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# New bird records from the arid Cúcuta Valley, north-east Colombia

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Summary.—Avian inventories of the poorly known tropical dry forest in the Cúcuta Valley, north-east Colombia, yielded new distributional data for 15 bird species including several range extensions along the east slope of the East Andes, or filled distributional gaps between the Serranía de Perijá and Mérida Andes of Venezuela, and between the Maracaibo basin in Venezuela and eastern Llanos of Colombia. Some of the new records are of fairly common but easily overlooked species associated with dense habitats, whereas others concern open-country species whose spread has apparently been promoted by landscape transformation. Further work will probably yield additional new records in the region, especially in the transition from dry forest of the Cúcuta Valley to more humid habitats in the Catatumbo and adjacent Andes of Colombia and Venezuela.

Seasonal tropical dry forest (STDF) is one of the most threatened and biologically least known ecosystems in Colombia (Pizano *et al*. 2014). Its original distribution covered six main regions of the country: (i) the Caribbean plains, (ii) the Magdalena and (iii) Cauca inter-Andean valleys, (iv) arid Andean enclaves in the northern East Andes, (v) the Dagua and Patía inter-Andean valleys, and (vi) the piedmont and rocky outcrops in the eastern Llanos (Pizano *et al*. 2014). Among arid Andean enclaves, the Cúcuta Valley in dpto. Norte de Santander harbours one of the most important relicts of seasonal tropical dry forest in the country (García *et al*. 2014). Knowledge of the dry forest avifauna in this region derives mainly from specimens collected by Brother Nicéforo María and M. A. Carriker between 1930 and 1967, for which summary details were initially reported by Meyer de Schauensee (1948–52) and subsequently by Rodríguez-Toloza (1985) and Hilty & Brown (1986), with a few novel records recently documented by Armesto *et al*. (2013). In December 2009, we conducted an avian inventory of three remnants of seasonal tropical dry forest in the Cúcuta Valley (Avendaño *et al*. 2018) to study the avifaunal relationships of this valley to other dry forest areas in northern South America. During this study and a previous visit to the area in 2003 we gathered new distributional data for 15 species, which we document here.

## Study sites and Methods

Field work was conducted at three study sites (Fig. 1) as follows. S1: Hacienda La Palma, vereda Ayacucho, municipality of San Cayetano (07°48′28.4″N, 72°35′56.8″W; *c*.900 m; 13–15 December 2009); S2: San Isidro, vereda El Tabiro, Corregimiento Carmen de Tochalá, municipality of Cúcuta (07°49′37.2″N, 72°35′01.0″W; 400 m; 16–18 December 2009; also visited by JEA on 7–8 November 2003); and S3: Hacienda Ramírez, vereda Ayacucho, municipality of San Cayetano (07°49′37.0″N, 72°37′0.0″W; 400–600 m; 19–21 December 2009). Details of vegetation composition and structure, and habitat pressures at each site are described in Avendaño *et al*. (2018). An additional site, known as Patillales, on the Cúcuta–Puerto Santander highway, municipality of Cúcuta (07°59′18.85″N 72°30′13.79″W; *c*.350 m) was visited by JEA on 7 November 2003.



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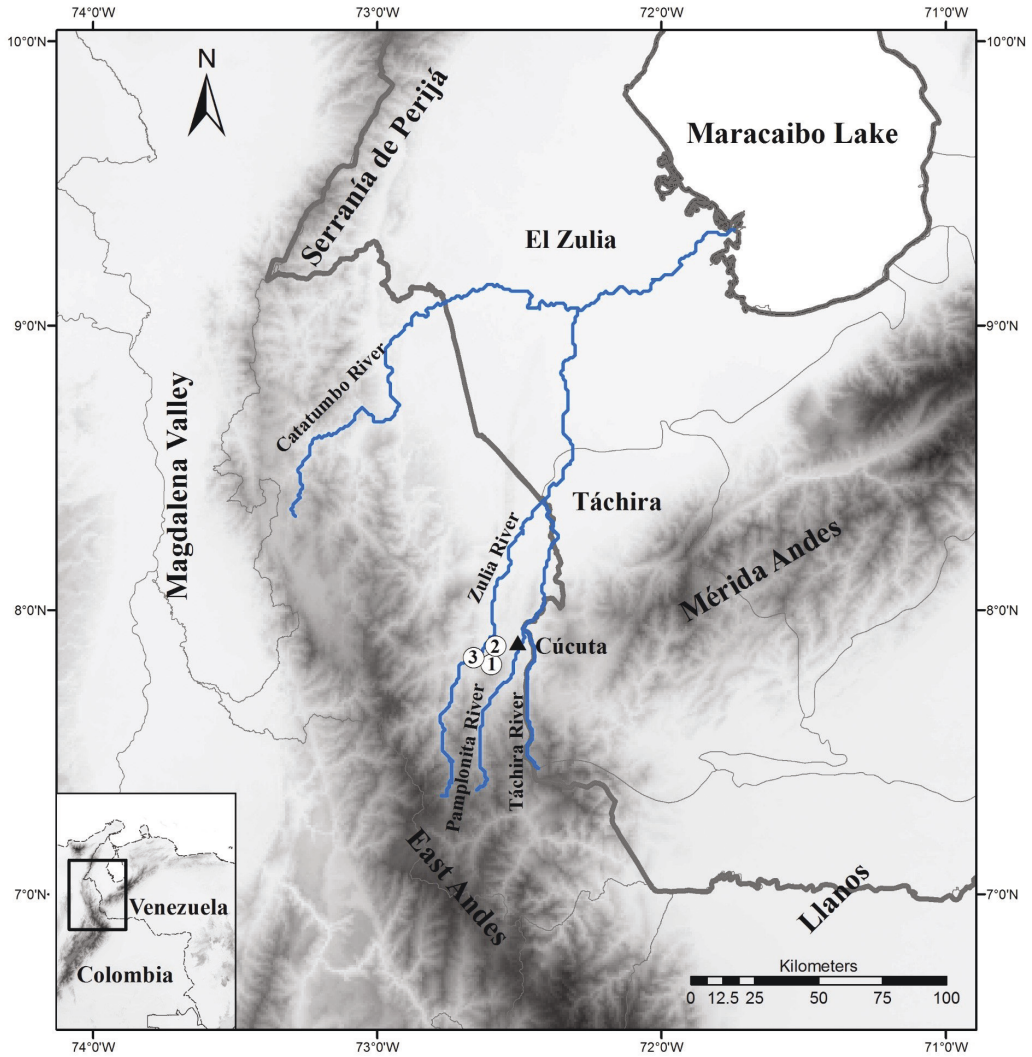


Figure 1. Map of north-east Colombia and adjacent Venezuela showing the location of the Cúcuta Valley (delimited by the Zulia, Pamplonita and Táchira Rivers) and the major geographical and geopolitical features mentioned in the text. White circles with numbers denote our three study sites.

At each site we erected nine mist-nets (36 mm, 12.0 × 2.2 m) on two days between 06.00 and 18.00 h, inside forest and at the forest-scrub ecotone. We collected some specimens, which were prepared as skins and deposited at the Instituto de Ciencias Naturales of the Universidad Nacional de Colombia, Bogotá. Simultaneously, two of us made visual and auditory records along 2–5 km transects through all available habitats. In addition, we made non-systematic sound-recordings of vocalisations along roads, using unidirectional microphones (Sennheiser ME67) and digital recorders (Marantz PMD620). Sound-recordings mentioned in the text are deposited at www.xeno-canto.org. At site 3, we made only sight records and sound-recordings as the steep topography hindered use of mist-nets, and Patillales was surveyed via only sight and auditory records. We follow the taxonomy and nomenclature of the South American Checklist Committee (Remsen *et al*. 2018). To assess


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new distributional records and status of Colombian bird species, Hilty & Brown (1986) and Avendaño *et al*. (2017) were principally used.

## Species accounts

**SCALED DOVE** *Columbina squammata*
A pair near Pozo Azul (S2) on 18 December 2009 was clearly identified by their heavily scaled plumage, long, white-edged tail and rufous in the primaries (Hilty 2002). Widely recorded at several localities in Táchira, Venezuela, this species has otherwise been recorded only recently (2016–18) in the Cúcuta Valley (eBird). These records fill a gap of *c*.200 km between the eastern Llanos of Colombia and the Maracaibo basin (Hilty & Brown 1986, Hilty 2002).

**WHITE-TIPPED SWIFT** *Aeronautes montivagus*
In Colombia, this is a rare species observed mostly in the lowlands (Hilty & Brown 1986). We saw a flock of five at S1. They had a slightly forked, short tail with white tips, and lacked the complete white collar of Lesser Swallow-tailed Swift *Panyptila cayennensis*. Recorded in the foothills of the east slope of the East Andes in Meta (Hilty & Brown 1986), south-east Táchira and the Serranía de Perijá in Venezuela (Hilty 2002). Recently observed at Toledo, Norte de Santander, on 26–27 June 2009, *c*.60 km south of our record (R. Parra unpubl.; eBird). These records suggest a continuous distribution on the east slope of the East Andes.

**LONG-BILLED STARTHROAT** *Heliomaster longirostris*
A male perched 2–3 m above ground in the forest-scrub ecotone at S1. Distinguished from similar-sized hummingbirds in the area such as White-vented Plumeleteer *Chalybura buffoni* by its blue forecrown, long straight bill, ruby throat, and white stripe on the rump-sides (Hilty 2002). Previously known in Colombia from scattered records in Casanare, Meta and Vichada south to Leticia, Amazonas (Hilty & Brown 1986; eBird), and at Saravena, Arauca, on 5 May 2018, *c*.120 km south-east of our record (E. Hernández *et al*. unpubl.; eBird). However, the closest records to the Cúcuta Valley are from south-east Zulia and the base of the Mérida Andes in Venezuela (Hilty 2002), including an observation at Tamá National Park on 29 December 2004 (M. Hernández-Vidal unpubl.; eBird). This new evidence suggests a more continuous albeit local distribution between the Maracaibo basin, Mérida Andes and the northern part of the eastern Llanos of Colombia.

**HOOK-BILLED KITE** *Chondrohierax uncinatus*
A pale-morph immature male was observed over gallery forest and grasslands around Tonchalá stream (S2) on 9 November 2003. It was distinguished from other hawks such as Grey Hawk *Buteo nitidus* by its hooked and heavier bill, pale lores and coarser pattern on the underparts and flight feathers (Hilty 2002). Previously known from the east slope of the East Andes from Boyacá south to western Meta (Hilty & Brown 1986), and in Táchira (Hilty 2002). Recently observed at La Donjuana, on 23 November 2017, 15 km south-west of S2 (J. Zuluaga-Bonilla unpubl.; eBird). These records suggest a continuous distribution in the northern part of the eastern Llanos of Colombia and the lowlands of the Maracaibo basin.

**GREY-HEADED KITE** *Leptodon cayanensis*
One observed and sound-recorded at S3 on 20–21 December 2009. It approached cautiously several minutes after playback (XC298667). The small grey head contrasting with white underparts, dark underwing-coverts, coarsely barred primaries and distinctive cackling


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series of *caw* notes distinguish this species from similar raptors in the area (Hilty 2002). Recently observed at Las Delicias, Táchira, 34 km south-west of our record (L. Fazio unpubl.; eBird). These records fill a distribution gap between the arid Maracaibo basin in Zulia (Hilty 2002) and the eastern Llanos (eBird), mainly from Caquetá and Vaupés south (Hilty & Brown 1986).

**BICOLOURED HAWK** *Accipiter bicolor*

On 20 December 2009, a pair was observed building a nest at S3. The nest was sited below a three-way bifurcation 12 m above ground in the forest edge, near a dirt road. Previous nest records in Colombia and Venezuela have been reported in February–May (early wet season), with fledglings in June–September (Mader 1981, Hilty & Brown 1986, Hilty 2002). However, our record seems to agree with the timing of the local breeding season observed in December 2009. Both were adults showing dark grey underparts contrasting with the rufous thighs not seen in Grey-bellied Hawk *Accipiter poliogaster*, which has been recorded in Táchira, Venezuela (Hilty 2002). This record fills a distribution gap of *c*.250 km between the base of the East Andes in Arauca (Hilty & Brown 1986, Acevedo-Charry 2017) and the foothills of the Mérida Andes in Táchira (Hilty 2002).

**COMMON BLACK HAWK** *Buteogallus anthracinus*

One at Tonchalá stream (S2) on 9 November 2003 was distinguished from the sympatric Great Black Hawk *B. urubitinga* by its bright yellow lores, cere and bill base, and median white tail-band and narrow white tip (Hilty 2002). It was perched in the canopy of gallery forest dominated by *Anacardium excelsum* (Anacardiaceae), from where it flew over the adjacent grassland. In flight, it was harassed by a Tropical Kingbird *Tyrannus melancholicus*, to which the hawk responded by turning its body 180º, stretching its legs towards the flycatcher, which desisted in its pursuit. Previously known locally on the east slope of the East Andes from the Sierra de la Macarena, Meta, north to Labateca in Norte de Santander, *c*.60 km south of our record (Rodríguez-Toloza 1985, Hilty & Brown 1986), both slopes of the Mérida Andes, the foothills of the Serranía de Perijá and adjacent lowlands of the Maracaibo basin in Zulia (Hilty 2002). Our record suggests a continuous distribution at the base of the East Andes.

**GREAT BLACK HAWK** *Buteogallus urubitinga*

A local *campesino* hunted one at S2 in 2009 and preserved part of its skin. It had the undertail-coverts and basal half of tail white, unlike the median white tail-band and narrow white tip of *B. anthracinus* (Hilty & Brown 1986). *B. urubitinga* is widespread in the lowlands east of the Colombian Andes. Our record fills a gap of *c*.260 km in the species' range between Arauca and the Maracaibo lowlands in southern Zulia and Táchira (Hilty & Brown 1986, Hilty 2002).

**WHITE-TAILED HAWK** *Geranoaetus albicaudatus*

One observed in flight at S1 on 16 December 2009. It was large, and had slate-grey upperparts contrasting with rufous shoulders and a single black band near the tail tip, which distinguish it from Short-tailed Hawk *Buteo brachyurus* (Hilty 2002). Recently observed at San Cristobal and Tamá National Park, Táchira, on 5–6 January 2014, *c*.33 km south-east and *c*.40 km east of our record, respectively (M. Hernández-Vidal unpubl.; eBird). These records fill a gap between the east slope of the East Andes, from the Sierra de la Marcarena, Meta, north to Arauca (Hilty & Brown 1986), and the Maracaibo basin and the Serranía de Perijá in Zulia (Hilty 2002). It has been recorded in the Área Natural Única Los


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Estoraques, on the East Andes ridge (JEA & OLR pers. obs.), but this is the first published record for Norte de Santander.

**COLLARED FOREST FALCON** *Micrastur semitorquatus*

One at S2 near Pozo Azul stream. Distinguished from Barred Forest Falcon *M. ruficollis*, which could range into the foothills of the Andes, by its larger size, white collar and underparts, and black crescent below the eyes (Hilty 2002). A specimen (FMNH 260982) was collected in Toledo, Norte de Santander, in 1959 by K. von Sneidern (Biomap 2014). Known locally at the base of the East Andes, from northern Boyacá to Putumayo and Leticia, Amazonas (Hilty & Brown 1986), the Maracaibo basin in Zulia (Hilty 2002), and observed at El Tamá National Park, Venezuela, on 28 June 2016 (J. Miranda unpubl.; eBird). These records suggest a more continuous distribution on the east slope of the East Andes and in the Maracaibo lowlands.

**SPECTACLED PARROTLET** *Forpus conspicillatus*

Until recently, Green-rumped Parrotlet *F. passerinus* was considered to be the only *Forpus* in Norte de Santander and the Maracaibo basin (Nicéforo María 1945, Hilty & Brown 1986, Hilty 2002, Rodríguez-Mahecha & Hernández-Camacho 2002). However, in 2005, Armesto *et al*. (2013) registered flocks of 10–30 *F. conspicillatus* daily in the urban area of Cúcuta. We recorded pairs visiting the canopy, forest borders, bushes and isolated trees in pastures daily at all three study sites. More recently (2015–18) it has been recorded from at least 11 localities in the Pamplonita drainage, with the northernmost *c.*15 km south-west of Puerto Santander at the Colombia / Venezuela border (N. Romero unpubl.; eBird). Male *F. conspicillatus* is clearly distinguished from male *F. passerinus* by the blue near its eyes, blue rump and vocalisations. Specimens are required to determine if the Cúcuta population corresponds to race *metae* from the eastern Llanos (Rodríguez-Mahecha & Hernández-Camacho 2002). However, the possibility of colonisation by the nominate from the middle Magdalena Valley cannot be discarded given the proximity of the Cúcuta Valley to the Ocaña pass, which has facilitated expansion by open-country species to opposite slopes of the East Andes (Freeman *et al*. 2012, Avendaño *et al*. 2013).

**BLACK-BACKED ANTSHRIKE** *Thamnophilus melanonotus*

The only bird species restricted to tropical dry forest on the Caribbean coast (Stotz *et al*. 1996, IAvH 1998). Because of its specific habitat requirements (Hilty 2002) any information about its ecology is relevant due to the critical conservation status of this ecosystem in Colombia. We recorded the species at all three study sites. However, it was commonest at S1 where it was recorded daily foraging in thorny scrub from the ground to *c.*4 m. Most records involved single males, although it is possible that females went unseen. Males were clearly distinguished from other *Thamnophilus* by their black upperparts and underparts, and white flanks and belly, while females were identified by their dusky crown, dull rufous tail and buff wingbars (Hilty 2002). Stomach contents of two males collected at S1 included mainly parts of Coleoptera, followed by Hemiptera, some Orthoptera and Homoptera, and a few Hymenoptera. Based on gonad sizes, brood patches, vocal activity and nestbuilding, our observations suggested that most bird species in the study area were breeding during December. In contrast, *T. melanonotus* displayed no evidence of breeding. Two males (ICN 37693, 37714) had small gonads (left testis ≤ 2.7 × 1.5 mm) and were moulting the body and flight feathers. Likewise, a female (ICN 37694) had its ovary granular (5.5 × 3.5 mm) and some moult in the back. The breeding season is probably March–October as reported for populations on the Caribbean coast of Colombia (Hilty & Brown 1986, Zimmer & Isler 2003).



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**RECURVE-BILLED BUSHBIRD** *Clytoctantes alixii*
Since its rediscovery in Venezuela and Colombia in 2004 / 05 (Lentino *et al*. 2004, Laverde-R. & Stiles 2007), five additional sites have been discovered in the latter country: Puerto Valdivia, Antioquia (Colorado 2008), the west slope of the Serranía de los Yariguíes, Santander (Donegan *et al*. 2010), Santa Rosa del Sur, Bolívar (Donegan 2012), northern Bucaramanga, Santander (Herrera-Ordóñez & Rincón-Guarín 2014) and Ciénaga de Zambito, Santander (F. Rowland unpubl.; eBird). All of these sites are within the species' historical range (Hilty & Brown 1986). However, on 21 December 2009, OLR heard the species' primary song, a series of three descending whistles (Laverde-R. & Stiles 2007), once from dense scrub on a steep slope at S3. This is the first record on the east slope of the East Andes of Colombia, and a range extension of *c*.95 km and *c*.280 km from Ocaña (west slope of the East Andes) and the Venezuelan side of the Serranía de Perijá, respectively (Lentino *et al*. 2004, Laverde-R. & Stiles 2007).

**RUFOUS-WINGED ANTWREN** *Herpsilochmus rufimarginatus*
Observed and sound-recorded (XC298067, 298665) daily in the midstorey and subcanopy at S2, although it was more abundant in the dry premontane forest transition zone at S3, where it followed mixed-species flocks. All those observed showed the rufous-chestnut wing patch and yellowish underparts that distinguish it from other *Herpsilochmus* (Hilty 2002). Observed at Cubará, Boyacá, on 5 May 2018, *c*.95 km south-east of our study area (J. Zuluaga-Bonilla *et al*. unpubl.; eBird). These records fill a distribution gap along the east slope of the East Andes in Arauca south to Nariño (Hilty & Brown 1986), both slopes of the Mérida Andes in Táchira and the Serranía de Perijá in Zulia, Venezuela (Hilty 2002; eBird).

**NORTHERN SCRUB FLYCATCHER** *Sublegatus arenarum*
One at Patillales on the Cúcuta–Puerto Santander highway on 7 November 2003 (JEA) was distinguished from other flycatchers such *Elaenia* and *Myiarchus* by its stubby black bill, slight crest, short whitish supercilium, and sharp division between grey and yellow on the underparts (Hilty 2002). Fairly common in arid lowlands of Zulia and Táchira in Venezuela (Hilty 2002), with the closest record from La Fría, Táchira, *c*.37 km north-east of Patillales (G. Carpentier unpubl.; eBird). However, ours is the first record for Norte de Santander, suggesting a continuous range from the Maracaibo basin to the Colombian Llanos in Meta (Hilty & Brown 1986).

## Discussion

In recent decades, ornithological research in unexplored or poorly known regions of Colombia has resulted in a significant number of additions to the country's bird list, as well as new distributional data for the Colombian avifauna in general (Avendaño *et al*. 2017). Here, we provide new data pertaining to 15 species in the Cúcuta Valley, which extend species' distributions along the east slope of the East Andes or fill distributional gaps between the Serranía de Perijá and the Mérida Andes of Venezuela, or between the Maracaibo basin in Venezuela and the eastern Llanos of Colombia.

Why did these species go undetected by experienced ornithologists such as Brother Nicéforo María and M. A. Carriker, who collected intensively in this region during the 20th century? Several of our records correspond to local and secretive species apparently restricted to especially humid or dense habitats (e.g. *Clytoctantes alixii*, *Herpsilochmus rufimarginatus*), whereas others are low-density species or are recorded only occasionally (e.g. raptors, swifts), even when using a range of sampling techniques. In addition, we recorded some species that probably have expanded their ranges recently due to landscape-


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level habitat transformation (e.g. *Columbina squammata*, *Geranoaetus albicaudatus*). Given the geographic location of the Cúcuta Valley, these range extensions could have occurred via trans-Andean dispersal as previously documented for other bird species in this region of the East Andes (Freeman *et al*. 2012, Avendaño *et al*. 2013). However, an alternative scenario of colonisation into the Cúcuta Valley from the northern part of the eastern Llanos is also plausible, particularly given accelerating loss of forest cover in recent decades in the Tame and Sarare regions (Sánchez-Cuervo *et al*. 2012, Acevedo-Charry 2017), which has probably facilitated the dispersal of open-country species (e.g. Masked Cardinal *Paroaria nigrogenis*, Armesto *et al*. 2013; Rufous-tailed Hummingbird *Amazilia tzacatl*, Acevedo-Charry *et al*. 2017) between these regions. In any case, range extensions reported here are expected given the location of the Cúcuta Valley, and its historical connection with dry forest avifaunas of the Caribbean, inter-Andean valleys and Llanos (Haffer 1967, Avendaño *et al*. 2018). Consequently, new distributional data are expected in this region of Colombia as ornithologists work poorly known areas such as the transition from the dry forest of the Cúcuta Valley to humid forest in the Catatumbo and Sarare regions, as well as to the foothills of the East Andes and Mérida Andes.

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