

## Two new species for Nicaragua and other notes on the avifauna of the Atlantic Region and Paso del Istmo Biological Corridor

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En este artículo reportamos dos nuevas especies para Nicaragua: *Butorides striata* y *Ornithion brunneicapillus*. Además registramos ampliaciones en la distribución y abundancia en la Región Atlántica y el Corredor Biológico del Paso del Istmo para 29 especies, durante el 2009. De estas observaciones diez corresponden a especies raras en toda Nicaragua, incluyendo cuatro que fueron recientemente incluidas en la lista de aves: *Cypseloides niger*, *Deconycura longicauda*, *Myiornis atricapillus* y *Tolomyias assimilis*. Las otras observaciones corresponden a ampliaciones de la distribución altitudinal y registros en bioregiones donde no han sido reportadas previamente estas especies. Además incluimos información sobre la abundancia de las especies y el hábitat donde se les observó.

Nicaragua's avifauna may be the least studied in Mesoamerica because the ecology, life history and distribution of most species remain little known. However, in the last decade resident and visiting ornithologists and birdwatchers have made several important contributions to our knowledge of Nicaraguan bird distribution, including more than 90 new species records and noteworthy range extensions<sup>1–5,8,11,13–18,20</sup>. The publication of the *Lista patrón de las aves de Nicaragua*<sup>12</sup> was an important contribution because it summarises contemporary information on species distribution and abundance throughout the country, and set the foundations for additional studies. Here we report the first records of Striated Heron *Butorides striata* and Brown-capped Tyrannulet *Ornithion brunneicapillus* for Nicaragua. Also included are notes of range extensions and abundance data for 29 other species in the Atlantic Region and the Paso del Istmo Biological Corridor.

### Methods

Most of LS's observations were made in 2009 during bird surveys of El Quebracho Private Reserve (hereafter QPR), dpto. Río San Juan (11°10'N 84°24'W; 80 m) and Mancarroncito Island in the Solentiname archipelago, within Lake Nicaragua (11°10'N 85°03'W; 30 m; Fig. 1) as part of a bird monitoring project sponsored by Fundación del Río. Other observations were made in San Juan del Sur or during trips to and from both aforementioned study areas.

WJA *et al.* conducted avian point-count surveys in March–November 2009 in the Paso del Istmo Biological Corridor (hereafter PIBC) on three private farms in dpto. Rivas: Finca Guadalupe (El Aceituno, Sapoá), Finca Sierra Serena (Cárdenas) and Las Fincas Nica Dev (Nicaraguan Development) (Escamequita). Additional observations were made

c.13 km south-east of Río Mena in the lower río San Juan watershed (11°06'39"N 85°16'49"W; Fig. 1). GPS coordinates of each observation are provided within the species accounts. When exact distances are presented, they were measured using a laser range finder. Other observers' initials are given where relevant and their names are provided in the Acknowledgements.

### Results

#### Rufescent Tiger Heron *Tigrisoma lineatum*

An adult perched at a distance of 7 m and c.3 m above ground in a broadleaf tree within riparian habitat at Finca Guadalupe (11°10'24.832"N 85°41'5.521"W; 229 m) on 28 March 2009 (WJA, JH), and one in riparian habitat, Finca Isla Vista (11°14'0.281"N 85°33'6.208"W; 43 m) on 1 April 2009 (FO, MS). The species is uncommon but regular along rivers and the lakeshore in the PIBC. An adult perched at a height of c.8 m in a leafless tree at the edge of the río Frío c.0.5 km inland of Lake Nicaragua (=Lake Cocibolca: 11°06'N 84°46'W; 34 m), on 3 September 2009 (LS). Listed as rare in Nicaragua<sup>12</sup>, but the abundance of small streams and rivers (prime habitat) throughout the PIBC and along the San Juan River suggests that this species may be commoner than previously reported.

#### Bare-throated Tiger Heron *Tigrisoma mexicanum*

Eight adults on different parts of Mancarroncito Island during daily bird surveys conducted from 05h30–11h00. All observations were of lone birds perched 1–5 m above the water in trees at the edge of the island, or among *Junco* sp. (Juncaceae) in the water, on 4 September 2009, with one each on 5–6 September 2009 (LS). The species is apparently commoner than reported previously in this area<sup>12</sup>.

**Striated Heron** *Butorides striata*

On 10 March 2009, LS observed a heron perched on a dead snag (Fig. 2) in the water c.5 m from the río San Juan's edge (10°59'N 84°26'W; 30 m). It was perched near Snowy Egrets *Egretta thula*, permitting a definitive comparison of size. The extensive white belly and breast, green wings and pale neck distinguish the species from Green Heron *B. virescens*. This is the first documented record in Nicaragua.

**Double-toothed Kite** *Harpagus bidentatus*

Two at QPR: the first (12 March 2009), a juvenile, perched at a height of c.15 m in a forest gap, and the second (13 March 2009), an adult, perched in the lower canopy c.5 m up in the forest interior. Another adult was seen flying over the town of Buena Vista (11°10'N 84°25'W; 80 m), on 9 September 2009 (LS). Reported as sporadic in the Atlantic Region and rare elsewhere<sup>12</sup>, these three records suggest that the bird may be commoner than previously reported.

**Semiplumbeous Hawk** *Leucopternis semiplumbeus*

The species' characteristic and unmistakable call was heard deep in secondary forest at QPR, at c.09h00, on 7 September 2009 (LS). The regenerating secondary forest in the reserve is very similar to that inhabited by the species in Costa Rica<sup>19</sup>. *L. semiplumbeus* was previously reported as rare in Nicaragua<sup>12</sup>.

**Common Black Hawk** *Buteogallus anthracinus*

An adult at Playa Marsella, San Juan del Sur (11°17'N 85°54'W; 0 m) soared 50 m above the shore with 12 Black Vultures *Coragyps atratus* on 31 December 2008 (LS); another adult in coastal wetlands c.300 m south-east of the mouth of the río Ostional (11°06'29.73"N 85°45'34.92"W; 9 m) on 6 October 2009 (WJA); and two adults in the same area near the coast on 23 April 2010 (WJA). Considered common in the Atlantic Region but sporadic in Nicaragua's Pacific Region<sup>12</sup>, whereas along the Pacific coast of Costa Rica, it is considered a common resident<sup>6</sup>. Perhaps commoner than previously reported in Nicaragua's Pacific Region, but more observations are needed to confirm its status locally.

**Grey Hawk** *Buteo nitidus*

Three observations of single adults at QPR, the first two on consecutive days (12–13 March 2009) in open areas near forest edge, soaring at 20–50 m over pastures with scattered trees, while the third bird was perched (and photographed) c.15 m above ground at the forest edge on 7 September 2009 (LS). At PIBC, a juvenile perched c.40 m away and c.5 m above ground in the midstorey of a broadleaf tree

at the edge of pastures bordering a dirt road c.13 km south-east of the lower río San Juan watershed (11°06'39"N 85°16'49"W; 49 m) on 28 March 2009 (WJA). *B. nitidus* had not been recorded previously in the Atlantic Region<sup>12</sup>, but the species is fairly common along Costa Rica's north-west Atlantic slope within 20 km of QPR<sup>6</sup>. Our observations suggest that the species may be extending its range from the south and west in response to land use changes conducive to its ecological prerequisites.

**White-tipped Dove** *Leptotila verreauxi*

The species' characteristic call was heard at El Castillo, río San Juan (11°00'N 84°25'W; 30 m) at 05h45, on 9 March 2009 (LS). Another was observed in the middle of the main trail between Boca de Sábalo and Bella Vista, c.5 km from Buena Vista, on 11 March 2009. It was apparently searching for food or grit. A third was heard calling prior to 06h00 near the forest edge at QPR, on 12–13 March 2009 (LS). Grey-chested Dove *L. cassinii* is commonly heard in the same area, which helped confirm the differences between their songs. *L. cassinii* is common in Nicaragua's Pacific Region and Central Highlands but there are no published reports of it in the Atlantic Region<sup>12</sup>. LS's observations constitute the first report in the latter region. Possibly, the fragmentation and deforestation that continues along the Atlantic slope favours the species, a trend also observed in other Central and South American countries<sup>7</sup>.

**Grey-headed Dove** *Leptotila plumbeiceps*

Five were seen in young, humid secondary forest on Mancarroncito Island. Three foraged on the ground next to a creek, while two others were observed perched 1 m above ground within a dense bush near the forest edge, on 4 September 2009 (LS). This dove is rare throughout Nicaragua<sup>12</sup>. However, at least on this island, it appears to be common.

**Crimson-fronted Parakeet** *Aratinga finschi*

Twelve alighted in a coconut palm *Cocos nucifera* on the beach near San Juan del Sur (11°15'N 85°52'W; 0 m) at 17h35, on 1 January 2009 (LS). Apparently, they were using the palm to roost because they formed groups of 2–3 and vied for perches just before nightfall. A very vocal flock of eight was at Las Fincas, Nica Dev (11°13'5.174"N 85°47'51.850"W; 38 m) flying above pastures at a distance of 335 m (viewed through 10×42 binoculars) on 7 April 2009 (WJA, JH). Nine were at San Juan del Sur (11°15'09.85"N 85°52'19.56"W; 10 m) feeding c.7 m above ground in the crown of an almond (*Terminalia catappa*) in a garden c.150 m inland, on 18 June 2009 (WJA). A flock of six at Finca Sierra Serena (11°13'11.309"N 85°33'29.563"W; 186 m) near forest edge at a distance of 43 m and c.20 m above ground, landed

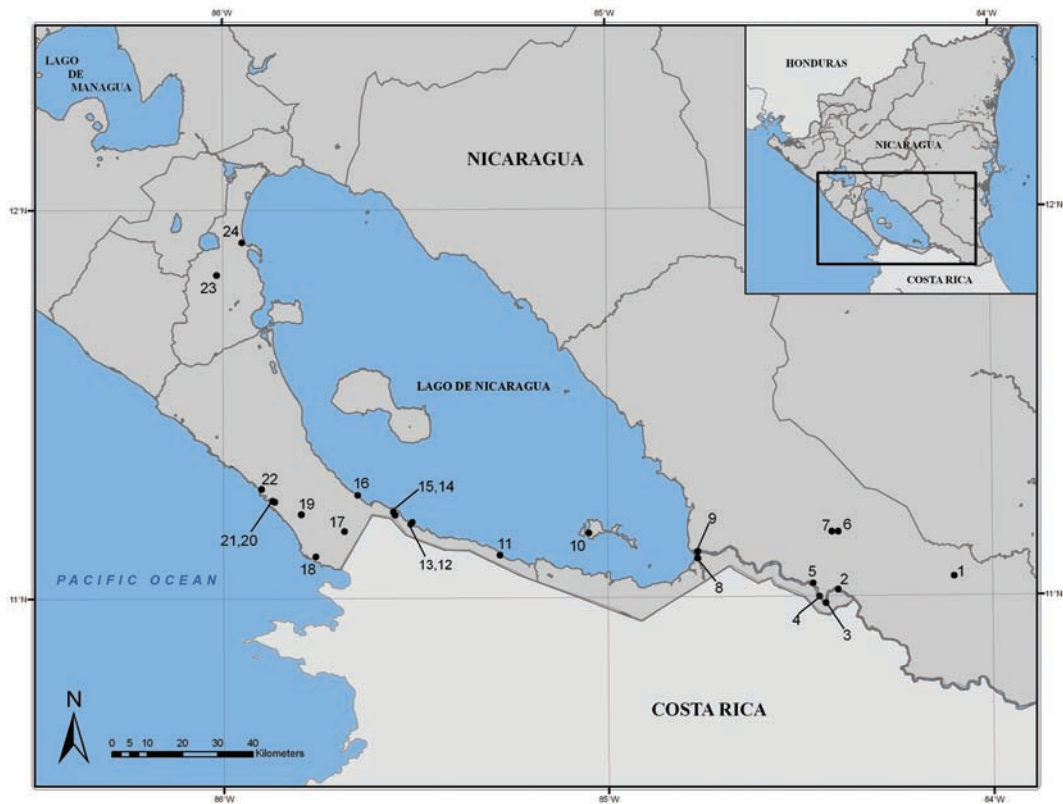


Figure 1. Map of Nicaragua showing locations mentioned in the text. (1) 1 km north-west of Brito; (2) Santa Fe, río San Juan; (3) El Castillo, río San Juan; (4) río San Juan between El Castillo and Boca de Sábalo; (5) mouth of the río Sábalo near Boca de Sábalo; (6) El Quebracho Private Reserve, dpto. Río San Juan; (7) Buena Vista; (8) río Frío c.0.5 km inland of Lake Nicaragua (=Lake Cocibolca); (9) San Carlos; (10) Mancarroncito Island, Solentiname archipelago, Lake Nicaragua; (11) 13 km south-east of Río Mena, lower río San Juan watershed; (12) military post on outskirts of Cárdenas; (13) Cárdenas; (14) Finca Isla Vista; (15) Finca Sierra Serena; (16) 15 km north of Peñas Blancas frontier pass; (17) Finca Guadalupe; (18) coastal wetlands c.300 m south-east of the mouth of the río Ostional; (19) Las Fincas, Nica Dev; (20) beach near San Juan del Sur; (21) San Juan del Sur; (22) Playa Marsella, San Juan del Sur; (23) Mombacho Volcano Natural Reserve; (24) Granada city.



Figure 2. Striated Heron *Butorides striata*, río San Juan, Nicaragua, 10 March 2009; note the Snowy Egret *Egretta thula* for size comparison (Luis Sandoval)



Figure 3. Female or young male Slate-coloured Seedeater *Sporophila schistacea*, Mancarroncito Island Nicaragua, 5 September 2009 (Luis Sandoval)

briefly in the crown of a tall broadleaf tree, on 3 October 2009 (WJA, JH). A flock of 16 was in the village of Cárdenas (11°11'47.63"N 85°30'29.23"W; 34 m) roosting among palm fronds c.50 m from the Lake Nicaragua shore, on 5 October 2009 (WJA). Distinguished from the similar Pacific Parakeet *A. strenua* on vocalisations and because *A. strenua* lacks the plush crimson forehead and bright red coverts at the bend of the wing, conspicuous when perched, and the red-and-yellow underwing linings visible in flight. Throughout its range, *A. finschi* inhabits mainly open and disturbed areas as well as humid forest edge from coastal lowlands to 2,000 m<sup>9</sup>. In Nicaragua, *A. finschi* is common in the Atlantic Region but less so in the Central Highlands<sup>12</sup>. These are the first reports (a) over a broad area of the PIB, including the shores of Lake Nicaragua; (b) on the Pacific coast of Nicaragua; and (c) in dry forest habitat anywhere in the species' range.

#### **Brown-hooded Parrot** *Pyrilia haematotis*

LS watched several flocks in the Atlantic Region in the QPR and near the río San Juan during March and September 2009. On 11–13 March, he observed a pair and a flock of three flying above the canopy of the reserve. On 7 September, a flock of 16 flew south to north over the canopy within the same reserve. In Nicaragua, *P. haematotis* is sporadic in the Atlantic Region<sup>12</sup> but may be commoner than previously reported.

#### **Mealy Parrot** *Amazona farinosa*

Several flocks seen near the Costa Rican border (LS): two flocks of 8–10, the largest of the those he recorded, flew south over the río San Juan between El Castillo and Boca de Sábalo (11°00'N 84°27'W; 36 m) early in the morning of 10 March 2009. Three flocks were observed at QPR as follows. Three foraged in a fig tree (*Ficus* sp.) in a forest gap on 11 March 2009. On 12–13 March 2009, two flocks of four and six, respectively, flew over the forest canopy between 05h30 and 06h30, calling as they did so (LS). At PIBC, a very vocal flock of six was observed at a distance of 30 m perched c.7 m above ground in a broadleaf tree within secondary forest at Finca Guadalupe (11°11'15.562"N 85°40'31.699"W; 172 m) on 17 June 2009 (WJA, JH). Uncommon in the Central Highlands and Atlantic Region<sup>12</sup>, but common in lowland forests of the Atlantic Region of Costa Rica and Honduras<sup>9,19</sup>. It appears to be expanding west into the Pacific Region.

#### **Crested Owl** *Lophotrix cristata*

Nocturnal vocalisations of two birds were sound-recorded in QPR at just 80 m, on 11–12 March 2009 (LS). The recording has been deposited at the Laboratorio de Bioacústica, Universidad de Costa

Rica, San José, but is yet to be assigned a catalogue number. A pair was heard at 21h00 at the same site on 6 September 2009 (LS). Reportedly rare in Nicaragua, where it inhabits mid elevations of the Central Highlands<sup>12</sup>, ours is the lowest elevational record in the country and the first report for the Atlantic Region.

#### **Black Swift** *Cypseloides niger*

Two foraged with a flock of c.20 Vaux's Swift *Chaetura vauxi* over pastures bordering riparian growth, c.1 km north-west of Brito (11°20'55.43"N 85°58'38.82"W; 12 m) on 21 October 2009 (WJA); and two foraged among a loose flock of c.40 Vaux's Swift and one White-collared Swift *Streptoprocne zonaris* near the entrance of Mombacho Volcano Nature Reserve (11°50'N 86°01'W; 325 m) on 27 December 2009 (LS). Rare in Nicaragua with only one record from the Pacific slope<sup>11</sup>, our observations further support its presence in the country and near sea level.

#### **White-collared Swift** *Streptoprocne zonaris*

One foraged with c.40 Vaux's Swift and two Black Swift over pastures near the entrance of Mombacho Volcano Nature Reserve (11°50'N 86°01'W; 325 m) on 27 December 2009 (LS). This is the first report in the Pacific Region of Nicaragua<sup>12</sup>.

#### **Vaux's Swift** *Chaetura vauxi*

A flock of c.20 with two Black Swifts over pastures bordering riparian habitat, c.1 km north-west of Brito (11°20'55.43"N 85°58'38.82"W; 12 m) on 21 October 2009 (WJA); and two over grassland with >100 Barn Swallows *Hirundo rustica* 15 km north of the Peñas Blancas frontier pass (11°16'N 85°39'W; 37 m) on 27 December 2008 (LS). On 27 December 2009, a flock of c.40 with two Black Swifts and a White-collared Swift was seen near the entrance to Mombacho Volcano Natural Reserve (11°50'N 86°01'W; 325 m) (LS). On 28 December 2009, in the centre of Granada (11°55'N 85°57'W; 33 m), ten Vaux's Swift foraged with >20 Grey-breasted Martin *Progne chalybea* (LS). We distinguished *C. vauxi* from *C. pelagica* by tail shape, the pale rump of *C. vauxi* and vocalisations. Chimney Swift is a common passage migrant in August–November in Costa Rica<sup>6</sup> and Nicaragua (WJA unpubl.). Thus, the December records probably constitute resident *C. vauxi* because by then most *C. pelagica* have passed through en route to their wintering grounds in South America. Vaux's Swift is considered rare in the Pacific Region and has been recorded only above 100 m<sup>12</sup>. Our records constitute the lowest elevations reported for Nicaragua and suggest the species is commoner than previously reported over dry forest and pastures in the Pacific Region.

**Ruby-throated Hummingbird** *Archilochus colubris*

A female foraged at a distance of 3.0 m and 1.5 m above ground among red-flowered bushes along a road cut c.13 km south-east of Río Mena, in the lower río San Juan watershed (11°06'39"N 85°16'49"W; 49 m) on 28 March 2009 (WJA). A female, after bathing, perched on a leafless branch beside a creek in secondary forest at QPR, on 7 September 2009 (LS). The QPR sighting is the first report in the Atlantic Region<sup>12</sup>. In Costa Rica, although the species is primarily a winter resident in dry forest<sup>6,19</sup>, it is also found sporadically throughout much of the rest of the country, including the Atlantic Region.

**Long-tailed Woodcreeper** *Deconychura longicauda*

Four seen at QPR, two on 13 March, and two on 7 September 2009 (LS). Observations involved singles foraging on moss-covered tree trunks in secondary forest. Previously reported just once in Nicaragua<sup>12</sup>, also in the Atlantic Region, this woodcreeper is perhaps commoner than realised, given the difficulty in identifying woodcreepers in general and this species in particular; it is easily mistaken for commoner species such as Cocoa *Xiphorhynchus susurrans* and Streak-headed Woodcreepers *Lepidocolaptes souleyetii*. More surveys are needed to confirm *D. longicauda*'s abundance in Nicaragua.

**Brown-capped Tyrannulet** *Ornithion brunneicapillus*

One within the town limits of Buena Vista (11°10'N 84°25'W; 80 m) on 11 March 2009 (LS), perched 5 m above ground in a common teak *Tectona grandis* (Verbenaceae) beside a road. During the observation, a Yellow Warbler *Dendroica petechia* began to chase it for c.30 seconds, before both flew to a nearby teak plantation c.50 m away. Distinguished from the similar Yellow-bellied Tyrannulet *O. semiflavum*, which is rare in the area<sup>12</sup>, by the brown crown. Brown-capped Tyrannulet ranges from north-west South America through Panama and is a common resident nearby on the Costa Rica–Nicaragua border<sup>6</sup>, meaning that it was anticipated in the area. This is the first report of *O. brunneicapillus* in Nicaragua.

**Black-capped Pygmy Tyrant** *Myiornis atricapillus*

Three observations at QPR (LS). The first (12 March) involved a pair moving furtively within a bush at the forest edge, possibly searching for a nest site. The other two observations were on the same day (7 September 2009), one in the morning (08h50) and the other in the afternoon (c.15h00),

on opposite sides of the reserve and involved a single and a pair. A recent addition to Nicaragua's avifauna<sup>16</sup> these observations constitute the second published report for the country.

**Yellow-margined Flycatcher** *Tolmomyias assimilis*

Two perched at a distance of 33 m and c.6 m above ground in a broadleaf tree in riparian habitat, at Finca Guadalupe (11°11'11.355"N 85°40'22.686"W; 166 m) on 2 March 2009 (FO, MS). Four observations at QPR in 2009 (LS): three in the same area near a building at the forest edge, where a single was seen foraging and singing, on 11–12 March and 8 September. The fourth involved a single at the southern edge of the reserve. Recorded previously from just one locality, Bartola Refuge<sup>5,16</sup>, these sightings further document the species' presence in Nicaragua.

**Golden-crowned Spadebill** *Platyrinchus coronatus*

Three observed in QPR during 2009 at c.80 m (LS). On 5 March, two were seen foraging at 2 m in the understorey, of young secondary forest. On 7–8 September, singles foraged in separate areas of the reserve. Reported in the Atlantic Region at 200–600 m<sup>12</sup> these observations establish the lowest elevation yet recorded in Nicaragua.

**Least Flycatcher** *Empidonax minimus*

One perched 1 m above ground in a small tree at the forest edge in QPR (11°10'N 84°24'W; 80 m) on 12 March 2009 (LS). At PIBC, six were observed, all foraging in scattered trees in pastures or the understorey, at edges of forest fallows and young secondary forest, at Las Fincas, Nica Dev, between 11°12'53.455"N and 11°13'49.004"N, and 85°47'51.898"W and 85°48'27.957"W, at elevations of 30–188 m, on 7–9 October 2009 (WJA, JH, JC, MS). Common at PIBC during autumn and spring migration in a mosaic of habitat types extending from the coast to islands (e.g., Zanate) in Lake Nicaragua (Arendt *et al.* in prep.). The species' reported elevational range is 600–1,500 m in the Central Highlands and Pacific Regions<sup>12</sup>. LS's observation is the first in the Atlantic Region and it, and the Las Fincas, Nica Dev sightings, constitute the lowest elevation ( $\leq 80$  m) for the species in Nicaragua. Identification was based on a combination of overall plumage coloration, the paler upperparts, with much less yellow on the underparts compared to other *Empidonax*, compact size, relatively short tail, disproportionately large head, the conspicuous and complete white eye-ring, and contrasting white throat. When visible, the primary extension was measured 'visually'. With experience, the primary extension can be used in

combination with the other characters to make a positive identification. On some occasions, especially in spring, birds gave a repeated *whit* call.

#### Great Crested Flycatcher *Myiarchus crinitus*

Four observed on 11–13 March 2009 (LS), one in a private garden in Buena Vista (11°10'N 84°25'W; 80 m), and the others at forest edge in different parts of QPR. At PIBC, during spring and autumn migration 2009, one was observed in riparian growth at Finca Sierra Serena (11°13'23.473"N 85°33'27.558"W; 130 m), two at the edge of young secondary forest at Finca Guadalupe (11°11'10.758"N 85°40'27.534"W; 174 m) and one in young secondary forest at Finca Isla Vista (11°13'47.823"N 85°33'7.919"W; 84 m) (JC, JH, MS, WJA). The species' migratory routes and 'wintering' areas extend along both slopes of Nicaragua<sup>10</sup>. This flycatcher is uncommon to common at PIBC in a variety of habitats, but especially along forest edge and in riparian and young second growth, during spring and autumn. Reported as a rare migrant in the Atlantic Region<sup>11</sup>, but it is common throughout Costa Rica below 1,800 m<sup>6</sup>. In Nicaragua, the species is undoubtedly commoner than previously reported.

#### Rufous-browed Peppershrike *Cyclarhis gujanensis*

One heard singing constantly during the afternoon of 11 March 2009 on the edge of young secondary forest in QPR (LS). Reported previously only in the Pacific Region and Central Highlands<sup>12</sup>, this is the first published report for the Atlantic Region.

#### House Wren *Troglodytes aedon*

Seven were heard at El Castillo, San Carlos, Boca de Sábalo, Buena Vista and QPR along the río San Juan at 30–80 m, on 10–13 March and 6–9 September 2009 (LS). In the Paso del Istmus, one was singing at Finca Guadalupe (11°11'1.5"N 85°40'25.6"W; 216 m) on 16 June 2009 (WJA). One sang in a fallow field at Finca Isla Vista (11°13'49.0"N 85°32'54.8"W; 82 m) on 20 June 2009 (WJA), with another also heard in a fallow field in the same area (11°12'57.0"N 85°33'11.6"W; 212 m) on the same day (JC). One was seen and heard on the outskirts of Cárdenas (11°11'28.8"N 85°30'45.0"W; 45 m) on 23 June 2009 (WJA, JC, MS). The species' reported elevational range is 400–1600 m<sup>12</sup>. These observations represent the lowest elevation reported in the country.

#### Cerulean Warbler *Dendroica cerulea*

An adult male in a forest gap at an elevation of c.80 m in QPR, on 7 September 2009 (LS), foraged within a mixed-species flock including Lesser Greenlet *Hylophilus decurtatus*, Tropical Gnatcatcher *Poliophtila plumbea* and Blue Dacnis *Dacnis cayana*. Reported previously only in the Central Highlands

at 800–1,200 m<sup>12</sup> this observation establishes the lowest elevation for the species in Nicaragua. However, it occurs at sea level at other migratory stopover sites such as Limón, Costa Rica<sup>6,19</sup>. This is the first report in the Atlantic Region.

#### Slate-coloured Seedeater *Sporophila schistacea*

A female or young male (Fig. 3) fed on grass at the edge of young secondary forest on Mancarroncito Island, on 5 September 2009 (LS). Reported just once previously in Nicaragua, at Los Guatusos Wildlife Refuge<sup>12</sup>, only 29 km away. The plain brownish plumage and strongly yellowish bill distinguish this species from similar seedeaters such as Variable *S. americana*, Yellow-bellied *S. nigricollis* and Ruddy-breasted *S. minuta*.

#### Orange-billed Sparrow *Arremon aurantirostris*

Singles were heard twice (12 March and 7 September 2009) in secondary forest at QPR (LS). At PIBC, two males were singing in mature second-growth forest at Finca Guadalupe (11°11'16.963"N 85°41'1.461"W; 276 m) on 18 June 2009 (JC). Three were observed foraging in riparian habitat at Finca Guadalupe (11°11'0.510"N 85°41'5.689"W; 297 m) on 26 September 2009 (JC, MS). Previously reported as common but found only in the Central Highlands<sup>12</sup> these are the first reports in the Pacific and Atlantic regions of Nicaragua. In Costa Rica, it is common in the northern Atlantic lowlands 20 km from QPR<sup>6,19</sup>.

#### Nicaraguan Grackle *Quiscalus nicaraguensis*

Six (two males and four females) perched in a partially submerged tree at the mouth of the río Sábalo near Boca de Sábalo (11°02'N 84°28'W; 37 m) on 11 March 2009 (LS). Three females were seen (one photographed) near the inland port of San Carlos (11°07'N 84°46'W) on 6 September 2009 (LS). Common but local in the Pacific Region<sup>12</sup> these are the first records from the Atlantic Region.

#### Yellow-throated Euphonia *Euphonia hirundinacea*

At PIBC, on 20 June–3 October 2009, the species was detected 18 times in four habitats, pastures with scattered trees ( $n=2$ ), forest fallow ( $n=6$ ), young second growth ( $n=6$ ) and riparian growth ( $n=4$ ) on four farms—Guadalupe, Isla Vista, Sierra Serena and Las Fincas, Nica Dev. Elevations ranged from 69 m to 309 m (WJA, JH, JC, MS). In the Atlantic Region, two were at the port town of Santa Fe, on the río San Juan (11°03'N 84°06'W; 30 m) on 6 September 2006 (LS). Common in the Central Highlands and Atlantic Region, and sporadic in the Pacific Region, at 500–1,500 m<sup>12</sup>, LS's observation establishes the lowest elevation for the country and all sightings were well below 500 m.

## Conclusions

For any regional avifauna, a fundamental prerequisite for sound conservation practice is a thorough knowledge of the abundance and distribution of species. The numerous sightings reported here of nationally rare species, and regional and altitudinal range extensions for several others, underscore the considerable effort still required to understand the contemporary status and distribution of Nicaragua's avifauna. This is especially true in the Atlantic Region, which is perhaps the most diverse in the country. Additional studies in all three regions, but especially the Atlantic, should produce more precise abundance estimates, reveal a broader distributional range for additional species, and continue to augment the national inventory of migrant and resident birds. Long-term monitoring programmes are needed throughout the Atlantic Region and the country in general. To that end, we encourage further studies to develop a more comprehensive understanding of Nicaragua's rich avifauna.

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