Camptostoma obsoletum</i> Southern Beardless-tyrannulet                   | O, R, I | C       |    |
| GALBULIDAE (1)   |            |    |  | <i>Suiriri suiriri</i> Campo Suiriri Flycatcher                              | 1, 2    | -       |    |
| <i>Galbula ruficauda</i> Rufous-tailed Jacamar                         | O, R, I    | FC |  | <i>Myiopagis caniceps</i> Grey Elaenia                                       | O, H, I | U       |    |
| BUCCONIDAE (1)   |            |    |  | <i>Elaenia flavogaster</i> Yellow-bellied Elaenia                            | O, R, I | C       |    |
| <i>Nystalus chacuru</i> White-eared Puffbird                           | O, I       | C  |  | <i>Elaenia mesoleuca</i> Olivaceous Elaenia                                  | 1, 4, 5 | -       |    |
| RAMPHASTIDAE (2)   |            |    |  | <i>Elaenia cristata</i> Plain-crested Elaenia                                | O, R, I | FC      |    |
| <i>Ramphastos dicolorus</i> Red-breasted Toucan                        | O, R, I    | U  |  | <i>Elaenia obscura</i> Highland Elaenia                                      | O, R, I | FC      |    |
| <i>Ramphastos toco</i> Toco Toucan                                     | O, R, I    | C  |  | <i>Elaenia chiriquensis</i> Lesser Elaenia                                   | O, R    | R       |    |
| PICIDAE (8)  |            |    |  | <i>Serpophaga nigricans</i> Sooty Tyrannulet                                 | O, R, I | C       |    |
| <i>Picumnus cirratus</i> White-barred Piculet                          | O, R, I    | C  |  | <i>Serpophaga subcristata</i> White-crested Tyrannulet                       | O, R, I | FC      |    |
| <i>Colaptes campestris</i> Campo Flicker                               | O, R, I    | C  |  | <i>Culicivora caudacuta</i> Sharp-tailed Tyrant                              | NT      | O, R, I | FC |
| <i>Colaptes melanochlorus</i> Green-barred Woodpecker                  | O, R, I    | C  |  | <i>Polystictus superciliosus</i> <sup>88*</sup> Grey-backed Tachuri          | NT      | P, I    | U  |
| <i>Celeus flavescens</i> Blond crested Woodpecker                      | P, R, I    | FC |  | <i>Mionectes rufiventris</i> Grey-hooded Flycatcher                          | O, R, I | C       |    |
| <i>Dryocopus lineatus</i> Lineated Woodpecker                          | O, R, I    | FC |  | <i>Leptopogon amaurocephalus</i> Sepia-capped Flycatcher                     | O, R, I | C       |    |
| <i>Melanerpes candidus</i> White Woodpecker                            | O, R, I    | C  |  | <i>Phylloscartes eximius</i> Southern Bristle-tyrant                         | NT      | O, R    | R  |
| <i>Veniliornis passerinus</i> Little Woodpecker                        | O, I       | C  |  | <i>Phylloscartes ventralis</i> Mottle-cheeked Tyrannulet                     | O, R, I | U       |    |
| <i>Campephilus robustus</i> Robust Woodpecker                          | O, R       | R  |  | <i>Capsiempis flaveola</i> Yellow Tyrannulet                                 | O, R, I | R       |    |
| RHINOCRYPTIDAE (2)   |            |    |  | <i>Corythopis delalandi</i> Southern Antpipit                                | O, R    | R       |    |
| <i>Melanopareia torquata</i> <sup>7</sup> Collared Crescentchest       | O, R       | C  |  | <i>Todirostrum poliocephalum</i> <sup>88*</sup> Yellow-lored Tody-flycatcher | O, R, I | C       |    |
| <i>Scytalopus novacapitalis</i> <sup>88*</sup> Brasilia Tapaculo       | V, P, R, I | C  |  | <i>Todirostrum cinereum</i> Common Tody-flycatcher                           | O, R, I | C       |    |
| THAMNOPHILIDAE (9)   |            |    |  | <i>Tolmomyias sulphurescens</i> Yellow-olive Flycatcher                      | O, R, I | C       |    |
| <i>Taraba major</i> Great Antshrike                                    | O, H       | FC |  | <i>Platyrinchus mystaceus</i> White-throated Spadebill                       | O, R, I | C       |    |
| <i>Thamnophilus punctatus</i> Eastern Slaty-antshrike                  | O, R, I    | FC |  | <i>Myiophobus fasciatus</i> Bran-coloured Flycatcher                         | O, R, I | C       |    |
| <i>Thamnophilus caerulescens</i> Variable Antshrike                    | O, R, I    | FC |  | <i>Lathrotriccus euleri</i> Euler's Flycatcher                               | O, R, I | FC      |    |
| <i>Thamnophilus torquatus</i> Large-billed Antshrike                   | O, R, I    | FC |  | <i>Pyrocephalus rubinus</i> Vermilion Flycatcher                             | O, I    | U       |    |
| <i>Dysithamnus mentalis</i> Plain Antvireo                             | O, R, I    | FC |  | <i>Xolmis cinerea</i> Grey Monjita   | O, R, I | C       |    |
| <i>Herpsilochmus atricapillus</i> Black-capped Antwren                 | 6          | -  |  | <i>Xolmis velata</i> White-rumped Monjita                                    | O, R, I | C       |    |
| <i>Herpsilochmus longirostris</i> <sup>7</sup> Large-billed Antwren    | O, R       | FC |  | <i>Knipolegus lophotes</i> Crested Black-tyrant                              | O, I    | C       |    |
| <i>Drymophila malura</i> Dusky-tailed Antbird                          | O, R       | R  |  | <i>Knipolegus nigerrimus</i> <sup>88*</sup> Velvety Black-tyrant             | O, I    | FC      |    |
| <i>Pyriglena leucoptera</i> White-shouldered Fire-eye                  | O, R, I    | C  |  | <i>Fluvicola nengeta</i> Masked Water-tyrant                                 | O, R, I | C       |    |
| CONOPOPHAGIDAE (1)   |            |    |  | <i>Colonia colonus</i> Long-tailed Tyrant                                    | O, R, I | C       |    |
| <i>Conopophaga lineata</i> Rufous Gnateater                            | O, R, I    | FC |  | <i>Alectrurus tricolor</i> Cock-tailed Tyrant                                | NT      | P, I    | C  |
| FURNARIIDAE (14)   |            |    |  | <i>Gubernetes yetapa</i> Streamer-tailed Tyrant                              | R, P, I | C       |    |
| <i>Geobates poecilopterus</i> <sup>7</sup> Campo Miner                 | O, I       | R  |  | <i>Satrapa icterophrys</i> Yellow-browed Tyrant                              | O, I    | FC      |    |
| <i>Furnarius rufus</i> Rufous Hornero                                  | O, R, I    | C  |  | <i>Hirundinea ferruginea</i> Cliff Flycatcher                                | O, R, I | FC      |    |
| <i>Synallaxis spixi</i> Spix's Spinetail                               | O, R, I    | C  |  | <i>Machetornis rixosus</i> Cattle Tyrant                                     | O, I    | C       |    |
| <i>Synallaxis ruficapilla</i> Rufous-capped Spinetail                  | O, R       | U  |  | <i>Sirystes sibilator</i> Sirystes   | O, R, I | U       |    |
| <i>Synallaxis frontalis</i> Sooty-fronted Spinetail                    | O, R, I    | C  |  | <i>Myiarchus ferox</i> Short-crested Flycatcher                              | O, R, I | C       |    |
| <i>Synallaxis albenscens</i> Pale-breasted Spinetail                   | O, R, I    | FC |  | <i>Myiarchus tyrannulus</i> Brown-crested Flycatcher                         | O, H, I | FC      |    |
| <i>Synallaxis cinerascens</i> Grey-bellied Spinetail                   | O, R       | U  |  | <i>Myiarchus swainsoni</i> Swainson's Flycatcher                             | O, H, I | U       |    |
| <i>Phacellodomus rufifrons</i> Common Thornbird                        | O, R, I    | C  |  | <i>Pitangus sulphuratus</i> Great Kiskadee                                   | O, H, I | C       |    |
| <i>Anumbius anumbi</i> Firewood-gatherer                               | O, I       | C  |  | <i>Megarynchus pitangua</i> Boat-billed Flycatcher                           | O, R, I | C       |    |
| <i>Philydor dimidiatus</i> <sup>7</sup> Russet-mantled Foliage-gleaner | 1, 6       | NT |  | <i>Myiozetetes similis</i> Social Flycatcher                                 | O, H, I | C       |    |
| <i>Philydor rufus</i> Buff-fronted Foliage-gleaner                     | O, R, I    | U  |  | <i>Myiodynastes maculatus</i> Streaked Flycatcher                            | O, R    | FC      |    |
| <i>Automolus leucophthalmus</i> White-eyed Foliage-gleaner             | O          | U  |  | <i>Legatus leucophaeus</i> Piratic Flycatcher                                | O, R, I | U       |    |
| <i>Xenops rutilans</i> Streaked Xenops                                 | O, R, I    | U  |  | <i>Empidonomus varius</i> Variegated Flycatcher                              | O, R    | FC      |    |
| <i>Lochmias nematura</i> Sharp-tailed Streamcreeper                    | O, R, I    | C  |  | <i>Griseotyrannus aurantioatrocristatus</i> Crowned Slaty Flycatcher         | O       | R       |    |
|  |            |    |  | <i>Tyrannus savana</i> Fork-tailed Flycatcher                                | O, H, I | C       |    |
|  |            |    |  | <i>Tyrannus melancholicus</i> Tropical Kingbird                              | O, H, I | C       |    |
|  |            |    |  | <i>Tyrannus albogularis</i> White-throated Kingbird                          | O, R, I | FC      |    |
|  |            |    |  | <i>Pachyrhamphus castaneus</i> Chestnut-crowned Becard                       | O, I    | R       |    |
|  |            |    |  | <i>Pachyrhamphus polychopterus</i> White-winged Becard                       | O, R, I | FC      |    |
|  |            |    |  | <i>Tityra cayana</i> Black-tailed Tityra                                     | O, R    | R       |    |
|  |            |    |  | PIPRIDAE (3)   |         |         |    |
|  |            |    |  | <i>Antilophia galeata</i> <sup>7</sup> Helmeted Manakin                      | O, R, I | C       |    |
|  |            |    |  | <i>Ilicura militaris</i> <sup>88*</sup> Pin-tailed Manakin                   | O, R, I | U       |    |
|  |            |    |  | <i>Manacus manacus</i> White-bearded Manakin                                 | O       | U       |    |

|   |            |         |    |   |         |         |   |
|---|------------|---------|----|---|---------|---------|---|
| COTINGIDAE (1)  |            |         |    | EMBERIZINAE (21)  |         |         |   |
| <i>Pyroderus scutatus</i> Red-ruffed Fruitcrow                      | R, P, I    | C       |    | <i>Zonotrichia capensis</i> Rufous-collared Sparrow                                       | O, R, I | C       |   |
| HIRUNDINIDAE (7)  |            |         |    | <i>Ammodramus humeralis</i> Grassland Sparrow   | O, R, I | C       |   |
| <i>Tachycineta albiventer</i> White-winged Swallow                  | O          | C       |    | <i>Haplospiza unicolor</i> Uniform Finch  | O, R    | R       |   |
| <i>Tachycineta leucarrhoa</i> White-rumped Swallow                  | O, I       | FC      |    | <i>Donacospiza albifrons</i> Long-tailed Reed Finch                                       | O       | R       |   |
| <i>Phaeoprogne tapera</i> Brown-chested Martin                      | O, R, I    | C       |    | <i>Sicalis citrina</i> Striped-tailed Yellow-finch  | O, R, I | C       |   |
| <i>Pragne chalybea</i> Grey-breasted Martin                         | O, R, I    | C       |    | <i>Sicalis flaveola</i> Saffron Finch   | O, R, I | C       |   |
| <i>Notiochelidon cyanoleuca</i> Blue-and-white Swallow              | P, I       | C       |    | <i>Sicalis luteola</i> Grassland Yellow-finch   | O, I    | U       |   |
| <i>Alopochelidon fucata</i> Tawny-headed Swallow                    | O, I       | R       |    | <i>Emberizoides herbicola</i> Wedge-tailed Grass-finch                                    | O, R, I | C       |   |
| <i>Stelgidopteryx ruficollis</i> Southern Rough-winged Swallow      | O, R, I    | C       |    | <i>Embernagra platensis</i> Great Pampa-finch   | O, R, I | C       |   |
| CORVIDAE (2)  |            |         |    | <i>Volatinia jacarina</i> Blue-black Grassquit  | O, H, I | C       |   |
| <i>Cyanocorax cristatellus</i> Curl-crested Jay                     | O, R, I    | C       |    | <i>Sporophila plumbea</i> Plumbeous Seedeater   | O, R, I | R       |   |
| <i>Cyanocorax chrysops</i> Plush-crested Jay                        | O, I       | U       |    | <i>Sporophila lineola</i> Lined Seedeater   | O, R    | U       |   |
| TROGLODYTIDAE (3)   |            |         |    | <i>Sporophila nigricollis</i> Yellow-bellied Seedeater                                    | O, R, I | C       |   |
| <i>Donacobius atricapillus</i> Black-capped Donacobius              | O, R, I    | C       |    | <i>Sporophila caerulescens</i> Double-collared Seedeater                                  | O, H, I | FC      |   |
| <i>Cistothorus platensis</i> Grass Wren                             | O, R, I    | C       |    | <i>Sporophila leucoptera</i> White-bellied Seedeater                                      | O, I    | U       |   |
| <i>Troglodytes aedon</i> House Wren                                 | O, H, I    | C       |    | <i>Sporophila bouvreuil</i> Capped Seedeater  | O, R, I | FC      |   |
| MUSCICAPIDAE / TURDINAE (3)   |            |         |    | <i>Sporophila hypochroma</i> Rufous-rumped Seedeater                                      | NT      | O       | R |
| <i>Turdus rufiventris</i> Rufous-bellied Thrush                     | O, H, I    | C       |    | <i>Sporophila melanogaster</i> <sup>BR</sup> Black-bellied Seedeater                      | NT      | O       | R |
| <i>Turdus leucamelas</i> Pale-breasted Thrush                       | O, H, I    | C       |    | <i>Arremon flavirostris</i> Saffron-billed Sparrow  | O, R, I | U       |   |
| <i>Turdus amaurochalinus</i> Creamy-bellied Thrush                  | O, H, I    | FC      |    | <i>Coryphospiza melanotis</i> Black-masked Finch  | V       | O, R, I | U |
| MIMIDAE (1)   |            |         |    | <i>Coryphospingus pileatus</i> Grey Pileated Finch  | O, I    | FC      |   |
| <i>Mimus saturninus</i> Chalk-browed Mockingbird                    | O, H, I    | C       |    | CARDINALINAE (4)  |         |         |   |
| MOTACILLIDAE (3)  |            |         |    | <i>Saltator similis</i> Green-winged Saltator   | O, R, I | C       |   |
| <i>Anthus hellmayri</i> Hellmayr's Pipit                            | I, 2, 4, 5 | -       |    | <i>Saltator atricollis</i> Black-throated Saltator  | O, R, I | C       |   |
| <i>Anthus lutescens</i> Yellowish Pipit                             | O, R, I    | FC      |    | <i>Passerina brissonii</i> Ultramarine Grosbeak   | O, I    | FC      |   |
| <i>Anthus nattereri</i> Ochre-breasted Pipit                        | E          | P, R    | R  | <i>Porphyrospiza caerulescens</i> Blue Finch  | NT      | O, I    | R |
| VIREONIDAE (3)  |            |         |    | ICTERINAE (6)   |         |         |   |
| <i>Cyclarhis gujanensis</i> Rufous-browed Peppershrike              | O, H, I    | C       |    | <i>Psarocolius decumanus</i> Crested Oropendola   | O, R, I | C       |   |
| <i>Vireo chivi</i> Chivi Vireo                                      | O, R       | FC      |    | <i>Agelaius ruficapillus</i> Chestnut-capped Blackbird                                    | O       | C       |   |
| <i>Hylophilus amaurocephalus</i> Grey-eyed Greenlet                 | O, H, I    | U       |    | <i>Pseudoleistes guirahuro</i> Yellow-rumped Marshbird                                    | O, R, I | C       |   |
| EMBERIZIDAE/PARULINAE (5)   |            |         |    | <i>Gnorimopsar chopi</i> Chopi Blackbird  | O, R, I | C       |   |
| <i>Parula pitayumi</i> Tropical Parula                              | O, R, I    | C       |    | <i>Molothrus bonariensis</i> Shiny Cowbird  | O, I    | C       |   |
| <i>Geothlypis aequinoctialis</i> Masked Yellowthroat                | O, H, I    | FC      |    | <i>Scaphidura aryzivora</i> Giant Cowbird   | O       | R       |   |
| <i>Basileuterus culicivorus</i> Golden-crowned Warbler              | O, R, I    | C       |    | FRINGILLIDAE (1)  |         |         |   |
| <i>Basileuterus leucophrys</i> <sup>BR*</sup> White-striped Warbler | O, R, I    | FC      |    | <i>Carduelis magellanicus</i> Hooded Siskin   | O, R, I | FC      |   |
| <i>Basileuterus leucoblepharus</i> White-rimmed Warbler             | O, R, I    | C       |    | PASSERIDAE (1)  |         |         |   |
| COEREBINAE (1)  |            |         |    | <i>Passer domesticus</i> House Sparrow  | O, H, I | C       |   |
| <i>Coereba flaveola</i> Bananaquit                                  | O, R, I    | C       |    | Key:  |         |         |   |
| THRAUPINAE (18)   |            |         |    | <sup>BR</sup> denotes a Brazilian endemic (13) <sup>5</sup> .                             |         |         |   |
| <i>Schistochlamys ruficapillus</i> Cinnamon Tanager                 | O, R, I    | FC      |    | * denotes a species endemic (12) to the cerrado region <sup>6</sup> .                     |         |         |   |
| <i>Neothraupis fasciata</i> White-banded Tanager                    | NT         | O, R, I | R  | Status (following Collar et al. <sup>5</sup> ): C = Critical (one); E = Endangered (one); |         |         |   |
| <i>Cypsnagra hirundinacea</i> White-rumped Tanager                  | NT         | O, R, I | FC | V = Vulnerable (seven); and NT = Near-threatened (12).                                    |         |         |   |
| <i>Cissopis leveriana</i> Magpie Tanager                            | O, R, I    | C       |    | Evidence type: O = sight record; P = photographed; H = heard; R = tape-                   |         |         |   |
| <i>Thlypopsis sordida</i> Orange-headed Tanager                     | O, I       | U       |    | recorded; I = record in Forrester <sup>4</sup> ; 2 = recorded by José Fernando Pacheco    |         |         |   |
| <i>Hemithraupis ruficapilla</i> <sup>BR</sup> Rufous-headed Tanager | O, I       | FC      |    | 3 = recorded by Bartmann <sup>2</sup> ; 4 = recorded by Rose Ann Rowlett;                 |         |         |   |
| <i>Nemosia pileata</i> Hooded Tanager                               | O, I       | FC      |    | 5 = recorded by Derek Scott and Luiz Antônio Pedreira Gonzaga;                            |         |         |   |
| <i>Tachyphonus coronatus</i> Ruby-crowned Tanager                   | O, R, I    | C       |    | 6 = tape-recorded by Bret Whitney.  |         |         |   |
| <i>Trichothraupis melanops</i> Black-goggled Tanager                | O          | R       |    | Relative abundance (Rel. Ab.) based on the author's observations:                         |         |         |   |
| <i>Piranga flava</i> Hepatic Tanager                                | O          | FC      |    | C = common (recorded on all visits); FC = fairly common (recorded on at                   |         |         |   |
| <i>Thraupis sayaca</i> Sayaca Tanager                               | O, I       | C       |    | least half of all visits); U = uncommon (recorded on less than half of all                |         |         |   |
| <i>Thraupis palmarum</i> Palm Tanager                               | O, I       | C       |    | visits); R = rare (recorded 1–2 occasions during all visits, and including                |         |         |   |
| <i>Euphonia chlorotica</i> Purple-throated Euphonia                 | O, R       | C       |    | some migrant species)   |         |         |   |
| <i>Tangara cyanoventris</i> <sup>BR</sup> Gilt-edged Tanager        | O, I       | C       |    |   |         |         |   |
| <i>Tangara cayana</i> Burnished-buff Tanager                        | O, R, I    | C       |    |   |         |         |   |
| <i>Dacnis cayana</i> Blue Dacnis                                    | O, R, I    | C       |    |   |         |         |   |
| <i>Conirostrum speciosum</i> Chestnut-vented Conebill               | O, I       | R       |    |   |         |         |   |
| <i>Tersina viridis</i> Swallow Tanager                              | O, R, I    | C       |    |   |         |         |   |