## The threatened birds of the río Toche, Cordillera Central, Colombia

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El río Toche y sus alrededores es un área de 261 km<sup>2</sup> con 15% de bosque montano húmedo, entre los 1.900 y 3.500 m, ubicado la ladera Este de la parte central de la Cordillera Central de Colombia, Departamento del Tolima. Esta área es tratada como Área Clave para la conservación de especies amenazadas y considerada dentro de dos EBAs (del ingles Endemic Birds Areas) por la presencia de diez especies con graves problemas de conservación. Se presenta un listado anotado actualizado de las aves de la zona y se analiza la situación de diez especies amenazadas y cuatro cuasi amenazadas. La presencia de nuevas especies amenazadas en la región de río Toche enfatiza la necesidad de tomar alguna medida de protección en al área, la cual podria ser tratada dentro del programa de IBAs (Important Bird Areas) de la BirdLife International.

#### Introduction

Man's inability to stem the destruction of Colombia's natural resources, particularly over the three unique Andean cordilleras and Sierra Nevada de Santa Marta, is sharply reflected in the status of the country's rich avifauna. In 1992, Colombia harboured 57 threatened species<sup>3</sup>. Today, Colombia holds 80 threatened species (BirdLife International *in litt.*), and this total is increasing by a mean three species per annum, reflecting the avifauna's dire plight.

The 650-km long Central Cordillera contains three Endemic Bird Areas (040 Colombian interAndean slopes, 042 Northern Central Andes and 044 Central Andean páramo) and supports 29 Endemic Bird Area species above 1,000 m—of which 16 are threatened species<sup>9</sup>. This ratio of Red Data Book species to endemics is the highest of any biogeographical region in north-west South America, and is a reflection of ever-dwindling natural habitat and paucity of protected areas within this 41,000 km<sup>2</sup> biogeographical region.

A typical example of the critical conservation problems faced is the Río Toche watershed, lying on the eastern slope of the Central Cordillera. The río Toche is one of the six most important Key Ar-



Figure 1. Map of the río Toche study area.



Figure 2. Landscape view of the study area with areas of wax palms *Ceroxylon quindiuense* (Bernabé López-Lanús)



Figure 4. Female Blossomcrown Anthocephala floriceps (Bernabé López-Lanús, from notebook).

eas (CO 28) in Colombia, containing six threatened species<sup>10</sup> and having no formal protection. Given the site's avifaunal importance, we present the status of all bird species registered in the area from various studies over the past decade as well as detailed information for the site's threatened species, including four threatened species not reported previously.

## Study area

The 261 km<sup>2</sup> río Toche watershed lies on the southeastern flank of the Volcán Tolima–Ruiz massif in the municipalities of Cajamarca and Ibagué, Tolima Department, Colombia ( $04^{\circ}26$ 'N 75°22'W), encompassing an unprotected mosaic of humid montane forest fragments and pasture at 1,900–3,500 m. The río Toche commences in the páramo of Nevado del Quindío, within PNN Los Nevados, at over 4,000 m and sharply descends south through a steep ravine to the town of Toche ( $4^{\circ}31$ 'N 75°24W, 2,100 m) and on towards Cajamarca. The study area also includes Quebrada San Juan, the río Tochecito and south to Tapias village. The watershed is bordered to the east by Ibagué city and to the west by Quindío Department.

Photos and descriptions from 1911<sup>2</sup> and 1943<sup>1</sup> reveal a much greater expanse of natural vegetation in the Toche valley than at present. Extensive



Figure 3.Yellow-eared Parrot Ognorhynchus icterotis (Bernabé López-Lanús)

deforestation has taken place in the past 50 years, concentrated at 1,900-3,200 m, with only c.15% of natural vegetation remaining. Only scattered mature secondary forest patches remain, mainly along watercourses and surrounded by pasture. Forest clearance continues annually. Above 3,200 m, continous old-growth forest predominates and is replaced by elfin forest at 3,400-3,650 m. Despite wholescale deforestation, almost all land at 2,400-3,200 m has wax palms Ceroxylon quindiuense -Colombia's national tree—that characterise the landscape and all forest patches. This tree has an extremely hard trunk that has deterred logging, resulting in palm groves within pastures or potato fields. While C. quindiuense has been legally protected since 1985, forest around wax palm groves continues to be cleared. Below 2,200 m and around the town of Toche little forest exists as the land is intensively farmed for potatoes and beans, and used for cattle grazing.

## Methods

Bird observations were made by the authors between 1990 and 1999. For each species recorded the observers are noted together with an overall abundance estimate (see appendix). Records from a collection in  $1911^2$  are included for selected species. Tape-recordings were made of many of the interesting species registered in the Toche area and have been deposited at the British Library National Sound Archive, London, UK. Sight records were largely made from the road, which passes through various forest patches, trails through fincas and to otherwise inaccessible forested slopes throughout the study area. The avifaunal inventory was principally compiled by TPC and BLL, from their observations in August–December 1995 (four months) and June 1998–May 1999 (12 months). Additional brief visits were made by LMR (28 May– 1 June 1990), SA (all of June 1993) and PS (18 March and 6 October 1997).

## Results

Of 249 species registered, 248 were confirmed in the past decade. Forty-three families occur in the area, including 10 threatened (nine recognised by BirdLife International and one that we consider deserves this categorisation) and four near-threatened species. The full inventory is presented in the Appendix 1.

### **Threatened species**

Specific accounts are presented for nine threatened species<sup>3.9</sup>.

#### **Tolima Dove** Leptotila conoveri Endangered

Locally fairly common. Recorded by TPC (August 1995) and PS *et al.* (October 1997) just east of Tapias, and at the same location in 1988 and 1990<sup>3</sup>. A few pairs and individuals are regularly seen feeding along the roadside, at dawn and dusk, at 2,000-2,200 m, often near small patches of second-growth forest. No old-growth forest is known from areas where the species has been recorded. It has never been found in more humid areas of the río Toche valley.

## **Golden-plumed Parakeet** *Leptosittaca branickii* Vulnerable

Abundant. Recorded daily in flocks, typically comprising 10–15 individuals, and at dusk flocks of c.200 roost within inaccessible forest patches in steep ravines. Breeds throughout the Toche area<sup>8</sup>. The sizeable resident population (total c.500 birds) makes Toche the species' global stronghold.

#### Yellow-eared Parrot Ognorhynchus icterotis Critical

Rare. Flocks observed flying over the study area in September and November 1995 (TPC) and October 1997 (PS *et al.*). Full details have already been published<sup>6,7,8</sup>.

#### Rufous-fronted Parakeet Bolborhynchus

#### ferrugine i frons

#### Endangered

Rare. A flock of 10 was seen on 5 December 1998 (BLL) flying over elfin woodland at the head of the río Toche, at 3,400 m. The species is locally common in the elfin forest / páramo ecotone (3,100-4,000 m) in PNN Los Nevados (PS).

#### **Blossomcrown** Anthocephala floriceps Vulnerable

Rare. The race *berlepschi* was recorded around the town of Toche on 9 March 1999 (BLL). The species' apparent scarcity is probably due to its inconspicuous habits and localised distribution.

#### **Bicoloured Antpitta** Grallaria rufocinerea Endangered

Rare. Registered in the Toche area by LMR at Hacienda La Leona, in May 1990<sup>9</sup>, and by BLL at Hacienda La Carbonera ( $04^{\circ}32'N 75^{\circ}28'W$ , 1,950 m), on 9 June 1998, and Hacienda Las Cruces ( $04^{\circ}31'N 75^{\circ}26'W$ , 2,500 m), on 15–21 June 1998. A pair was observed in response to playback at the border of a large isolated secondary forest patch. Not recorded again in the same forest patches until April 1999 suggesting that the species may move between similar forest patches or that seasonal variations in its detectability exist.

#### **Brown-banded Antpitta** Grallaria milleri Critical

Locally uncommon. Recorded by BLL at 1,800-2,600 m. being heard and seen at Hacienda La Carbonera (1,830 m) in June and September 1998, and January-March 1999; Hacienda Las Cruces (2,550m) on 17-19 June 1998; and Alto de Yerbabuenal (near Toche), at c.2,600 m, on 24 June 1998. All records are from six well-preserved secondary forest patches, except one which is a heavily degraded 0.5 ha patch that has few trees. On 17 June 1998, a pair was observed, at 11h10 for 52 minutes, feeding a fledgling juvenile and briefly joining an undergrowth mixed-species foraging flock (Grey-breasted Wood-wren Henicorhina leucophrys and Chestnutcapped Brush-finch Atlapetes brunneinucha). During the entire period the family party remained within a 10 m radius in the dense undergrowth of an extensive area (c.5 ha) of secondary forest. Arthropods were caught using rapid sprints and by shaking leaves. The juvenile was similar to the illustration of a juvenile Tawny Antpitta Grallaria quitensis in Fjeldså & Krabbe<sup>4</sup> with dark barring on the crown and neck, and the entire plumage flecked. The bill was pinkish red with a blackish tip.

Historically known only from the Quindío and Caldas Departments<sup>3,4</sup> but recently discovered in Parque Regional Natural Ucumarí, Risaralda Departament<sup>5</sup>. Our records represent a range extension and the first records from Tolima Department and the eastern slope of the Cordillera Central.

#### Yellow-headed Manakin Chloropipo flavicapilla Recommended: Vulnerable

Rare. A pair was observed, on 26 December 1997, by G. Engblom *et al.* while searching for *Leptotila conoveri* just east of Tapias. They perched silently in the understorey, c.3 m up, inside a wooded gully of spindly second growth. This area consisted of very patchy and fragmented mature second growth surrounded by grazing pasture. The species is very inconspicuous and easily overlooked.

## Yellow-headed Brush-finch Atlapetes flaviceps Critical

Locally common just east of Tapias, towards Ibaqué (c.2,000–2,500 m), in secondary forest, brushy scrub and overgrown bean fields. Frequently recorded in pairs and small family groups in August 1993<sup>10</sup> and October 1997 (PS). On 23 June 1998, BLL observed a juvenile with adults and, on 8 October 1998, adults carrying nesting material within forest, but could not locate the nest. Juvenile plumage is similar to adults but the crown and collar are pale, chequered with black, producing a more obscure head pattern. While the species appears tolerant of degraded forest, it remains known only from this very small area.

#### Red-bellied Grackle Hypopyrrhus

#### pyrohypogaster

#### Endangered

Locally extinct. Known from the Toche region in 1911, when several small groups were recorded within a few hours in premontane forest on the banks of the río Toche at San Juan<sup>2</sup>. This locality is now almost entirely pasture with a few bushy areas, and the species has not been recorded in the past decade. Also known from adjacent areas (Los Nevados in 1889 and Alto Quindío in 1917) but recent ornithological surveys have failed to find it. With the exception of a small population in Parque Regional Natural Ucumarí (PGWS per. obs.), on the western flank of the Volcán Tolima–Ruiz massif, the species is regionally extinct.

#### **Noteworthy species**

### **Black-and-chestnut Eagle** Oroaetus isidori Near-threatened

An adult was seen calling from a perch and in flight in October 1995 (TPC).

# **Black-thighed Puffleg** *Eriocnemis derbyi* Near-threatened

A female was seen by TPC near the treeline above Quebrada San Jose along Cuchilla de Cruces.

# **Grey-breasted Mountain-toucan** Andigena hypoglauca

#### Near-threatened

Common. Daily observations and especially abundant when wax palms are fruiting, which they feed on together with *A. nigrirostris*.

## Black-billed Mountain-toucan Andigena

nigrirostris

Near-threatened

Common. Observed regularly throughout the Toche area.

#### Conclusions

The study area contains populations of nine Red Data Book species and one (*Chloropipo flavicapilla*) that we consider deserves categorisation as a threatened species, of which all but one (Hypopyrrhus *pyrohypogaster*) has been recorded in recent years. Of critical importance is that Toche supports the global population strongholds of three threatened species: Leptotila conoveri, Leptosittaca branickii and Atlapetes flaviceps. Furthermore, when considered with adjacent forested sites on the southern flank of the Volcan Tolima-Ruiz massif, the area is the global stronghold for Bolborhynchus ferrugineifrons, Grallaria milleri and Fuertes's Parrot Hapalopsittaca fuertesi. The latter, critically threatened, species almost certainly occurs at upper elevations in Toche but its presence has not been confirmed. All globally threatened bird species occurring in the río Toche watershed lack any form of protection, despite being dependent upon an everdwindling and increasingly fragmented forest area.

The international importance of the río Toche watershed for birds is clear, yet the río Toche watershed lacks any form of protection and the limited remaining forest is ever-diminishing and increasingly fragmented. There is a clear and urgent need to enact protective measures in the río Toche. Land purchase is overly expensive and ineffective for several threatened species (that range over a wide area). However, the local communities of Toche are extremely enthusiastic and willing to work with conservation programmes, particularly towards a sustainable agricultural system, environmental education, and reforestation of watersheds and watercourses. The involvement of Colombian NGOs (such as Fundación Herencia Verde based in Salento-25 km from Toche) is critical to such a conservation strategy. In addition, international attention and protection is urgently sought through

the implementation of an Important Bird Area  $\left( IBA\right)$  by BirdLife International.

## Warning

Unfortunately, the Tapias–Toche–Salento area has been politically unstable for many years due to the presence of guerrilla insurgents. In 1995, TPC was held by the guerrilla for four months before being released. We highly recommend that visitors do not enter the region at present.

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Appendix. Bird checklist for the río Toche area, Tolima, Colombia.

General abundance status:

- c common; detected on >90% of days
- f fairly common; detected on 50-90% of days
- u uncommon; detected on 10-50% of days
- r rare; detected on <10% of days
- s seasonal or temporal occurrence
- ${\sf H}$  historical presence at site, although not rediscovered in the past decade

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Tawny-breasted Tinamou	Nothocercus julius	r
Torrent Duck	Merganetta armata	r
Cattle Egret	Bubulcus ibis	rs
Black Vulture	Coragyps atratus	с
Turkey Vulture	Cathartes aura	f
Plain-breasted Hawk	Accipiter ventralis	r
Broad-winged Hawk	Buteo platypterus	rs
Roadside Hawk	Buteo magnirostris	f
White-rumped Hawk	Buteo leucorrhous	r
Swainson's Hawk	Buteo swainsoni	rs
Red-backed Hawk	Buteo polyosoma	с
Black-and-chestnut Eagle	Oroaetus isidori	r
Crested Caracara	Polyborus plancus	с
American Kestrel	Falco sparverius	f
Aplomado Falcon	Falco femoralis	r

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Colombian Chachalaca Andean Guan Sickle-winged Guan Crested Bobwhite Spotted Sandpiper Rock Pigeon Band-tailed Pigeon Pale-vented Pigeon Fared Dove Common Ground-dove Ruddy Ground-dove Tolima Dove White-throated Quail-dove Golden-plumed Parakeet Yellow-eared Parrot Barred Parakeet Rufous-fronted Parakeet Speckle-faced Parrot Bronze-winged Parrot Scaly-naped Parrot Squirrel Cuckoo Smooth-billed Ani Barn Owl White-throated Screech-owl Rufous-banded Owl Oilbird Grey Potoo Rufous-vented Nighthawk Band-winged Nightjar Chestnut-collared Swift White-collared Swift Chimney Swift swift White-tipped Swift Green Hermit Tawny-bellied Hermit Green-fronted Lancebill Sparkling Violetear Andean Emerald Indigo-capped Hummingbird Steely-vented Hummingbird Rufous-tailed Hummingbird Speckled Hummingbird Blossomcrown Fawn-breasted Brilliant Mountain Velvetbreast Great Sapphirewing Bronzy Inca Collared Inca Buf-winged Starfrontlet Sword-billed Hummingbird Buff-tailed Coronet Tourmaline Sunangel Golden-breasted Puffleg Black-thighed Puffleg Booted Racket-tail Purple-backed Thornbill Rainbow-bearded Thornbill Viridian Metaltail Tyrian Metaltail Long-tailed Sylph White-bellied Woodstar Crested Quetzal Golden-headed Quetzal Highland Trogon Blue-crowned Motmot Moustached Puffbird **Emerald Toucanet** Grey-breasted Mountain-toucan Black-billed Mountain-toucan Bar-bellied Woodpecker Yellow-vented Woodpecker Crimson-mantled Woodpecker

Ortalis colombianus Penelope montagnii Chamaepetes goudotii Colinus cristatus Actitis macularia Columba livia Columba fasciata Columba cavennensis Zenaida auriculata Columbina passerina Columbina talpacoti Leptotila conoveri Geotrygon frenata Leptosittaca branickii Ognorhynchus icterotis Bolborhynchus lineola Bolborhynchus ferrugineifrons Pionus tumultuosus Pionus chalcopterus Amazona mercenaria Piaya cayana Crotophaga ani Tyto alba Ótus albogularis Ciccaba albitarsus Steatornis caripensis Nyctibius griseus Lurocalis rufiventris Caprimulgus longirostris Cypseloides rutilus Streptoprocne zonaris Chaetura pelagica Chaetura sp. Aeronautes montivagus Phaetornis guy Phaetornis syrmatophorus Doryfera ludoviciae Colibri coruscans Amazilia franciae Amazilia cyanifrons Amazilia saucerottei Amazilia tzacatl Adelomyia melanogenys Anthocephala floriceps Heliodoxa rubinoides Lafresnaya lafresnayi Pterophanes cyanopterus Coeligena coeligena Coeligena torquata Coeligena lutetiae Ensifera ensifera Boissonneaua flavescens Heliangelus exortis Eriocnemis mosquera Eriocnemis derbyi Ocreatus underwoodii Ramphomicron microrhynchum Ramphomicron herrani Metallura williami Metallura tyrianthina Aglaiocercus kingi Acestrura mulsant Pharomachrus antisianus Pharomachrus auriceps Trogon (personatus) temperatus Momotus momota Malacoptila mystacalis Aulacorhynchus prasinus Andigena hypoglauca Andigena nigrirostris Veniliornis nigriceps Veniliornis dignus Piculus rivolii

Powerful Woodpecker Olivaceous Piculet Elegant Spinetail Rufous Spinetail White-browed Spinetail Rusty-winged Barbtail Pearled Treerunner Streaked Tuftedcheek Lineated Foliage-gleaner Spectacled Foliage-gleaner Flammulated Treehunter Tyrannine Woodcreeper Strong-billed Woodcreeper Black-banded Woodcreeper Spot-crowned Woodcreeper Bar-crested Antshrike Western Slaty-antshrike Undulated Antpitta Chestnut-crowned Antpitta **Bicolored Antpitta** Chestnut-naped Antpitta Rufous Antpitta Brown-banded Antpitta Slate-crowned Antpitta Ash-coloured Tapaculo Brown-rumped Tapaculo Unicolored Tapaculo Northern White-crowned Tapaculo Spillman's Tapaculo Ocellated Tapaculo Streak-necked Flycatcher Rufous-headed Pygmy-tyrant Rufous-crowned Tody-tyrant Black-throated Tody-tyrant Common Tody-flycatcher Black-capped Tyrannulet Ashy-headed Tyrannulet Mountain Elaenia Sierran Elaenia White-throated Tyrannulet White-tailed Tyrannulet White-banded Tyrannulet Torrent Tyrannulet Agile Tit-tyrant Subtropical Doradito Variegated Bristle-tyrant Flavescent Flycatcher Handsome Flycatcher Cinnamon Flycatcher Greater Pewee Black Phoebe Yellow-bellied Chat-tyrant Crowned Chat-tyrant Slaty-backed Chat-tyrant Rufous-breasted Chat-tyrant Brown-backed Chat-tyrant Streak-throated Bush-tyrant Smoky Bush-tyrant Pale-edged Flycatcher Apical Flycatcher Tropical Kingbird Golden-crowned Flycatcher Barred Becard Red-crested Cotinga Green-and-black Fruiteater Dusky Piha Black-collared Jay Green Jay Black-billed Peppershrike Red-eyed Vireo Brown-capped Vireo Andean Solitaire Veery

Campephilus pollens f Picumnus olivaceus r Synallaxis elegantior с Synallaxis unirufa r Hellmayrea gularis Premnornis guttuligera r Margarornis squamiger Pseudocolaptes boissonneautii f Syndactyla subalaris Anabacerthia striaticollis Thripadectes flammulatus Dendrocincla tyrannina Xiphocolaptes promeropirhynchus u Dendrocolaptes picumnus Lepidocolaptes affinis Thamnophilus multistriatus Thamnophilus atrinucha Grallaria squamigera u Grallaria ruficabilla f Grallaria rufocinerea Grallaria nuchalis Grallaria rufula f Grallaria milleri u Grallaricula nana u Myornis senilis Scytalopus latebricola Scytalopus unicolor latrans S. (femoralis) atratus r Scytalopus spillmani f Acropternis orthonyx u Mionectes striaticollis u Pseudotriccus ruficebs r Poecilotriccus ruficeps u Hemitriccus granadensis r Todirostrum cinereum u Phyllomyias nigrocabillus f Phyllomyias cinereiceps Elaenia frantzii Elaenia pallatangae Mecocerculus leucophrys Mecocerculus poecilocercus Mecocerculus stictopterus f Serpophaga cinerea Anairetes agilis Pseudocolopteryx acutipennis r Phylloscartes poecilotis Myiophobus flavicans Myiophobus pulcher Pyrrhomyias cinnamomea с Contopus fumigatus Sayornis nigricans , Silvicultrix diadema Ochthoeca frontalis u Ochthoeca cinnamomeiventris f Ochthoeca rufipectoralis f Ochthoeca fumicolor п Myiotheretes striaticollis f Myiotheretes fumigatus u Myiarchus cephalotes f Myiarchus apicalis u Tyrannus melancholicus f Myiodynastes chrysocephalus u Pachyramphus versicolor п Ampelion rubrocristatus f Pibreola riefferii u Lipaugus fuscocinereus f Cyanolyca armillata u Cyanocorax yncas с Cyclarhis nigrirostris u Vireo olivaceus r Vireo leucophrvs u Myadestes ralloides r Catharus fuscescens rs

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Swainson's Thrush Great Thrush Glossy-black Thrush Pale-breasted Thrush Black-billed Thrush Tropical Mockingbird Brown-bellied Swallow Pale-footed Swallow Blue-and-white Swallow Barn Swallow Southern Rough-winged Swallow Sepia-brown Wren Rufous Wren Sedge Wren Whiskered Wren Bay Wren Nountain Wren Grey-breasted Wood-wren Chestnut-breasted Wren Tropical Parula Blackburnian Warbler Canada Warbler Slate-throated Whitestart Golden-fronted Whitestart Citrine Warbler Black-crested Warbler Russet-crowned Warbler Blue-backed Conebill Capped Conebill Black-faced Tanager Grass-green Tanager White-capped Tanager Common Bush-tanager Ashy-throated Bush-tanager Grey-hooded Bush-tanager Black-capped Hemispingus Superciliaried Hemispingus Black-eared Hemispingus Black-headed Hemispingus Dusky-faced Tanager Rufous-crested Tanager Summer Tanager Red-hooded Tanager Blue-grey Tanager Palm Tanager

Catharus ustulatus Turdus fuscater Turdus serranus Turdus leucomelas Turdus ignobilis Mimus gilvus Notiochelidon murina Notiochelidon flavibes Notiochelidon cyanoleuca Hirundo rustica Stelgidopterix ruficollis Cinnycerthia peruana Cinnycerthia unirufa Cistothorus platensis Thryothorus mystacalis Thryothorus nigricapillus Troglodytes solstitialis Henicorhina leucophrys Cyphorhinus thoracicus Parula pitiayumi Dendroica fusca Wilsonia canadensis Myioborus miniatus Myioborus ornatus Basileuterus luteoviridis Basileuterus nigrocristatus Basileuterus coronatus Conirostrum sitticolor Conirostrum albifrons Schistochlamvs melanopis Chlorornis rieferii Sericossypha albocristata Chlorospingus ophthalmicus Chlorospingus canigularis Cnemoscopus rubrirostris Hemispingus atropileus Hemispingus superciliaris Hemispingus melanotis Hemispingus verticalis Mitrospingus cassinii Creurgops verticalis Piranga rubra Piranga rubriceps Thraupis episcopus Thraupis palmarum

Blue-capped Tanager Golden-crowned Tanager Hooded Mountain-tanager Black-chested Mountain-tanager Lacrimose Mountain-tanager Scarlet-bellied Mountain-tanager Buff-breasted Mountain-tanager Fawn-breasted Tanager Chestnut-breasted Chlorophonia Saffron-crowned Tanager Scrub Tanager Blue-necked Tanager Beryl-spangled Tanager Blue-and-black Tanager Black-capped Tanager Plush-capped Finch Black-backed Bush-tanager **Rusty Flowerpiercer** White-sided Flowerpiercer Glossy Flowerpiercer Black Flowerpiercer Bluish Flowerpiercer Masked Flowerpiercer Rose-breasted Grosbeak Black-winged Saltator Masked Saltator Rufous-collared Sparrow Yellow-throated Brush-finch Pale-naped Brush-finch Olive-headed Brush-finch Slaty Brush-finch Chestnut-capped Brush-finch Stripe-headed Brush-finch Slaty Finch Yellow-bellied Seedeater Yellow-faced Grassquit Mountain Cacique Yellow-billed Cacique Yellow-backed Oriole Red-bellied Grackle Shiny Cowbird Giant Cowbird Andean Siskin Hooded Siskin Lesser Goldfinch

Thraubis cvanocephala f Iridosornis rufivertex ш Buthraubis montana f Buthraubis eximia ... Anisognathus lacrymosus f Anisognathus igniventris f Dubusia taeniata u Pibraeidea melanonota u Chlorophonia pyrrhophrys r Tangara xanthocephala Б Tangara vitriolina u Tangara cyanicollis Tangara nigroviridis f Tangara vassorii с Tangara heinei r Catamblyrhynchus diadema Urothraupis stolzmanni f Diglossa sittoides Diglossa albilatera с Diglossa lafresnavi f Diglossa humeralis f Diglossa caerulescens r Diglossa cyanea с Pheucticus Iudovicianus us Saltator atribennis u Saltator cinctus r Zonotrichia capensis с Atlapetes gutturalis п Atlapetes pallidinucha u Atlapetes flaviceps ш Atlapetes schistaceus f Atlabetes brunneinucha f Atlapetes torquatus ш Haplospiza rustica ш Sporophila nigricollis u Tiaris olivacea U Cacicus leucorhamphus u Amblycercus holosericeus r Icterus chrysater f Hypopyrrhus pyrohypogaster н Molothrus bonariensis u Scaphidura oryzivora u Carduelis spinescens u Carduelis magellanica u Carduelis bsaltria ш