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Biogeography

A compilation of the birds of La Libertad Region, Peru

Una recopilación de las aves de la región de La Libertad, Perú

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Abstract

We present a list of the species of birds that have been recorded in La Libertad Region, a highly diverse semi-arid region located in northwestern Peru. Records are based on field observations, literature research, and databases of scientific collections. We recorded a total of 484 species in this region. These include 45 endangered species, and 42 species endemic to Peru. This list is intended as a guide for future programs of management and conservation of biodiversity in the region.

Keywords: Birds; Checklist; Northwestern Peru; Ecoregions

Resumen

Presentamos una lista de las especies de aves que han sido documentadas en la región de La Libertad, una región semi-árida muy diversa situada en el noroeste de Perú. Los registros se basan en observaciones de campo, revisión de literatura y bases de datos de colecciones científicas. Se registró un total de 484 especies en esta región. Estos registros incluyen 45 especies amenazadas y 42 endémicas de Perú. Esta lista pretende ser una guía para futuros programas de manejo y conservación de la biodiversidad para la región.

Palabras clave: Avifauna; Listado; Noroeste de Perú; Ecorregiones

Introduction

Lists of bird species that inhabit a region are fundamental tools for the synthesis of knowledge of biodiversity in a specific geographical area, but also are the basis for further studies in systematics, taxonomy, distribution, evolution, and conservation. Checklists are especially useful in protected areas, and they provide significant information on the distribution and migration patterns of different species of birds (e.g., Álvarez & Iannacone, 2008; Núñez-Zapata & Tiravanti, 2012; Quiñonez & Tello, 2011; Sullivan et al., 2009; Witt & Lane, 2009).

Peru holds one of the most diverse bird faunas in the world (Myers, Mittermeier, Mittermeier, da Fonseca, & Kent, 2000). Its study started early in the ornithological exploration of the Neotropics (Franke, 2007), and has been extensive since the 1960s, increasing the records of birds for different regions (Fjeldså, 1993; Gonzáles & Málaga, 1997; Graham, Graves, Schulenberg, & O'Neill, 1980; Hughes, 1970; Parker & O'Neill, 1985; Parker, 1982; Terborgh, Fitzpatrick, & Emmons, 1984; Walker, Stotz, Pequeño, & Fitzpatrick, 2006). Main products of this continuous survey work are general publications and

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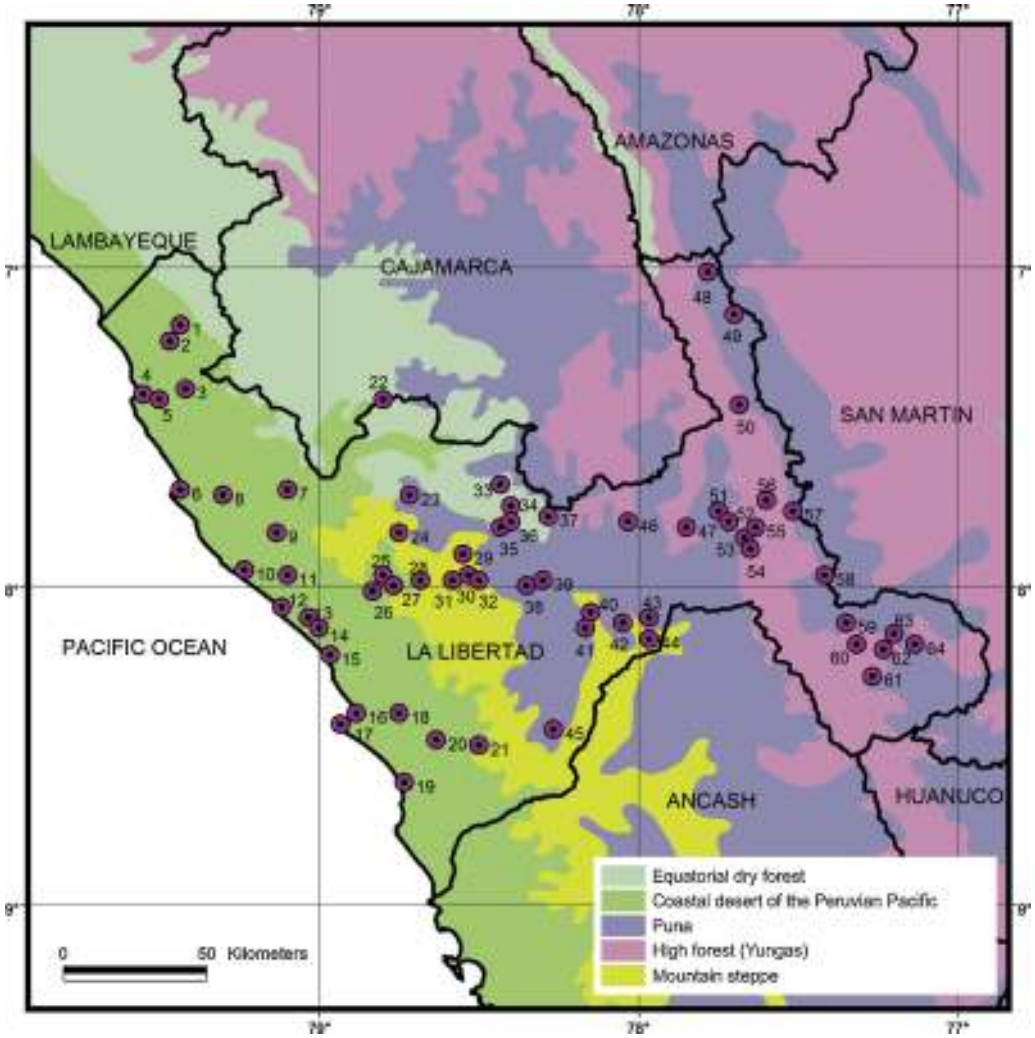

Figure 1. Map of La Libertad Region (Peru) with localities where studies or collections of birds were carried out. 1. Algarrobal El Moro (07°11′ S, 79°26′ W), 2. Guadalupe (07°14′ S, 79°28′ W), 3. ACPB El Cañoncillo (07°23′ S, 79°25′ W), 4. Pacasmayo (07°24′ S, 79°33′ W), 5. San Pedro de Lloc (07°25′ S, 79°30′ W), 6. Malabrigo-El Tubo (07°42′ S, 79°26′ W), 7. Ascope (07°42′ S, 79°06′ W), 8. Paijan (07°43′ S, 79°18′ W), 9. Chicama (07°50′ S, 79°08′ W), 10. El Brujo (07°57′ S, 79°14′ W), 11. Cerro Campana (07°58′ S, 79°06′ W), 12. Huanchaco (08°04′ S, 79°07′ W), 13. Trujillo (08°06′ S, 79°02′ W), 14. Moche (08°08′ S, 79°00′ W), 15. Salaverry (08°13′ S, 78°58′ W), 16. Puerto Morin (08°24′ S, 78°53′ W), 17. Cerro Negro (08°26′ S, 78°56′ W), 18. Viru (08°24′ S, 78°45′ W), 19. Chao (08°37′ S, 78°44′ W), 20. Laramie (08°29′ S, 78°38′ W), 21. Huamanzaña (08°30′ S, 78°30′ W), 22. Bosque de Cachil (07°25′ S, 78°48′ W), 23. Llaguen (07°43′ S, 78°43′ W), 24. Sinsicap (07°50′ S, 78°45′ W), 25. Simbal (07°58′ S, 78°48′ W), 26. Menocucho (08°01′ S, 78°50′ W), 27. Poroto (08°00′ S, 78°46′ W), 28. Samne (07°59′ S, 78°41′ W), 29. Otuzco (07°54′ S, 78°33′ W), 30. Agallpampa (07°58′ S, 78°32′ W), 31. Milluachaqui (07°59′ S, 78°35′ W), 32. Motil (07°59′ S, 78°30′ W), 33. Huaranchal (07°41′ S, 78°26′ W), 34. Chuquizonco (07°45′ S, 78°24′ W), 35. Charat (07°49′ S, 78°26′ W), 36. Usquil (07°48′ S, 78°24′ W), 37. Shitauar (07°47′ S, 78°17′ W), 38. Shorey (08°00′ S, 78°21′ W), 39. Quiruvilca (07°59′ S, 78°18′ W), 40. Cachicadan (08°05′ S, 78°09′ W), 41. Santiago de Chuco (08°08′ S, 78°10′ W), 42. Angasmarca (08°07′ S, 78°03′ W), 43. Tulpo (08°06′ S, 77°58′ W), 44. Mollebamba (08°10′ S, 77°58′ W), 45. Calipuy (08°27′ S, 78°16′ W), 46. Huamachuco (07°48′ S, 78°02′ W), 47. Cochabamba (07°49′ S, 77°51′ W), 48. Las Quinuas (07°01′ S, 77°47′ W), 49. Bolívar (07°09′ S, 77°42′ W), 50. Bambamarca (07°26′ S, 77°41′ W), 51. El Molino (07°46′ S, 77°45′ W), 52. Aricapampa (07°48′ S, 77°43′ W), 53. Soquian (07°51′ S, 77°40′ W), 54. Succha (07°53′ S, 77°39′ W), 55. Chagual (07°49′ S, 77°38′ W), 56. Pataz (07°44′ S, 77°36′ W), 57. Chigualen (07°46′ S, 77°31′ W), 58. Parcoy (07°58′ S, 77°25′ W), 59. Buldibuyo (08°07′ S, 77°21′ W), 60. Huaylillas (08°11′ S, 77°19′ W), 61. Tayabamba (08°17′ S, 77°16′ W), 62. Mashua (08°12′ S, 77°14′ W), 63. Cumpang (08°09′ S, 77°12′ W), 64. Utcubamba (08°11′ S, 77°08′ W). Ecoregions follow official names provided by MINAM and described in Material and methods section.

annotated field-guides of birds of the whole country (Clements & Shany, 2001; Schulenberg, Stotz, Lane, O'Neill, & Parker III, 2007), which include distributional information about species and notes on their ecology, behavior, and taxonomy. However, biological surveys have been geographically uneven, being more frequent in the Andes and the Amazonian regions, while other areas remain little or unexplored (Mark, Augustine, Barrio, Flanagan, & Vellinga, 2008).

La Libertad is a region of the northwestern section of the country (Fig. 1) where few studies of birds have been performed; most of those have concentrated on the coast (Becerra, 1981; Meléndez, 1976; Pollack-Velásquez et al., 2003; Vallejos-Vardales, Saldaña-Ugaz, Pollack-Velásquez, & Tiravanti, 2013), therefore there is only limited information about birds of the other ecosystems in the area. This broad area is the southern limit for many bird species characteristic of the Tumbesian region,

while on its eastern side occur taxa restricted to the Marañón basin and the central Andes (Flanagan, Franke, & Salinas, 2005; Valqui, 2004), conferring this region a special biological significance.

In this contribution we report the first compilation of birds present in La Libertad. The list is based on several sources of information (scientific literature, museum collections, and extensive field work by the authors); we also highlight some aspects on the general distribution of species, endemism, and the species facing threats.

Material and methods

La Libertad Region (Fig. 1) is located in northwestern Peru, between 6°56′38″ and 8°58′40″ S, 79°27′9″ and 79°41′18″ W, with a total area of 25,569 km^2 and elevations ranging from sea level to 4,730 m (Banco Central de Reserva del Perú, 2004; Gastelo, Alva, del Busto, Kauffmann, & Vásquez, 2004). For better observation of the data in a biogeographic context, the region was subdivided following the last update of the "Ecoregions of Peru" provided by the Ministerio de Ambiente (2011). This subdivision is based on Brack (1986), who considered a total of 11 ecoregions in Peru based on bioclimates, soil, vegetation, and chorology of important species of flora and fauna data. According to MINAM, 5 of these ecoregions converge in La Libertad: (1) Bosque Seco Ecuatorial (*Equatorial Dry Forest* – EDF), which includes mangrove forest; (2) Desierto del Pacífico (*Pacific Desert* – PD), with desert vegetation in coastal hills and riparian formations; (3) Serranía Esteparia (*Andean steppe* – AS) which includes seasonally dry tropical forest, sub-xerophytic relict forests, and montane cloud forests in western Andes, and (4) Puna (*Puna* – P), which occurs above 3,800 m and is mostly covered by grasses and some patches of quinual trees (*Polylepis* spp.); and (5) Selva Alta or Yungas (*Yungas* – Y), a sub-humid rainforests, observable throughout most of the premountain-mountain stratum in the Andean Amazon, and includes mountain rainforest and premountain humid forest in the eastern Andes. Detailed descriptions of the ecoregions' attributes are available in Reynel, Pennington, and Särkinen (2013).

Field trips and observational surveys in different localities, mainly on the coast and the western slope of Andes, were carried out from January 1998 to December 2012 (Fig. 1); species records are supported by observations, sound recordings, specimens, and/or photographs. The information was supplemented with records from the scientific literature (e.g., Mark et al., 2008; Pollack-Velásquez, Zelada, Medina, & Tiravanti, 2009; Salvin, 1895) and records obtained from natural history museums databases: Louisiana Museum of Natural History (LSUMZ); Museum of Vertebrate Zoology, University of California, Berkeley (MVZ); Field Museum of Natural History (FMNH); Muséum National d'Histoire Naturelle (MNHN); Academy of Natural Sciences (ANSP); and Centro de Ornitología y Biodiversidad (CORBIDI) in Lima. Additional information was obtained from revision of theses, congress proceedings, and technical reports (see Appendix), which were carefully analyzed to avoid including dubious uncertain data.

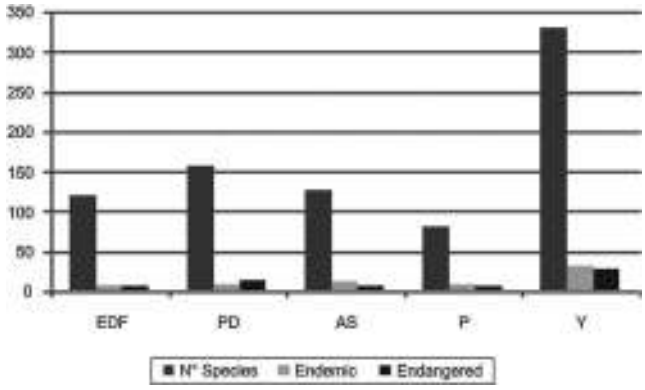

Figure 2. Number of species from La Libertad by ecoregion.

Scientific names and taxonomic order follow the current version of the South American Classification Committee (SACC; Remsen et al., 2015), with exceptions in some species of doubtful taxonomic status. The conservation status of the species follows BirdLife International (2015a), and the current Peruvian legislation (Ministerio de Agricultura, 2014). The general distribution of species was compared with the maps by Ridgely and Tudor (1994), Schulenberg et al. (2007), and BirdLife International (2015a).

Results

A total of 484 species belonging to 63 families (Appendix) was recorded for La Libertad. Greater than 85% of the species records are supported by a voucher specimen, 37% of species were observed in field, and fewer than 4% of the records were solely documented in unpublished theses or technical reports. The vast majority of species have resident populations (>90%), but we also recorded species that are austral or boreal migrants (∼8%).

Species richness is uneven between ecoregions; the Peruvian Yungas host the highest number of species (≈70%) whereas the other ecoregions host between 14% and 34% of species (Fig. 2). At the same time, important numbers of endemic and endangered species have been documented. A total of 42 Peruvian endemic species (8.7% of the total) have been reported in the region, with a large majority (30) recorded on the Peruvian Yungas. Further, 45 species (9.3% of the total) are considered in different categories of risk according to either BirdLife International (2015a), or Peruvian legislation (Ministerio de Agricultura, 2014).

Discussion

La Libertad represents 2% of the total area of the country, but hosts approximately 40% of the birds that have been recorded in Peru. Although this number is not comparable with Amazonian biodiversity (Patterson, Stotz, Solari, Fitzpatrick, & Pachecho, 1998; Terborgh et al., 1984), the extension of the territory and the different ecosystems that it holds play an important role in conservation and sustainability of avian populations. In this study we did not include sea birds because of the lack of precise documentation of records, but distributional maps in Schulenberg

et al. (2007) document several species (∼30) that are potentially present along the coastline of the region.

Extension of distributional ranges

The known distribution range was increased significantly for populations of some species detected in La Libertad. Cactus Canastero (*Pseudasthenes cactorum*) and Great Inca-finch (*Incaspiza pulchra*) are two clear examples of northward range extensions (Núñez-Zapata & Tiravanti, 2012). A main factor explaining our ignorance on the distribution of species is the lack of studies in similar areas. As another example, LoPresti and Angulo-Pratolongo (2014) recently reported new coastal localities for the Great Inca-finch and the Masked Duck (*Nomonyx dominicus*). For other species that we report herein (e.g., *Forpus xanthopterygius*, *Glaucidium brasilianum*, *Tangara chilensis*, *Tangara schrankii*, *Dacnis cayana*, *Thraupis palmarum*, *Dixiphia pipra*, and *Cardellina canadensis*), published distribution maps (Schulenberg et al., 2007) exclude La Libertad, but our data confirm that these species are present in the region, occupying a thin strip along the eastern boundary of the region (e.g., Tayabamba, Mashua, Cumpang, and Utcubamba).

Endangered species and endemism

Although La Libertad hosts fewer than 3% of the endangered bird species listed for Peru, it includes 45 species of national and worldwide conservation concern. There are incompatibilities between threatened status of species (Appendix); BirdLife International (2015a) consider 43 threatened species, whereas the Ministerio de Agricultura (2014) consider only 33. Following BirdLife International (2015a), which takes into account the global population distribution, no species is considered critically endangered, but 9 species are "endangered", 12 are "vulnerable", and 22 are "near threatened" (Appendix); the other 2 species (*Sula variegata* and *Falco peregrinus*), considered as "least concern", are listed (as endangered and near threatened, respectively) by the Ministerio de Agricultura (2014). Moreover, some of these taxa are also endemic to Peru (e.g., *Aglaeactis aliciae*, *Aulacorhynchus huallagae*, *Synallaxis zimmeri*, *Thripophaga berlepschi*, *Myiarchus semirufus*, *Phytotoma raimondii*, *Cnemathraupis aureodorsalis*, *Poospiza alticola*, and *Poospiza rubecula*). In the last 10 years, the number of threatened species of birds inhabiting La Libertad have increased; comparisons of Peruvian legislation for two periods (Ministerio de Agricultura, 2004, 2014) added six more species (indicated in Appendix with ‡); however, few of these decisions are based on scientific studies due to the lack of detailed biological information for most of the species listed.

Although Peruvian endemic species represent a small percentage of the regional list, fewer than 3% of total Peruvian birds, they account for close to 45% of the total endemic Peruvian avifauna (Angulo-Pratolongo, 2009). However, four of these species have a higher degree of importance because their populations are almost exclusively restricted to La Libertad (Schulenberg et al., 2007): Yellow-faced Parrotlet (*Forpus xanthops*), Purple-backed Sunbeam (*A. aliciae*), Great Spinetail (*Synallaxis hypochondriaca*), and Unicolored Tapaculo (*Scytalopus unicolor*). The remaining endemic species (e.g., *P. raimondii*, *Incaspiza personata*, and *S. zimmeri*) are shared with nearby regions (e.g., Ancash, Lambayeque, Cajamarca, and Lima); however, it is still necessary to perform ecological studies to determine the population sizes and health of these remarkable taxa in the region.

Our list also includes some species that could be considered as vagrants or accidentals to the region. This is the case of the Masked Duck (*Nomonyx dominicus*) and the White Ibis (*Eudocimus albus*), which were only observed occasionally by our team during field trips. Populations of these species commonly occupy other Peruvian ecosystems such as mangroves or Amazonian lowland forest (Clements & Shany, 2001; Schulenberg et al., 2007). Although the records included only a single individual per species, future records of other similar species or a greater number of individuals could indicate substantial changes in the distributional ecology of these species.

Taxonomic considerations

Conservation biology is linked inextricably with systematic biology. A correct taxonomic identification of birds is a vital step toward investigating further aspects of the biology of these organisms (Cotterill, 1995). During the revision of this manuscript we found some incompatibilities between current SACC (Remsen et al., 2015) names, BirdLife International (2015a) proposal for the nomenclature of endangered taxa, and the other sources of information. Moreover, use of molecular data in recent taxonomic studies involving birds of Peru (e.g., Bonaccorso, Guayasamin, Peterson, & Navarro-Sigüenza, 2011; Derryberry et al., 2010) is modifying the current systematics, and therefore the species delimitation and formal names of birds. As a result, the number of species found in La Libertad may vary due to species splits. For example, some taxa present in the region; may be added, such as the toucanets *Aulacorhynchus atrogularis* and *Aulacorhynchus cyanolaemus*, now considered as different species level taxa from *Aulacorhynchus prasinus* (Bonaccorso et al., 2011; del Hoyo & Collar, 2014; Puebla-Olivares et al., 2008). Similarly, the Blue-cowled barbet (*Eubucco steerii*) is considered as a different taxon from the Versicolored barbet (*Eubucco versicolor*; BirdLife International, 2015b) based on the discrete variation of color patterns (del Hoyo & Collar, 2014). Other names of birds present at La Libertad only have to be updated and replaced, such as *Psittacara wagleri* by *Psittacara frontalis*, or *Pionus tumultuosus* by *Pionus seniloides*; in both cases BirdLife International (2015a) suggested the latter names based on their distribution, although SACC considers both cases as the same species, or concludes that additional studies are needed (Remsen et al., 2015).

Biogeography

For a better interpretation of birds in a biogeographical context, we used ecoregions, which are defined as relatively large units of land containing a distinct assemblage of natural communities and species that share similar environmental conditions

and interact ecologically for long-term persistence (Morrone & Escalante, 2012; Olson et al., 2001). Several systems of classification have been proposed for ecoregions of Peru (see Reynel et al., 2013); however, one of the most used is the proposal of Brack (1986) due to its clear representation of the biomes in the country, the use of bioclimatic and corologic data as criteria, and a continuous updating; furthermore, this map is suggested as the main consensus classification of ecoregions in Peru (Ministerio de Ambiente, 2011). Other similar maps, which were partially congruent with our designation, were not used given that they did not consider appropriate local information (Terrestrial Ecoregions of the World; Olson et al., 2001), or include ecoregions with controversial status (e.g., paramos, Reynel et al., 2013; Zamora, 1996).

Yungas is the ecoregion of most special interest for birds in La Libertad, considering the number of species (∼70% of the total) and endemic taxa (31 species, most of them in the cloud forests) recorded (Fig. 2). This ecoregion includes the Marañón Valley, which is considered one of the most important biogeographic boundaries in the Andes due to its environmental complexity, and because it harbors a very unique biodiversity for several taxa (Angulo-Pratolongo, Palomino, Arnal, Aucca, & Uchofen, 2008; Koch, 2014; Särkinen et al., 2011; Venegas, Townsend, Koch, & Böhme, 2008). The Marañón Valley, considered also as a different ecoregion by other authors (Olson et al., 2001; Reynel et al., 2013), apparently limits the distribution of several species of birds (e.g., *F. xanthops* and *S. hypochondriaca*) from the north-central Andes, and creates an important area of endemism (Barrio, 2007; Mark et al., 2008; Valqui, 2004). The Yungas ecoregion also includes cloud forests to the southeast, the area with the highest species richness in La Libertad. In this ecosystem, birds of the highlands (e.g., *Notoprocta curvirostris*, and *Vanellus resplendens*) coexist with species typical of the temperate forests of the west-central Andes (e.g., *Coeligena violifer*, *Margarornis squamiger*, and *Pipreola intermedia*), surely due to the presence of patches of high Andean humid temperate forests located below the Puna ecoregion (Barrio, 2007; Mark et al., 2008).

The other ecoregions host lower species richness (∼80–160), and few endemic species (5–12). However, they are not equivalent to one another because they harbor species that are adapted to specific habitats. We found that approximately 60% (considering only endemic species) are present in more than one ecoregion. We emphasize records in the Equatorial Dry Forest ecoregion, where 19 native species of the Tumbesian region (*Forpus coelestis*, *Nyctidromus anthonyi*, *Myrmia micrura*, *P. raimondii*, *Tumbezia salvini*, *Ochthoeca piurae*, *Myiodynastes bairdii*, *M. semirufus*, *Thamnophilus bernardi*, *Geositta peruviana*, *Synallaxis stictothorax*, *Cantorchilus superciliaris*, *Basileuterus trifasciatus*, *Icterus graceannae*, *Sicalis taczanowskii*, *Piezorhina cinerea*, *Sporophila simplex*, and *Atlapetes seebohmi*) were recorded. The EDF is part of the larger Tumbesian region that extends from western Ecuador to northwestern Peru, an area that is considered a biological hotspot for hosting a significant number of endemic (Peruvian-Ecuadorian) bird species (Flanagan et al., 2005; Myers et al., 2000; Stattersfield, Crosby, Long, & Wege, 1998). Despite its small area in La Libertad (Fig. 1), a total of 120 species of birds were recorded in this ecoregion.

The different species richness in each ecoregion reflects a complex biogeographic history for birds of La Libertad. Current phylogeographic studies attributed this diversity and endemism to the dynamic history of orogeny and climatological shifts since the mid-Neogene in the Andes (Rull, 2011). However, other events (e.g., migrations, colonizations, and fragmentation of habitat) can influence the distribution of species, or populations, in the region.

Conservation

Ecosystems in La Libertad, and therefore the inhabiting bird populations, face a wide range of threats. During our explorations, we witnessed deforestation for firewood extraction and wood, which represent the main problems in the Equatorial Dry Forest and Yungas ecoregions. These modifications are reducing the available habitat of endemic species of the tumbesian region (e.g., *P. raimondii*, Pollack-Velásquez et al., 2009; *Ochthoeca piurae*, *Tumbezia salvini*, Flanagan et al., 2005). Mining and the expansion of agricultural limits are the main threats in the Puna and Yungas ecoregions, which could lead to a drastic decline in bird populations, especially those that are threatened (e.g., *A. aliciae*, Lambert & Angulo-Pratolongo, 2007; *F. xanthops*, BirdLife International, 2015a). Other threats are the presence of livestock overgrazing and illegal hunting (including trafficking some species as pets). The current situation results in highly fragmented landscapes (Flanagan et al., 2005; Franke, 1994; Rodríguez & Mora, 1994), with an uncertain future for bird populations. Five protected areas exist in La Libertad (Ministerio de Ambiente, 2015), two located in the Pacific Desert (El Cañoncillo and Puquio Santa Rosa), two in the Puna-Andes steppe (Sanctuary and Reserve of Calipuy), and one in the Equatorial Dry Forest (Sunchubamba Hunting Reserve); but, there are no protected areas in Yungas region, where our study reports the greatest avifaunal diversity. As an alternative, four Important Birds Areas (IBAS: Llaguén, El Molino, Abiseo River-Tayabamba, and Chao-Corcovado-Santa-Ferrol Islands) were suggested by Angulo-Pratolongo (2009), a conservation program aimed at generated a prioritization scheme for preserving birds and their habits. However, no government actions have been implemented yet to promote this program and transform prioritized areas into "real" protected areas. According to our results, a monitoring program within IBAS, as well as in different localities along the Marañón Valley and eastern slope of the Andes (e.g., Utcubamba, Ongón) would help to assess the status of bird populations, and probably the designation of new protected areas, which are much needed in La Libertad.

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Appendix. List of birds of La Libertad Region (Peru). Classification follows SACC (Remsen et al., 2015). Evidence (EVD): (o) observations in the field, and (s) specimens in scientific collections. Support source (SS): 1. LSUMZ, 2. MVZ, 3. FMNH, 4. MNHN, 5. ANSP, 6. CORBIDI, 7. Abanto and Carcelen (2005), 8. Álvarez (2001), 9. Ávalos (1997), 10. Barrio (2007), 11. Becerra (1981), 12. de la Cruz (1996), 13. Franke (1994), 14. Guarniz (1997), 15. Herrera (1980), 16. Senner and Angulo-Pratolongo (2014), 17. Plascencia (2001), 18. Salvin (1895), 19. Valqui (2004), 20. Martin-Alva, Florián Medina, and Díaz Pillasca (2013), 21. Schmitt et al. (2013). Conservation status (CS): EN – endangered, VU – vulnerable, NT – near threatened, LC – least concern, e – endemic; boldCS follows Ministerio de Agricultura (2014).

Taxon	EVD	SS	CS
Tinamidae			
Crypturellus obsoletus	s	1	
Nothoprocta ornata		15	
Nothoprocta pentlandii	o,s	3,4,6,15,19,21	
Nothoprocta curvirostris	s	5,6,19	
Anatidae			
Lophonetta specularioides	s	5	
Anas flavirostris		10	
Anas bahamensis	o		
Anas cyanoptera	o,s	4,7,11	
Nomonyx dominicus	o,p		
Oxyura jamaicensis	o,s	1	
Cracidae			
Chamaepetes goudotti	s	5	
Penelope montagnii	s	1,4	
Odontophoridae			
Odontophorus speciosus	s	1	NT, **LC**
Podicipedidae			
Rollandia rolland	o	14	
Podilymbus podiceps		7	
Pelecanidae			
Pelecanus thagus	o	8,14	NT, **EN**
Sulidae			
Sula nebouxii	o	8	
Sula variegata	o	8,14	LC, **EN**
Phalacrocoracidae			
Phalacrocorax brasilianus	o	8	
Phalacrocorax bougainvillii		8,14	NT, **NT**
Ardeidae			
Nycticorax nycticorax	o	7,8	
Butorides striata	o	7,11,17,18	
Bubulcus ibis	o	7,9,12,20	
Ardea cocoi	o		
Ardea alba	o	7,8,11,14	
Egretta tricolor	o	14	
Egretta thula	o	7,8,11,14	
Egretta caerulea	o	7,8,15,14	
Threskiornithidae			
Eudocimus albus	o		
Plegadis ridgwayi	o		
Cathartidae			
Cathartes aura	o	7,8,11,15,21	
Coragyps atratus	o	7,9,11,12,15,17,20	
Vultur gryphus	o	15	NT, **EN**

Appendix (*Continued*)

Taxon	EVD	SS	CS
Phoenicopteridae			
Phoenicopterus chilensis	o		NT, **NT**
Pandionidae			
Pandion haliaetus	o	7	
Accipitridae			
Circus cinereus	o,s	4	
Accipiter striatus	o,s	1,21	
Geranoaetus melanoleucus	o,s	2,5,21	
Geranoaetus polyosoma	o	7,21	
Buteo platypterus	o		
Rupornis magnirostris		21	
Parabuteo unicinctus		21	
Parabuteo leucorrhous		21	
Rallidae			
Pardirallus sanguinolentus	o,s	4,7,11,17,18	
Gallinula galeata	o	7,8,11,14,17	
Porphyrio martinicus	o	11	
Fulica ardesiaca	o		
Charadriidae			
Vanellus resplendens	s	4,10,15	
Pluvialis squatarola	s	5,14,16	
Pluvialis dominica		16	
Charadrius semipalmatus	o	7,8,14,16	
Charadrius vociferus	o	7,8,14,16	
Charadrius nivosus		8,16	NT, **LC**
Charadrius collaris		16	
Charadrius wilsonia		16	
Haematopodidae			
Haematopus palliatus	o	16	
Recurvirostridae			
Himantopus mexicanus	o	8,14,16	
Burhinidae			
Burhinus superciliaris	o	7	
Scolopacidae			
Gallinago paraguaiae	s	1,2,5	
Limnodromus griseus	o	16	
Numenius phaeopus	o	8,14,16	
Actitis macularius	o,s	5,16	
Tringa melanoleuca	o	16	
Tringa flavipes	o	8,16	
Tringa semipalmata		16	
Tringa incana		16	
Arenaria interpres		8,16	
Calidris alba	o,s	5,8,16	
Calidris pusilla	o	14,16	NT, **LC**
Calidris mauri	o	16	
Calidris minutilla	s	3,16	
Calidris bairdii	s	2,16	
Calidris himantopus	o		
Calidris canutus		16	
Calidris melanotos		16	
Phalaropus tricolor	o		
Phalaropus lobatus	s	5,8	
Limosa haemastica		16	
Limosa fedoa		16	
Thinocoridae			
Thinocorus orbignyianus	s	2,4,5	

Appendix (*Continued*)

Taxon	EVD	SS	CS
Laridae			
Larus belcheri	o	8	
Larus dominicanus		8,14	
Chroicocephalus cirrocephalus	o	8	
Leucophaeus modestus	o	14	
Leucophaeus atricilla		8,14,17	
Leucophaeus pipixcan	o	14	
Sternula lorata	o	8,14	EN, **EN**
Thalasseus elegans	o		NT, **LC**
Thalasseus sandvicensis	o		
Rynchopidae			
Rynchops niger	o		
Columbidae			
Columbina minuta	o,s	3,5,11	
Columbina cruziana	o,s	3,4,5,7,8,9,11,12,18,20,21	
Metriopelia ceciliae	s	3,5,11,15,18	
Metriopelia melanoptera	s	3,7,9,12,15	
Patagioenas fasciata	o,s	3,4,5,21	
Patagioenas oenops‡	s	1,18,19	VU, **VU**
Zenaida meloda	o,s	3,7,9,11,12,17,20	
Zenaida auriculata	o,s	1,3,5,7,9,12,15,17,18,20,21	
Leptotila verreauxi	o,s	3,5,7,9,11,12,18,20,21	
Geotrygon frenata	s	1,5	
Cuculidae			
Coccyzus melacoryphus	9,12,18,19		
Coccyzus erythropthalmus	s	5,18	
Coccyzus lansbergi		19	
Piaya cayana	s	1,5,18	
Crotophaga sulcirostris	o,s	3,7,9,11,12,14,20,21	
Tapera naevia	s	5,18	
Strigidae			
Bubo virginianus		7	
Megascops koepckeae	o	21	
Ciccaba albitarsis	o	19,21	
Glaucidium jardinii	s	1	
Glaucidium brasilianum	o,s	1,2	
Glaucidium peruanum	o,s	3,5,7,9,11,12,18,19,20,21	
Athene cunicularia	o,s	3,5,7,8,11	
Pseudoscops clamator	s	18	
Asio flammeus	o		
Caprimulgidae			
Chordeiles acutipennis	o,s	3,5,7,9,11,12,19,20	
Systellura longirostris	o,s	1,2,3,4,5,10,15,19,21	
Nyctidromus anthonyi		19	
Uropsalis segmentata	s	1	
Apodidae			
Streptoprocne rutila	o,s	3,21	
Streptoprocne zonaris	o	21	
Chaetura pelágica	s	1	NT, **LC**
Trochilidae			
Doryfera ludovicae	s	1	
Doryfera johannae	s	5	
Colibri delphinae	s	5	
Colibri thalassinus	s	5	
Colibri coruscans	s	1,2,3,4,18,19,21	
Leucippus taczanowskii	s	1,2,3,4,5,18,19	e
Amazilia chionogaster	s	5	
Amazilia amazilia	o,s	3,4,5,7,9,11,12,19,20,21	
Amazilia franciae	s	1,5,18	
Adelomyia melanogenys	o,s	1,5,6,21	

Appendix (*Continued*)

Taxon	EVD	SS	CS
Heliodoxa rubinoides	s	1	
Heliodoxa leadbeateri	s	1,5	
Boissonneaua matthewsii	s	1,5	
Aglaeactis cupripennis	o,s	1,4,5,10,21	
Aglaeactis aliciae	s	1,3,4,5,19	EN, **VU**, e
Oreotrochilus estella	s	1,4,5,10,18	
Lafresnaya lafresnayi	o,s	1,21	
Coeligena coeligena	s	1,5	
Coeligena torquata	s	1,5	
Coeligena dichroura	s	1,19	e
Coeligena iris	o,s	1,5,18,21	
Ensifera ensifera	s	1,19	
Pterophanes cyanopterus	s	1,5,10	
Patagona gigas	o,s	1,2,3,15,18,21	
Heliangelus amethysticollis	s	1	
Heliangelus viola	o	21	
Eriocnemis luciani	s	1	
Eriocnemis aline	s	1,5	
Ocreatus underwoodii	s	1,5	
Lesbia victoriae	s	1,5,10	
Lesbia nuna	o,s	1,3,5,18,21	
Polyonymus caroli	s	1,4,6,10,19	e
Metallura tyrianthina	s	1,4,5	
Metallura theresiae	s	1,5,19	e
Metallura phoebe	s	2,4,5,10,15,18	e
Haplophaedia assimilis	s	5	
Chalcostigma ruficeps	s	1	
Chalcostigma stanleyi	s	1,5,10	
Opisthoprora euryptera	s	1	
Aglaiocercus kingii	s	1,5	
Schistes geoffroyi	s	1	
Thaumastura cora	s	3,4,5,19	
Chaetocercus mulsant	s	5,18,21	
Chaetocercus bombus‡	s	5,18	VU, **NT**
Myrtis fanny	o,s	1,5,7,9,12,18,19,20,21	
Myrmia micrura	o,s	3	
Trogonidae			
Pharomachrus auriceps	s	4	
Trogon personatus	s	1,4,5	
Alcedinidae			
Megaceryle torquata	9		
Chloroceryle americana	o,s	5,9,11	
Bucconidae			
Hapaloptila castanea	s	1,4	
Capitonidae			
Eubucco versicolor	s	1	NT, **LC**
Ramphastidae			
Aulacorhynchus prasinus	s	1	
Aulacorhynchus huallagae	s	1,5,19	EN, **EN**, e
Andigena hypoglauca	s	1,4,5,19	NT, **NT**
Picidae			
Picoides fumigatus	o,s	4,5,21	
Veniliornis callonotus		7,9,12,20	
Veniliornis nigriceps	s	1	
Colaptes rubiginosus		7	
Colaptes rivolii	s	1,4	
Colaptes atricollis	o,s	2,3,4,5,18,21	e
Colaptes rupicola	s	1,3,4,5,10	
Campephilus pollens	s	1,5	

Appendix (*Continued*)

Taxon	EVD	SS	CS
Falconidae			
Phalcoboenus megalopterus	s	1	
Falco sparverius	o,s	2,3,4,7,8,9,12,18,20,21	
Falco femoralis	s	4,15,17	
Falco peregrinus	o	21	LC, **NT**
Psittacidae			
Psittacara wagleri	o,s	1,2,5,15,21	NT, **LC**
Leptosittaca branickii	s	1	VU, **VU**
Psilopsiagon aurifrons	s	4,5	
Bolborhynchus orbygnesius	o,s	1,3,5,15,18,21	
Forpus xanthopterygius	s	3	
Forpus coelestis	o,s	5,9,11,12,20,21	
Forpus xanthops	s	1,3,5,18,19	VU, **VU**, e
Pionus tumultuosus	s	1,5	
Amazona mercenarius	s	1	
Thamnophilidae			
Thamnophilus bernardi	s	3,4,5,19,20	
Thamnophilus caerulescens	s	1,5	
Dysithamnus mentalis	s	1	
Myrmotherula schisticolor	s	1,5	
Pyriglena leuconota	s	1	
Melanopareiidae			
Melanopareia elegans	s	4,5,19	
Conopophagidae			
Conopophaga castaneiceps	s	1	
Grallariidae			
Grallaria squamigera	s	1,4	
Grallaria andicolus	s	1,2,4,5,10,18	
Grallaria carrikeri‡	s	1,19	NT, **NT**, e
Grallaria przewalskii	s	1,19	VU, **LC**, e
Grallaria rufula	s	1,19	
Grallaria quitensis	s	1,19	
Grallaria guatimalensis	o	21	
Grallaria ruficapilla	o	21	
Grallaricula ferrugineipectus	s	1	
Rhinocryptidae			
Myornis senilis	s	1	
Scytalopus unicolor	o,s	5,18,19,21	e
Scytalopus macropus	s	1,5,19	e
Scytalopus femoralis	s	1	e
Scytalopus atratus	s	1	
Scytalopus altirostris	s	1,19	e
Scytalopus affinis		19	e
Furnariidae			
Geositta peruviana	o,s	2,3,5,7,8	e
Geositta tenuirostris	s	3,5	
Geocerthia serrana	s	1,2,3,5,10,18	e
Cinclodes albiventris	s	1,3,5,6,10	
Furnarius leucopus	o,s	4,5,7,9,12,20	
Phleocryptes melanops	o	8,11,14,17	
Leptasthenura pileata	o,s	1,5,10,18,19,21	e
Leptasthenura striata	s	4	
Synallaxis azarae	o,s	5,21	
Synallaxis unirufa	s	1,5	
Synallaxis zimmeri	s	6,13,19	EN, **EN**, e
Synallaxis stictothorax	s	1,2,3,5,6,9,12,19,20	
Synallaxis hypochondriaca	s	1,5,19	VU, **VU**, e
Hellmayrea gularis	s	1	
Cranioleuca antisiensis	o,s	1,5,18,19,21	
Thripophaga berlepschi	s	1,19	VU, **EN**, e

Appendix (*Continued*)

Taxon	EVD	SS	CS
Pseudasthenes cactorum	o,p		e
Asthenes fuliginosa	s	1,19	
Asthenes humilis	s	1,2,5,10,18	
Asthenes urubambensis	s	1,5,19	NT, **NT**
Asthenes flammulata	s	1,2,5,10,19	
Premnornis guttuliger	s	1	
Premnoplex brunnescens	s	1	
Margarornis squamiger	s	1	
Pseudocolaptes boissonneautii	s	1,4,5,19	
Anabacerthia striaticollis	s	1	
Syndactyla rufosuperciliata	s	1	
Thripadectes holostictus	s	1,19	
Thripadectes scrutator	s	1	
Lochmias nematura	s	1	
Xenops rutilans	s	5	
Dendrocincla tyrannina	s	1	
Xiphorhynchus triangularis	s	1	
Lepidocolaptes lacrymiger	s	1,4,5	
Drymotoxeres pucherani	s	1,7	NT, **NT**
Tyrannidae			
Phyllomyias uropygialis	o,s	1,21	
Elaenia albiceps	o,s	1,5,18,21	
Elaenia chiriquensis	s	5	
Camptostoma obsoletum	o,s	1,3,5,7,9,12,19,20,21	
Mecocerculus stictopterus	o,s	1,5,21	
Mecocerculus leucophrys	o,s	1,5,21	
Mecocerculus minor	s	1	
Anairetes nigrocristatus	o,s	1,4,10,18,19,21	
Anairetes reguloides	o,s	2,3,5	
Anairetes flavirostris	o,s	5,21	
Anairetes parulus	s	1,5	
Uromyias agraphia	s	1,10,19	e
Serpophaga cinerea	o,s	5	
Phaeomyias murina	o,s	1,2,3,4,5,19,21	
Pseudocolopteryx acutipennis	s	18	
Pseudotriccus pelzelni	s	1	
Pseudotriccus ruficeps	s	1	
Euscarthmus meloryphus	o,s	2,5,18,19,21	
Phylloscartes ventralis	s	5	
Mionectes striaticollis	s	1,5	
Leptopogon taczanowskii	s	1,5	NT, **LC**, e
Tachuris rubrigastra	o,s	4,8,11,17	
Hemitriccus granadensis	s	1	
Todirostrum cinereum	s	18	
Rhynchocyclus fulvipectus	s	1	
Tolmomyias sulphurescens	s	1,5	
Platyrinchus mystaceus	s	1,5	
Myiophobus flavicans	s	1	
Myiophobus fasciatus	s	1,2,3,5,18	
Nephelomyias ochraceiventris	s	1,19	
Pyrrhomyias cinnamomeus	s	1	
Empidonax alnorum	s	2	
Contopus fumigatus	s	1,5	
Contopus cinereus	o,s	2,3,5,18,21	
Sayornis nigricans	s	18	
Pyrocephalus rubinus	o,s	3,4,7,9,11,12,14,19,18,20	
Knipolegus poecilurus	s	1,5	
Knipolegus aterrimus	s	1,2,4,5,18	
Muscisaxicola maculirostris	s	1,5	
Muscisaxicola griseus	s	1,5,15,18	
Muscisaxicola flavinucha	s	5	
Muscisaxicola rufivertex	s	1,4,5	
Muscisaxicola albilora	s	1	

Appendix (*Continued*)

Taxon	EVD	SS	CS
Agriornis montanus	s	1,4,5	
Agriornis albicauda‡	s	3	VU, **VU**
Myiotheretes striaticollis	o,s	5,18,19,21	
Cnemarchus erythropygius	s	1	
Polioxolmis rufipennis	s	1,5,10,18	
Tumbezia salvini		19	NT, **NT**
Ochthoeca frontalis	s	1	
Ochthoeca jelskii	o,s	1,4,19,21	
Ochthoeca pulchella	s	1,5	
Ochthoeca cinnamomeiventris	s	1,4	
Ochthoeca rufipectoralis	s	1,5,10	
Ochthoeca fumicolor	s	1,5,10	
Ochthoeca oenanthoides	s	1,5,18	
Ochthoeca piurae	o,s	5,13,19,21	NT, **VU**, e
Ochthoeca leucophrys	o,s	1,4,5,10,18,19,21	
Muscigralla brevicauda	o,s	1,3,5,19	
Myiodynastes chrysocephalus	s	1,5	
Myiodynastes bairdii	s	3,9,12,20	
Tyrannus melancholicus	o,s	1,3,11,18	
Myiarchus semirufus‡	s	1,3,5,19	EN, **VU**, e
Myiarchus tuberculifer	o,s	1,3,5,21	
Myiarchus cephalotes	s	1,5	
Myiarchus tyrannulus	s	1	
Cotingidae			
Ampelion rubrocristatus	o,s	1,5,10,21	
Doliornis sclateri‡	s	1,19	VU, **VU**, e
Phytotoma raimondii	o,s	1,3,4,19	EN, **EN**, e
Pipreola riefferii	s	1	
Pipreola intermedia	s	1,4	
Pipreola arcuata	s	1,4	
Pipreola pulchra	s	1	e
Snowornis cryptolophus	s	1	
Pipridae			
Chloropipo unicolor	s	1	
Dixiphia pipra	s	1	
Tityridae			
Pachyramphus versicolor	s	1	
Pachyramphus albogriseus	s	1,18	
Vireonidae			
Cyclarhis gujanensis	o,s	1,5,18,21	
Vireo olivaceus	s	1,5	
Corvidae			
Cyanolyca viridicyanus	s	1,5	NT, **LC**
Cyanocorax yncas	s	1,5	
Hirundinidae			
Progne murphyi	o		VU, **LC**
Pygochelidon cyanoleuca	o,s	3,5,7,8,9,12,14,17,20,21	
Orochelidon murina	o,s	1,21	
Orochelidon flavipes	s	1	
Hirundo rustica	o,s	3,8	
Petrochelidon rufocollaris	o		
Troglodytidae			
Troglodytes aedon	o,s	1,3,5,10,15,21	
Troglodytes solstitialis	s	1	
Cistothorus platensis	s	1,5	
Campylorhynchus fasciatus	o,s	2,3,4,5,7,9,11,12,18,20,21	
Cantorchilus superciliaris	o,s	1,3,9,12,20	
Cinnycerthia peruana	s	1	e
Henicorhina leucoptera	s	1	NT, **NT**
Henicorhina leucophrys	s	1,5	
Cyphorhinus thoracicus	s	1	

Appendix (*Continued*)

Taxon	EVD	SS	CS
Polioptilidae			
Polioptila plumbea	o,s	2,3,5,7,9,12,19,20	
Cinclidae			
Cinclus leucocephalus	o,s	1,18,21	
Turdidae			
Myadestes ralloides	s	1,5	
Catharus fuscater	o,s	1,18,21	
Catharus ustulatus	o,s	1,2,21	
Entomodestes leucotis	s	1,5	
Turdus leucops	s	1	
Turdus fuscater	o,s	1,2,3,5,10,21	
Turdus chiguanco	o,s	1,3,15,21	
Turdus serranus	s	1,4,5	
Turdus maranonicus		18,19	
Mimidae			
Mimus longicaudatus	o,s	2,3,4,5,7,9,11,12,18,19,20	
Motacillidae			
Anthus lutescens	o,s	3,8,14,17,18	
Anthus bogotensis	s	1,10,18	
Thraupidae			
Conothraupis speculigera	s	4,5	NT, **NT**
Sericossypha albocristata	s	1,3,4,19	VU, **LC**
Hemispingus atropileus	s	1	
Hemispingus superciliaris	s	1	
Hemispingus frontalis	s	1	
Hemispingus rufosuperciliaris	s	1,19	VU, **VU**, e
Hemispingus xanthophthalmus	s	1	
Hemispingus melanotis	o	21	
Cnemoscopus rubrirostris	s	1	
Thlypopsis ornata	o,s	1,5,19,21	
Nephelornis oneilli	s	1,19	e
Thraupis episcopus	o,s	7,18	
Thraupis palmarum	s	5	
Thraupis cyanocephala	s	1,4,5	
Pipraeidea bonariensis	o,s	3,4,5,11,18,19,21	
Pipraeidea melanonota	o	21	
Buthraupis montana	s	1,3,4,5	
Cnemathraupis aureodorsalis	s	1,19	EN, **VU**, e
Anisognathus lacrymosus	s	1,4	
Anisognathus igniventris	s	4,5,10	
Anisognathus somptuosus	s	1	
Chlorornis riefferii	s	1,3,4	
Dubusia taeniata	s	1	
Dubusia castaneoventris	s	1,19	
Iridosornis analis	s	1,4,5	
Iridosornis jelskii	s	1,19	
Iridosornis reinhardti	s	1,4	e
Tangara chilensis	s	3	
Tangara schrankii	s	3	
Tangara xanthocephala	s	1,5	
Tangara parzudakii	s	1	
Tangara cyanotis	s	1	
Tangara nigroviridis	s	1	
Tangara vassorii	o,s	1,4,5,21	
Tangara viridicollis	s	1,4	
Iridophanes pulcherrimus	s	1	
Dacnis lineata	s	3	
Dacnis cayana	s	5	
Conirostrum cinereum	o,s	2,4,5,10,11,18,21	
Conirostrum sitticolor	s	1	
Conirostrum albifrons	s	1	

Appendix (*Continued*)

Taxon	EVD	SS	CS
Xenodacnis parina	s	1,19	
Diglossa sittoides	o,s	1,4,18,21	
Diglossa mystacalis	s	1,5,10	
Diglossa brunneiventris	s	1,10,18	
Diglossa caerulescens	s	1,4,5	
Diglossa cyanea	s	1,4	
Catamblyrhynchus diadema	o,s	1,6,21	
Coereba flaveola	s	1,2,3,5,7,18	
Tiaris obscurus	o,s	3,5,18,19	
Phrygilus punensis	s	1,10,18	
Phrygilus fruticeti	s	3,18	
Phrygilus unicolor	o,s	1,2,10	
Phrygilus plebejus	s	3,10,18	
Phrygilus alaudinus	s	5	
Haplospiza rustica	s	1	
Piezorhina cinerea	s	1,3	e
Incaspiza pulchra	o,p,s	3	e
Incaspiza personata	s	1,5	e
Incaspiza laeta	s	1,2,4,5,18,19	e
Poospiza alticola	s	1,5,18,19	EN, **EN**, e
Poospiza rubecula	s	18	EN, **EN**, e
Poospiza hispaniolensis	s	1,3,5	
Sicalis uropygialis	s	5	
Sicalis olivascens	s	1,5,18	
Sicalis flaveola	o,s	1,3,4,5,7,9,12,20	
Sicalis luteola	o,s	5,18	
Sicalis taczanowskii	s	2,2	
Volatinia jacarina	o,s	1,5,11,18,21	
Sporophila corvina	s	5	
Sporophila luctuosa	o,s	4,5,18,21	
Sporophila peruviana	s	1,3,5,9,12,20	
Sporophila simplex	o,s	2,18,19	
Sporophila telasco	o,s	1,3,8,11	
Catamenia analis	o,s	1,5,7,9,12,20,21	
Catamenia inornata	s	1,5,10,18	
Catamenia homochroa	s	1,19	
Saltator maximus[*]	s	5	
Saltator aurantiirostris[*]	o,s	4,5,21	
Saltator striatipectus[*]	o,s	1,3,4,5,9,11,12,18,19,20	
Emberizidae			
Zonotrichia capensis	o,s	1,3,5,7,8,9,10,11,12,15,18,20,21	
Arremon brunneinucha	s	1,5	
Arremon torquatus	s	1	
Arremon assimilis	o	21	
Atlapetes tricolor	s	1	
Atlapetes latinuchus	o,s	1,5,10,18,21	
Atlapetes rufigenis	s	1,5,18,19	NT, **NT**, e
Atlapetes seebohmi	o,s	4,5,19,21	
Chlorospingus flavopectus	s	1	
Chlorospingus parvirostris	s	1,5	
Cardinalidae			
Pheucticus chrysogaster	o,s	1,2,4,5,18,21	
Piranga flava	o,s	5,18,19,21	
Piranga rubra	s	1,4	
Piranga rubriceps	s	1,3,4	
Parulidae			
Setophaga fusca	s	1,5	
Geothlypis aequinoctialis	o,s	2,5,18	
Cardelina canadensis	s	1	
Myioborus melanocephalus	s	1	
Myioborus miniatus	o	21	

Appendix (*Continued*)

Taxon	EVD	SS	CS
Myiothlypis luteoviridis	s	1,5	
Myiothlypis nigrocristata	o,s	1,5,18,21	
Myiothlypis coronata	s	1,5	
Basileuterus trifasciatus	o	19,21	
Basileuterus tristriatus	s	1,5	
Icteridae			
Amblycercus holosericeus	s	1	
Cacicus chrysonotus	s	1	
Icterus graceannae	s	3,4,5,19	
Icterus mesomelas	o,s	5,18	
Dives warszewiczi	o,s	3,4,5,7,8,9,11,12,15,19,20,21	
Molothrus bonariensis	o,s	3,4,5,7,9,11,12,20	
Sturnella bellicosa	o,s	3,5,7,8,11,15,18	
Fringillidae			
Sporagra magellanica	o,s	1,2,3,5,9,11,12,18,20,21	
Astragalinus psaltria	s	3,5,18	
Euphonia chlorotica	s	1,19	
Euphonia cyanocephala	s	5	
Chlorophonia pyrrhophrys	s	1	
Passeridae			
Passer domesticus	o	8,11	

‡ Threatened species added in the last 10 years according to Ministerio de Agricultura (2004, 2014).
* Taxa considered as *Incertae sedis*.

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