Noteworthy records and range extensions from the Caura River watershed, Bolívar state, Venezuela

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Reportamos 482 especies detectadas en el bajo y medio río Caura, Venezuela, como parte de un proyecto de documentación y desarrollo del conocimiento indígena de nombres y cantos de aves. Estas especies fueron detectadas durante seis diferentes visitas por los autores, y por los análisis de grabaciones de audio hechas por los participantes del proyecto entre 2006 y 2009. Destacamos 16 especies resaltantes y varias extensiones de rango menores para el país, y proveemos una lista completa de las especies detectadas durante todo el proyecto. El río Caura sigue siendo el mayor tributario del río Orinoco con menos perturbación, por lo tanto recomendamos continuar con exploraciones ornitológicas adicionales.

The Caura River, a major tributary of the Orinoco, lies entirely in the state of Bolívar in southern Venezuela. The Caura basin (45,336 km²) ranges from just 40 m elevation (and 1,300 mm annual rainfall) near the convergence with the Orinoco to >2,300 m (and 3,000-4,000 mm rainfall) in the south⁶. Approximately 90% of the basin is covered by humid lowland or pre-montane forest, with the remainder comprising seasonally inundated riverine forest and savannas. A nutrient-poor river, the Caura experiences a phytogeographical break at La Mura rapids (in the lower river) such that lower tree species richness occurs in the unconstrained and more deeply flooded northern forests downstream of the rapids8. In the northernmost section of the river (between the town of Maripa and its confluence with the Orinoco) savannas with tree islands dominate as the landscape transitions into the *llanos* of central Venezuela. Along this 580-km river, the diversity of the underlying geology and the climactic gradient



Figure 1. The lower Caura River as viewed from near Pará Falls; this point is generally considered the cut-off between the lower and middle Caura (Ivan Samuels)

associated with altitude contribute to exceptional species richness², which makes this relatively intact watershed a high priority for conservation (Fig. 1).

The avifauna of the Caura basin is primarily Amazonian. Its geographical location adds numerous Guianan endemics to the avifauna, although its westerly location and lower elevation places it outside the primary area of endemism within the Guiana Shield⁵; we detected 36 Guianan endemic taxa (species and subspecies). At the river's confluence with the Orinoco, Amazonian avifauna is replaced by species characteristic of the *llanos*. This change in biomes means that many species reach their northern range limit here, and overall species richness is extremely high due to the turnover that occurs within a small geographical area.

Here we report 482 species detected along the lower and middle Caura and its tributaries (Fig. 2) and at sites near the town of Maripa and near the confluence with the Orinoco (Si'pao River lagoon; site 1), although comparatively less time was spent in llanos habitats. Highland sites in the upper Caura were not visited, but a montane element was detected in the cooler foothills of the Tabaro watershed; our study area ranged from c.30 m to 300 m. Our primary purpose was to assist members of two indigenous groups, the Ye'kwana and Sanema, to develop a database of indigenous bird names throughout the Caura basin. Several individuals from both groups were trained to use binoculars, a field guide4 and to record bird vocalisations using Sony MZ-RH1 minidisc recorders and Audio Technica AT 835b shotgun microphones. Recordings were sent to the USA where identification was verified by IS & BO. Most of the species listed here were detected by us during six visits to the region in 2006-09: 2-11 March 2006 (JC, TM, IS); 19 May-3 June 2007 (PB, JC, TM, IS); 23 January-4 February 2008 (JC, TM, IS); 15-29 April 2008 (PB, TM, IS); 2-26 April

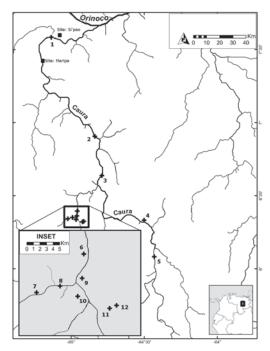


Figure 2. Map of the study area showing the Caura River and its location within Venezuela. Numbers correspond to specific sightings mentioned in the text. The inset highlights locations on the Nichare and Tabaro rivers, where survey effort by the authors and project participants was greatest.

2009 (TM, IS); and 30 October–11 November 2009 (JC, TM, BO, IS). Additional species were identified on recordings made by project participants. We also received reports from project participants of 'seen only' species, but these are not included here because skills varied considerably, and verification of species identification was only possible from sound-recordings. Special mention is given below to noteworthy species and range extensions within Venezuela. A complete species list is presented in Table 1.

Orinoco Goose Neochen jubata

Near Threatened. One observed on a large sandbar in the middle of the Caura (at 07°33'60"N 65°06'04"W) on 27 January 2008, between the town of Maripa and the confluence with the Orinoco, an area where hunting pressure is probably high, making this sighting especially noteworthy.

Black Curassow Crax alector / Crestless Curassow Mitu tomentosum

Although expected within the watershed, both were fairly common throughout our study area. This is encouraging considering the persistent pressure on both species, which were regularly encountered in the vicinity of indigenous communities, suggesting

that their populations are still resilient to current hunting levels.

White-rumped Sandpiper Calidris fuscicollis

One foraging on mats of algae on a rocky, channelised section of the Caura on 28 April 2008 at 06°54'22"N 64°50'18"W (site 2; IS & TM). Regular migrant through the *llanos* in late April—mid May⁹ and the north—south-running Caura may orient migrants; a few other sight records near Caurama, lower Caura (D. Ascanio pers. comm.). Also detected in autumn in Amazonas state¹².

Tepui Parrotlet Nannopsittaca panychlora

A flock of 40–60 seen flying high above the Tabaro River on 4 November 2009 at 06°21'05"N 64°59'26"W (site 8; JC, BO & IS). This represents a range extension, with most Bolívar records from the tepuis of the Gran Sabana⁴ and Cerro Guaiquinima⁷. The Tabaro, a major tributary of the Nichare River, drains from the remote Serranía de Maigualida in the south-west of the Caura basin, and *N. panychlora* may be more common at inaccessible locations upslope.

Sapphire-rumped Parrotlet Touit purpuratus

At least one heard calling from a canopy perch on 10 November 2009 at 06°19'16"N 64°55'22"W (site 11), c.2 km from the Nichare River, was recorded by JC. Although previously detected in the upper río Caura (Sabana Canaracuni)⁴, this represents a small range extension to the lower Caura.

Pearly-breasted Cuckoo Coccyzus euleri

One observed on 25 April 2009 at 06°20'11"N 64°58'01"W (site 10) as it foraged silently in secondary vegetation c.15 m above ground near the Nichare River (IS). Old specimens exist for the upper Caura, with recent specimens from the lower río Caroni and south-east Venezuela near Santa Elena (D. Ascanio pers. comm.).

Oilbird Steatornis caripensis

A feather was found by BO on 5 November 2009 at 06°19'16"N 64°55'22"W (site 11). Colonies are almost unknown in Bolívar, with a few exceptions in the south and south-east of the state³. We noted several large rock faces and outcrops, which might harbour colonies.

Paradise Jacamar Galbula dea

Although reported for the upper Caura⁴, one at 06°38'44"N 64°47'28"W on 23 May 2008, one sound-recorded at 06°19'58"N 64°30'04"W on 2 June 2010 and one seen by J. Kvarnbäck in the lower Caura on 18 June 2012, are the first records for the lower and middle Caura and slightly extend the known range of the Guianan endemic subspecies (*G. d. dea*) within Venezuela.

English name

Zigzag Heron

Night Heron

Striated Heron

Yellow-crowned

Cochlearius cochlearius Boat-billed Heron

Scientific name

Zebrilus undulatus

Nyctanassa violacea

Butorides striata

Indemism

Distribution

MC

MC

MC, M S

MC, M S, R

S, R

S

Table 1. Bird species detected in the Caura River
watershed, Bolívar, southern Venezuela. Scientific
nomenclature follows SACC classification version 29 June
2012 .

Distribution: MC = middle and lower Caura, including Nichare and Tabaro rivers; M = Maripa and vicinity, including Si'pao River and lagoon.

Evidence: S = sight record; R = sound-recorded

Threat (following IUCN Red List): NT = Near Threatened, V = Vulnerable; all others are LC (Least Concern)

Endemism: taxa restricted to the Guianan area of endemism at the species or subspecies level following Naka $^{\rm 5}$.

at the species of t		_				Bubulcus ibis	Cattle Egret	М	S
		tion	ø		Ë	Ardea cocoi	Cocoi Heron	MC, M	S
		Distribution	Evidence	Threat	Endemism	Ardea alba	Great Egret	MC, M	S
Scientific name	English name	Dist	Evic	Ļ	End	Syrigma sibilatrix	Whistling Heron	М	S
TINAMIDAE						Pilherodius pileatus	Capped Heron	MC, M	S
Tinamus major	Great Tinamou	MC	S, R			Egretta thula	Snowy Egret	MC. M	S
Crypturellus cinereus	Cinereous Tinamou	MC, M	R			Egretta caerulea	Little Blue Heron	MC, M	S
Crypturellus soui	Little Tinamou	MC	S, R			THRESKIORNITI		110,11	J
Crypturellus variegatus	Variegated Tinamou	MC	R				Green Ibis	мс м	СЪ
ANATIDAE						Mesembrinibis cayennensis	Green idis	MC, M	3, K
Dendrocygna	Black-bellied	MC, M	S			Phimosus infuscatus	Bare-faced Ibis	MC, M	S
autumnalis	Whistling Duck					Platalea ajaja	Roseate Spoonbill	М	S
Neochen jubata	Orinoco Goose	M	S	NT		CATHARTIDAE			
Cairina moschata	Muscovy Duck	MC, M	S			Cathartes aura	Turkey Vulture	MC, M	S
CRACIDAE Penelope jacquacu	Spix's Guan	MC	S			Cathartes burrovianus	Lesser Yellow-headed Vulture	М	S
Pipile cumanensis	Blue-throated Piping Guan	MC	S			Cathartes melambrotus	Greater Yellow- headed Vulture	MC	S
Ortalis motmot	Variable Chachalaca	MC	S, R			Coragyps atratus	Black Vulture	MC, M	S
Crax alector	Black Curassow	MC	S, R			Sarcoramphus papa	King Vulture	MC	S
Mitu tomentosum	Crestless Curassow	MC, M	,			PANDIONIDAE			
ODONTOPHORIC		,	-,			Pandion haliaetus	Osprey	MC, M	S, R
Colinus cristatus	Crested Bobwhite	М	S. R			ACCIPITRIDAE			
Odontophorus	Marbled Wood Quail	MC	5, R			Gampsonyx swainsonii	Pearl Kite	MC, M	S
gujanensis CICONIIDAE	i iai bieu 1100u Quali	110	3, 10			Chondrohierax uncinatus	Hook-billed Kite	MC	S
Mycteria americana	Wood Stork	MC, M	S			Leptodon cayanensis	Grey-headed Kite	MC, M	S
PHALACROCORA		,	-			Elanoides forficatus	Swallow-tailed Kite	MC	S, R
Phalacrocorax	Neotropic	MC, M	S			Busarellus nigricollis	Black-collared Hawk	М	S
brasilianus	Cormorant	ric, M	3			Harpagus bidentatus	Double-toothed Kite	MC	S
ANHINGIDAE						lctinia plumbea	Plumbeous Kite	MC, M	S
Anhinga anhinga	Anhinga	MC, M	S			Accipiter poliogaster	Grey-bellied Hawk	MC	S
ARDEIDAE						Geranospiza	Crane Hawk	MC, M	S
Tigrisoma lineatum	Rufescent Tiger Heron	MC, M	S, R			caerulescens Buteogallus meridionali		MC, M	S
Agamia agami	Agami Heron	MC, M	S			•			

Scientific name Buteogallus urubitinga	English name Great Black Hawk	O Distribution	Evidence	Threat	Endemism	Scientific name	English name	Distribution	Evidence	Threat	Endemism
Rupornis magnirostris	Roadside Hawk	MC, M	,			Sternula superciliaris	Yellow-billed Tern	MC, M	S		
Geranoaetus	White-tailed Hawk	M	S			Phaetusa simplex	Large-billed Tern	MC, M			
albicaudatus Pseudastur albicollis	White Hawk	MC	S, R			RYNCHOPIDAE	· ·				
Buteo nitidus	Grey Hawk	MC, M	,			Rynchops niger	Black Skimmer	MC, M	S		
Buteo brachyurus	Short-tailed Hawk	M	s, r.			COLUMBIDAE					
Buteo albonotatus	Zone-tailed Hawk	MC, M	S			Columbina passerina	Common Ground	М	S, R		
Morphnus guianensis	Crested Eagle	MC MC	S	NT		Columbina talpacoti	Dove Ruddy Ground Dove	М	S, R		
Harpia harpyja	Harpy Eagle	MC	S, R	NT		Columbina squammata	,	M	S, R		
Spizaetus tyrannus	Black Hawk-Eagle	MC	S, R			Claravis pretiosa	Blue Ground Dove	MC, M	,		
Spizaetus ornatus	Ornate Hawk-Eagle	MC	S, R			Patagioenas speciosa	Scaled Pigeon	MC, M	,		
PSOPHIIDAE			-,			Patagioenas cayennensis	Ü	MC, M	S		
Psophia crepitans	Grey-winged	MC	S, R		E	Patagioenas subvinacea	·	MC	S, R		
RALLIDAE	Trumpeter					Zenaida auriculata	Eared Dove	М	S		
Aramides cajaneus	Grey-necked Wood	MC	S, R			Leptotila verreauxi	White-tipped Dove	MC, M	S, R		
•	Rail	110	3, 10			Leptotila rufaxilla	Grey-fronted Dove	MC	S, R		
HELIORNITHIDA						Geotrygon montana	Ruddy Quail-Dove	MC	S, R		
Heliornis fulica	Sungrebe	MC	S			OPISTHOCOMIDA	AE				
EURYPYGIDAE						Opisthocomus hoazin	Hoatzin	MC, M	S, R		
Eurypyga helias	Sunbittern	MC	S, R			CUCULIDAE					
CHARADRIIDAE	Die d Leave in a	мс м	c			Coccycua minuta	Little Cuckoo	MC	S, R		
Vanellus cayanus	Pied Lapwing	MC, M M	S			Piaya cayana	Squirrel Cuckoo	MC	S, R		
Vanellus chilensis Charadrius collaris	Southern Lapwing Collared Ployer	M	S, R S			Piaya melanogaster	Black-bellied Cuckoo	MC	S		
RECURVIROSTRI		I*I	3			Coccyzus melacoryphus	Dark-billed Cuckoo	М	S		
Himantopus mexicanus		М	S			Coccyzus euleri	Pearly-breasted Cuckoo	MC	S		
BURHINIDAE	Diack-Hecked Julic		3			Crotophaga major	Greater Ani	MC, M	S		
Burhinus bistriatus	Double-striped	М	S			Crotophaga ani	Smooth-billed Ani	MC, M	S, R		
	Thick-knee	•••	J			Tapera naevia	Striped Cuckoo	М	S, R		
SCOLOPACIDAE			_			Neomorphus rufipennis		MC	S, R		
Actitis macularius	Spotted Sandpiper	MC, M	S			TYTONIDAE	Ground Cuckoo				
Tringa solitaria	Solitary Sandpiper	MC	S			Tyto alba	Barn Owl	М	S		
Calidris minutilla	Least Sandpiper	MC	S			STRIGIDAE					
Calidris fuscicollis	White-rumped Sandpiper	MC	S			Megascops choliba	Tropical Screech Owl	MC	R		
JACANIDAE						Megascops watsonii	Tawny-bellied	MC	R		
Jacana jacana	Wattled Jacana	М	S				Screech Owl				

Scientific nam	ne English name	Distribution	Evidence	Threat	Endemism	Scientific name	English name	Distribution	Evidence	Threat	Endemism
Lophostrix cristata	Crested Owl	MC	R		_	Phaethornis rupurumii	Streak-throated Hermit	MC	S, R		_
Pulsatrix perspicilla	sta Spectacled Owl	MC	S, R			Phaethornis ruber	Reddish Hermit	MC	S, R		
Ciccaba huhula	Black-banded Owl	MC	R			Phaethornis augusti	Sooty-capped Hermit	MC	S		
Glaucidium brasilia	num Ferruginous Pygmy Owl	MC	R			Phaethornis hispidus	White-bearded Hermit	MC	S		
Pseudoscops clamo	ntor Striped Owl	MC	S ²			Phaethornis bourcieri	Straight-billed Hermit	MC	S		
STEATORNIT	THIDAE					Phaethornis	Long-tailed Hermit	MC	S		
Steatornis caripens	sis Oilbird	MC	S1			superciliosus Heliothryx auritus	Black-eared Fairy	MC	S		
NYCTIBIIDA						Chrysolampis mosquitus	,	М	S		
Nyctibius grandis	Great Potoo	MC	S, R				Hummingbird				
Nyctibius aethereu	s Long-tailed Potoo	MC	R			Anthracothorax nigricollis	Black-throated Mango	М	S		
Nyctibius griseus	Common Potoo	MC, M	R			Lophornis chalybeus	Festive Coquette	MC	S		
CAPRIMULGI	DAE					Heliomaster longirostris	Long-billed Starthroat	MC	S		
Chordeiles nacund	a Nacunda Nighthawk	М	S			Calliphlox amethystina	Amethyst Woodstar	М	S		
Chordeiles pusillus	Least Nighthawk	М	S			Chlorostilbon mellisugus	Blue-tailed Emerald	М	S		
Chordeiles rupestri	s Sand-coloured Nighthawk	MC, M	S			Chlorestes notata	Blue-chinned Sapphire	MC	S		
Chordeiles acutipe	•	М	S			Campylopterus largipennis	Grey-breasted Sabrewing	MC	S		
Nyctidromus albico	ollis Common Pauraque	MC, M	S, R			Thalurania furcata	Fork-tailed Woodnymph	MC	S		
Antrostomus rufus	Rufous Nightjar	MC	S^2			Amazilia versicolor	Versicoloured	MC	S		
Caprimulgus cayennensis	White-tailed Nightjar	MC, M	S			Amazilia brevirostris	Emerald White-chested	MC, M	S		
Caprimulgus maculicaudus	Spot-tailed Nightjar	MC, M	S			Amazilia fimbriata	Emerald Glittering-throated	MC, M	S		
Caprimulgus parvu	llus Little Nightjar	MC	R			Hylocharis sapphirina	Emerald Rufous-throated	MC	S, R		
Hydropsalis climacocerca	Ladder-tailed Nightjar	MC	S			TROGONIDAE	Sapphire	110	5, 10		
APODIDAE						Trogon melanurus	Black-tailed Trogon	MC	S, R		
Cypseloides cryptus	White-chinned Swift	М	S^2			Trogon viridis	Green-backed Trogon		,		
Streptoprocne zon	aris White-collared Swift	MC, M	S			Trogon violaceus	Guianan Trogon	MC, M			
Chaetura spinicaud	dus Band-rumped Swift	MC	S			Trogon rufus	Black-throated	MC	5, R		Е
Chaetura cinereive	ntris Grey-rumped Swift	MC	S				Trogon				-
Chaetura chapmar	ni Chapman's Swift	MC	S			Trogon collaris	Collared Trogon	MC	S, R		
Chaetura brachyur	a Short-tailed Swift	MC, M	S			ALCEDINIDAE					
Tachornis squamat	ta Fork-tailed Palm Swift	MC, M	S			Megaceryle torquata	Ringed Kingfisher	MC, M	S		
Panyptila cayenner	nsis Lesser Swallow-tailed Swift	MC	S			Chloroceryle amazona	Amazon Kingfisher	MC, M			
TROCHILIDA						•	Green Kingfisher	MC, M	S		
Topaza pella	Crimson Topaz	MC	S, R		Ε	Chloroceryle inda	Green-and-rufous Kingfisher	MC, M	S		
Florisuga mellivora	White-necked Jacobin	MC	S			Chloroceryle aenea	American Pygmy Kingfisher	MC	S, R		

Scientific name	English name	Distribution	Evidence	Threat	Endemism	Scientific name	English name	Distribution	Evidence	Threat	Endemism
MOMOTIDAE						Celeus grammicus	Scale-breasted Woodpecker	MC	S, R		_
Momotus momota GALBULIDAE	Amazonian Motmot	MC	S, R		E	Celeus elegans	Chestnut Woodpecker	MC	S		
Galbula albirostris	Yellow-billed Jacamar	MC	S, R		E	Celeus flavus	Cream-coloured Woodpecker	MC	S, R		
Galbula ruficauda	Rufous-tailed Jacamar	М	S			Celeus torquatus	Ringed Woodpecker	MC	S, R		Е
Galbula galbula	Green-tailed Jacamar	MC	S, R			Dryocopus lineatus	Lineated	MC, M	S, R		
Galbula dea	Paradise Jacamar	MC	S, R		E	Campephilus rubricollis	Woodpecker Red-necked	MC	S, R		
Jacamerops aureus	Great Jacamar	MC	S, R			Campephilus	Woodpecker Crimson-crested	MC	S, R		
BUCCONIDAE						melanoleucos	Woodpecker				
Notharchus tectus	Pied Puffbird	MC	S			FALCONIDAE					
Bucco macrodactylus	Chestnut-capped	MC	S			Herpetotheres cachinnans	Laughing Falcon	MC, M	S, R		
Bucco capensis	Puffbird Collared Puffbird	MC	S, R			Micrastur ruficollis	Barred Forest Falcon	MC	S, R		
Hypnelus ruficollis	Russet-throated	М	S			Micrastur gilvicollis	Lined Forest Falcon	MC	S, R		
Monaca atra	Puffbird Black Nunbird	MC	S, R		Е	Micrastur mirandollei	Slaty-backed Forest Falcon	MC	S		
Monasa atra		MC	s, r.		_	Micrastur semitorquatus	Collared Forest	MC	S, R		
Chelidoptera tenebrosa	Swallow-winged Puffbird	MC	3			Caracara cheriway	Falcon Crested Caracara	М	S		
CAPITONIDAE	Cit In I	МС	6 D			lbycter americanus	Red-throated	MC	S, R		
Capito auratus	Gilded Barbet	MC	S, R			Daptrius ater	Caracara Black Caracara	MC	S, R		
RAMPHASTIDAE					_	Milvago chimachima	Yellow-headed	М	5, R		
Ramphastos tucanus	White-throated Toucan	MC, M	S, R		E	·	Caracara		,		
Ramphastos vitellinus	Channel-billed Toucan	MC, M	S, R		E	Falco sparverius	American Kestrel	М	S		
Selenidera nattereri	Tawny-tufted	MC	S			Falco rufigularis	Bat Falcon	MC, M	S		
Pteroglossus viridis	Toucanet Green Aracari	MC, M	S		Е	Falco femoralis	Aplomado Falcon	М	S ²		
Pteroglossus aracari	Black-necked Aracari	MC	S		Е	PSITTACIDAE		140			
Pteroglossus pluricinctus	Many-banded Aracari	MC, M	S, R			Ara macao	Scarlet Macaw	MC	S, R		
Pteroglossus azara	lvory-billed Aracari	MC	S			Ara chloropterus	Red-and-green Macaw	MC	S, R		
PICIDAE	, , , , , , , , , , , , , , , , , , , ,					Ara severus	Chestnut-fronted Macaw	MC, M	S, R		
Picumnus exilis	Golden-spangled	MC	S			Orthopsittaca manilata	Red-bellied Macaw	MC	S		
	Piculet					Diopsittaca nobilis	Red-shouldered Macaw	М	S		
Picumnus squamulatus	Scaled Piculet	М	S			Aratinga leucophthalma		М	S		
Melanerpes cruentatus	Yellow-tufted Woodpecker	MC	S, R			Aratinga pertinax	Brown-throated	М	S		
Melanerpes rubricapillus	Red-crowned Woodpecker	М	S			Pyrrhura picta	Parakeet Painted Parakeet	MC	S, R		Е
Veniliornis cassini	Golden-collared Woodpecker	MC	S		E	Forpus passerinus	Green-rumped	М	S		
Veniliornis passerinus	Little Woodpecker	MC	S			Brotogeris chrysoptera	Parrotlet Golden-winged	MC	S, R		
Piculus flavigula	Yellow-throated Woodpecker	MC	S		E	7 7 7	Parakeet				

Scientific name	English name	Distribution	S Evidence	Threat	Endemism	Scientific name	English name	Distribution	Evidence	Threat	Endemism
Nannopsittaca panychlora	Tepui Parrotlet	MC	S			Myrmotherula menetriesii	Grey Antwren	MC	S, R	-	
Touit purpuratus	Sapphire-rumped Parrotlet	MC	S, R			Herpsilochmus sticturus	Spot-tailed Antwren	MC	S, R		Е
Pionites melanocephalus		MC	S, R			Herpsilochmus dorsimaculatus	Spot-backed Antwren	MC	R		
Deroptyus accipitrinus	Red-fan Parrot	MC	S, R			Herpsilochmus	Rufous-winged	MC, M	R		
Pyrilia caica	Caica Parrot	MC	S, R		Е	rufimarginatus Formicivora grisea	Antwren White-fringed	MC, M	S, R		
Pionus menstruus	Blue-headed Parrot	MC	S, R			Hypocnemis flavescens	Antwren Imeri Warbling	MC	S, R		
Pionus fuscus	Dusky Parrot	MC	S, R				Antbird		,		
Amazona festiva	Festive Parrot	MC	S^2	٧		Terenura spodioptila	Ash-winged Antwren	MC	S, R		
Amazona ochrocephala	Yellow-crowned Parrot	М	S, R			Cercomacra cinerascens	•	MC	S, R		_
Amazona amazonica	Orange-winged	М	S, R			Cercomacra tyrannina	Dusky Antbird	MC, M	S, R		Е
Amazona farinosa	Parrot Mealy Parrot	MC	S, R			Cercomacra nigricans	Jet Antbird	MC	S ²		
THAMNOPHILID	•	MC	J, IX			Myrmoborus leucophrys	White-browed Antbird	MC	S, R		
Cymbilaimus lineatus	Fasciated Antshrike	MC	S, R			Myrmoborus myotherinus	Black-faced Antbird	MC	S, R		
Frederickena viridis	Black-throated Antshrike	MC	S, R		E	, Hypocnemoides melanopogon	Black-chinned Antbird	MC	S, R		
Taraba major	Great Antshrike	MC	S, R			Sclateria naevia	Silvered Antbird	MC	S, R		
Sakesphorus canadensis		MC, M	S, R			Schistocichla caurensis	Caura Antbird	MC	S, R		
Thamnophilus doliatus	Antshrike Barred Antshrike	MC, M	S, R			Myrmeciza longipes	White-bellied Antbird	MC, M	S, R		
Thamnophilus murinus	Mouse-coloured	MC	S, R			Myrmeciza atrothorax	Black-throated Antbird	MC	S, R		
Thamnophilus	Antshrike Northern Slaty	М	S, R			Myrmornis torquata	Wing-banded Antbird	MC	S, R		
punctatus Thamnophilus aethiops	Antshrike White-shouldered	MC	S, R			Pithys albifrons	White-plumed Antbird	MC	S, R		E
	Antshrike		ŕ			Gymnopithys rufigula	Rufous-throated Antbird	MC	S, R		E
Megastictus margaritatus	Pearly Antshrike	MC	S, R			Hylophylax naevius	Spot-backed Antbird	MC	S, R		
Dysithamnus mentalis	Plain Antvireo	MC	R			Hylophylax punctulatus	Dot-backed Antbird	MC	S, R		
Thamnomanes ardesiacus	Dusky-throated Antshrike	MC	S, R			Willisornis poecilinotus	Common Scale- backed Antbird	MC	S, R		Е
Thamnomanes caesius	Cinereous Antshrike	MC	S, R			FORMICARIIDAE	Dacked Antoird				
Isleria guttata	Rufous-bellied Antwren	MC	S, R		E	Formicarius colma	Rufous-capped Antthrush	MC	S, R		
Pygiptila stellaris	Spot-winged Antshrike	MC	S, R			FURNARIIDAE	, arean aon				
Epinecrophylla haematonota	Stipple-throated Antwren	MC	S, R			Sclerurus mexicanus	Tawny-throated Leaftosser	MC	R		
Myrmotherula brachyura	Pygmy Antwren	MC	S, R			Deconychura longicauda	Long-tailed Woodcreeper	MC	S, R		
Myrmotherula surinamensis	Guianan Streaked Antwren	MC	S, R			Dendrocincla fuliginosa	Plain-brown Woodcreeper	MC	S, R		
Myrmotherula axillaris	White-flanked Antwren	MC	S, R		E	Dendrocincla merula	White-chinned Woodcreeper	MC	S		
Myrmotherula longiþennis	Long-winged Antwren	MC	S, R			Glyphorynchus spirurus	Wedge-billed Woodcreeper	MC	S, R		

Scientific name Dendrocoloptes certhia	English name Amazonian Barred	✓ Distribution	S. Evidence	Threat	⊓ Endemism	Scientific name Polystictus pectoralis	English name Bearded Tachuri	extstyle ext	S Evidence	Z Threat	Endemism
	Woodcreeper	м	ŕ			Corythopis torquatus	Ringed Antpipit	MC	S, R		
Xiphorhynchus obsoletus	Striped Woodcreeper	М	S			Zimmerius gracilipes	Slender-footed	MC	S, R		
Xiphorhynchus pardalotus	Chestnut-rumped Woodcreeper	MC	S, R		Ε		Tyrannulet	MC	S, R		
Xiphorhynchus guttatus	•	MC, M	S, R		Ε	Mionectes oleagineus	Ochre-bellied Flycatcher		ŕ		
Dendroplex picus	Straight-billed	М	S			Leptopogon amaurocephalus	Sepia-capped Flycatcher	MC	S		
Campylorhamphus	Woodcreeper Red-billed Scythebill	MC	R			Sublegatus obscurior	Amazonian Scrub Flycatcher	М	S ²		
trochilirostris Lepidocolaptes	Streak-headed	М	S			Inezia caudata	Pale-tipped Tyrannulet	М	S		
souleyetii	Woodcreeper Lineated	MC				Myiornis ecaudatus	Short-tailed Pygmy	MC, M	S, R		
Lepidocolaptes albolineatus	Woodcreeper	MC	S, R			Lophotriccus galeatus	Tyrant Helmeted Pygmy	MC	S, R		
Xenops minutus	Plain Xenops	MC, M	S, R		E		Tyrant	м	C D		
Berlepschia rikeri	Point-tailed Palmcreeper	MC	S ²			Hemitriccus margaritaceiventer	Pearly-vented Tody-Tyrant	М	S, R		
Philydor ruficaudatum	Rufous-tailed Foliage- gleaner	MC	S			Poecilotriccus sylvia	Slate-headed Tody-Flycatcher	MC	S, R		
Philydor pyrrhodes	Cinnamon-rumped	MC	S			Taeniotriccus andrei	Black-chested Tyrant	MC	S		
Automolus infuscatus	Foliage-gleaner Olive-backed Foliage-	MC	S, R			Todirostrum cinereum	Common Tody-Flycatcher	М	S, R		
Automolus rufipileatus	gleaner Chestnut-crowned	MC	R			Todirostrum pictum	Painted Tody-Flycatcher	MC	S, R		E
	Foliage-gleaner					Rhynchocyclus olivaceus		MC	S		
Cranioleuca vulpina	Rusty-backed Spinetail	M	S			Tolmomyias assimilis	Yellow-margined	MC	S, R		
Cranioleuca gutturata	Speckled Spinetail	MC	S			Tolmomyias	Flycatcher Grey-crowned	MC	S, R		
Synallaxis albescens	Pale-breasted Spinetail	М	S, R			poliocephalus Tolmomyias flaviventris	Flycatcher Yellow-breasted	MC, M	S, R		
Synallaxis gujanensis	Plain-crowned Spinetail	MC	S, R			, ,	Flycatcher		,		
TYRANNIDAE						Platyrinchus saturatus	Cinnamon-crested Spadebill	MC	S		
Phyllomyias griseiceps	Sooty-headed Tyrannulet	MC	R			Platyrinchus platyrhynchos	White-crested Spadebill	MC	S, R		
Tyrannulus elatus	Yellow-crowned Tyrannulet	MC, M	S, R			Onychorhynchus coronatus	Royal Flycatcher	MC	S, R		Ε
Myiopagis gaimardii	Forest Elaenia	MC, M	S, R			Myiobius barbatus	Sulphur-rumped	MC	S		
Myiopagis caniceps	Grey Elaenia	MC	S			Terenotriccus erythrurus		MC	S, R		
Elaenia flavogaster	Yellow-bellied Elaenia	М	S, R			Lathrotriccus euleri	Flycatcher Euler's Flycatcher	MC	R		
Elaenia parvirostris	Small-billed Elaenia	М	S			Cnemotriccus fuscatus	Fuscous Flycatcher	MC, M			
Elaenia cristata	Plain-crested Elaenia	М	S			Pyrocephalus rubinus	Vermilion Flycatcher	М	S, R		
Elaenia chiriquensis	Lesser Elaenia	М	S, R			Ochthornis littoralis	Drab Water Tyrant	MC, M			
Ornithion inerme	White-lored Tyrannulet	MC	R			Arundinicola	White-headed Marsh	M	S ²		
Camptostoma obsoletum	Southern Beardless Tyrannulet	MC, M	S, R			leucocephala Machetornis rixosa	Tyrant Cattle Tyrant	М	S ²		
Phaeomyias murina	Mouse-coloured Tyrannulet	М	S			Legatus leucophaius	Piratic Flycatcher	MC, M	S, R		
Capsiempis flaveola	Yellow Tyrannulet	М	S, R								

Scientific name	English name	Distribution	Evidence	Threat	Endemism	Scientific name	English name	Distribution	Evidence	Threat	Endemism
Myiozetetes cayanensis	Rusty-margined	MC, M	S, R	-	ш	PIPRIDAE			ш	۲	ш
Myiozetetes similis	Flycatcher Social Flycatcher	М	S			Tyranneutes stolzmanni	Dwarf Tyrant- Manakin	MC	S, R		
Myiozetetes granadensis	Grey-capped Flycatcher	MC	S			Corapipo gutturalis	White-throated Manakin	MC	R		Ε
Myiozetetes luteiventris	Dusky-chested	MC	S, R			Machaeropterus regulus		MC	S		
Pitangus sulphuratus	Flycatcher Great Kiskadee	М	S, R			Lepidothrix coronata	Blue-crowned Manakin	MC	S, R		
Pitangus lictor	Lesser Kiskadee	MC, M	S			Manacus manacus	White-bearded	MC	S, R		
Conopias parvus	Yellow-throated Flycatcher	MC	S			Pipra pipra	Manakin White-crowned Manakin	MC	S, R		
Myiodynastes maculatus	Streaked Flycatcher	MC, M	S, R			Pipra erythrocephala	Golden-headed	MC	S, R		
Megarynchus pitangua	Boat-billed Flycatcher	MC, M	S, R			TITYRIDAE	Manakin				
Tyrannopsis sulphurea	Sulphury Flycatcher	М	S^2				Diagle anatom and Titation	м	S		
Empidonomus varius	Variegated Flycatcher	М	S			Tityra inquisitor	Black-crowned Tityra	М			
Tyrannus albogularis	White-throated Kingbird	MC	S			Tityra cayana Schiffornis turdina	Black-tailed Tityra Brown-winged	MC, M MC	S, R S, R		
Tyrannus melancholicus	o .	MC, M	S, R				Schiffornis				
Tyrannus savana	Fork-tailed Flycatcher	MC, M	S			Laniocera hypopyrra	Cinereous Mourner	MC	S, R		
Tyrannus dominicensis	Grey Kingbird	М	S^2			Pachyramphus polychopterus	White-winged Becard	MC, M	S, R		
Rhytipterna simplex	Greyish Mourner	MC, M	S, R			Pachyramphus marginatus	Black-capped Becard	MC	S, R		
Myiarchus tuberculifer	Dusky-capped Flycatcher	MC, M	S, R			Pachyramphus surinamus	Glossy-backed Becard	MC	R		
Myiarchus swainsoni	Swainson's Flycatcher	MC, M	S			Pachyramphus minor	Pink-throated Becard	MC	S		
Myiarchus ferox	Short-crested Flycatcher	MC, M	S, R			INCERTAE SEDIS					
Myiarchus tyrannulus	Brown-crested Flycatcher	MC, M	R			Piprites chloris	Wing-barred Piprites	MC	S, R		E
Ramphotrigon ruficauda	,	MC	S, R			VIREONIDAE					
Attila cinnamomeus	Cinnamon Attila	MC	R			Cyclarhis gujanensis	Rufous-browed Peppershrike	MC, M	S, R		
Attila spadiceus	Bright-rumped Attila	MC	S, R			Vireo olivaceus	Red-eyed Vireo	MC, M	S, R		
COTINGIDAE						Vireo altiloquus	Black-whiskered Vireo	MC	S		
Rupicola rupicola	Guianan Cock-of- the-Rock	MC	S			Hylophilus thoracicus	Lemon-chested Greenlet	MC	S, R		
Querula purpurata	Purple-throated Fruitcrow	MC	S, R			Hylophilus semicinereus	Grey-chested Greenlet	MC	R		
Perissocephalus tricolor	Capuchinbird	MC	S			Hylophilus muscicapinus	Buff-cheeked Greenlet	MC, M	S, R		Е
Cotinga cayana	Spangled Cotinga	MC	S			Hylophilus flavipes	Scrub Greenlet	MC	S^2		
Lipaugus vociferans	Screaming Piha	MC	S, R			Hylophilus ochraceiceps	Tawny-crowned	MC	S, R		
Procnias albus	White Bellbird	MC	S, R				Greenlet				
Procnias averano	Bearded Bellbird	MC	R			CORVIDAE	16.1				
Xipholena punicea	Pompadour Cotinga	MC	S			Cyanocorax violaceus	Violaceous Jay	MC, M			
Gymnoderus foetidus	Bare-necked Fruitcrow	MC	S			Cyanocorax cayanus	Cayenne Jay	MC	R		E

Scientific name	English name	Distribution	Evidence	Threat	Endemism	Scientific name	English name	Distribution	Evidence	Threat	Endemism
HIRUNDINIDAE		_	_		_	Lanio fulvus	Fulvous Shrike- Tanager	MC	S, R		_
Pygochelidon melanoleuca	Black-collared Swallow	MC	S			Ramphocelus carbo	Silver-beaked Tanager	MC	S, R		
Atticora fasciata	White-banded Swallow	MC, M	S			Thraupis episcopus	Blue-grey Tanager	MC, M	S		
Stelgidopteryx ruficollis	Southern Rough- winged Swallow	MC, M	S			Thraupis palmarum	Palm Tanager	MC, M			
Progne tapera	Brown-chested	MC, M	S, R			Tangara cayana	Burnished-buff Tanager	М	S		
Progne chalybea	Martin Grey-breasted Martin	MC, M	S			Tangara nigrocincta	Masked Tanager	MC	S		
Tachycineta albiventer	White-winged	MC, M	S, R			Tangara punctata	Spotted Tanager	MC	S		
Hirundo rustica	Swallow Barn Swallow	MC, M	S			Tangara mexicana	Turquoise Tanager	MC, M	S		
TROGLODYTIDA		110,11	J			Tangara chilensis	Paradise Tanager	MC	S, R		
Microcerculus bambla	Wing-banded Wren	MC	S, R			Tangara velia	Opal-rumped Tanager	MC	S		
Troglodytes aedon	House Wren	М	5, R			Tangara gyrola	Bay-headed Tanager	MC	S		
,			,			Tersina viridis	Swallow Tanager	MC	S		
Campylorhynchus nuchalis	Stripe-backed Wren	М	S			Dacnis flaviventer	Yellow-bellied Dacnis	MC	S		
Campylorhynchus griseus	Bicoloured Wren	М	S^2			Dacnis cayana	Blue Dacnis	MC	S		
Pheugopedius coraya	Coraya Wren	MC	S, R			Cyanerpes nitidus	Short-billed Honeycreeper	MC	S		
Cantorchilus leucotis	Buff-breasted Wren	MC, M	S, R			Cyanerpes caeruleus	Purple Honeycreeper	MC	S		Ε
Henicorhina leucosticta	White-breasted Wood Wren	MC	S, R			Cyanerpes cyaneus	Red-legged Honeycreeper	MC	S		
POLIOPTILIDAE						Chlorophanes spiza	Green Honeycreeper	MC	S		
Ramphocaenus melanurus	Long-billed Gnatwren	MC, M	S, R			Hemithraupis flavicollis	Yellow-backed Tanager	MC	S		
Polioptila plumbea	Tropical Gnatcatcher	М	S, R			Sicalis flaveola	Saffron Finch	М	S		
TURDIDAE						Emberizoides herbicola	Wedge-tailed Grass Finch	М	S^2		
Catharus minimus	Grey-cheeked Thrush	MC	R			Volatinia jacarina	Blue-black Grassquit	М	S, R		
Turdus leucomelas	Pale-breasted Thrush	M	S, R			Sporophila schistacea	Slate-coloured Seedeater	MC	S, R		
Turdus nudigenis	Spectacled Thrush	М	S			Sporophila plumbea	Plumbeous Seedeater	М	S^2		
Turdus lawrencii	Lawrence's Thrush	MC	S, R			Sporophila intermedia	Grey Seedeater	М	S		
Turdus albicollis	White-necked Thrush	MC	S, R			Sporophila bouvronides	Lesson's Seedeater	MC	S		
MIMIDAE						Sporophila lineola	Lined Seedeater	MC	S		
Mimus gilvus THRAUPIDAE	Tropical Mockingbird	М	S, R			Sporophila nigricollis	Yellow-bellied	М	S		
Paroaria gularis	Red-capped Cardinal	М	S			Oryzoborus angolensis	Seedeater Chestnut-bellied Seed	М	S, R		
Tachyphonus cristatus	Flame-crested	MC	S			Coereba flaveola	Finch Bananaquit	MC, M	S, R		
Tachyphonus surinamus	Tanager Fulvous-crested	MC	S		Ε	INCERTAE SEDIS					
Tachyphonus luctuosus	Tanager White-shouldered	MC	S			Saltator grossus	Slate-coloured Grosbeak	MC, M	S, R		
Tachyphonus rufus	Tanager White-lined Tanager	М	S			Saltator maximus	Buff-throated Saltator	MC, M	S, R		
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Scientific name	English name	Distribution	S Evidence	Threat	Endemism	Scientific name	English name	Distribution	Evidence	Threat	Endemism
Saltator coerulescens	Greyish Saltator	M	S	_	_	Cacicus cela	Yellow-rumped Cacique	MC	S, R	_	_
EMBERIZIDAE						Cacicus haemorrhous	Red-rumped Cacique	MC	S, R		
Ammodramus humeralis	Grassland Sparrow	М	S, R			lcterus auricapillus	Orange-crowned Oriole	М	S^2		
Arremon taciturnus	Pectoral Sparrow	MC	S, R			Icterus nigrogularis	Yellow Oriole	М	S, R		
CARDINALIDAE Granatellus pelzelni	Rose-breasted Chat	MC	S, R			Gymnomystax mexicanus	Oriole Blackbird	М	S		
'						Molothrus oryzivorus	Giant Cowbird	MC	S, R		
Caryothraustes canadensis	Yellow-green Grosbeak	MC	S, R			Molothrus bonariensis	Shiny Cowbird	М	S		
Cyanocompsa cyanoides	Blue-black Grosbeak	MC, M	S, R			Quiscalus lugubris	Carib Grackle	М	S^2		
Spiza americana PARULIDAE	Dickcissel	MC	S			Sturnella militaris	Red-breasted Blackbird	М	S, R		
	Tennessee Warbler	MC	S			Sturnella magna	Eastern Meadowlark	М	S, R		
Leiothlypis peregrina						FRINGILLIDAE					
Parula pitiayumi	Tropical Parula	M	S			Euphonia chlorotica	Purple-throated	М	S		
Dendroica petechia	Yellow Warbler	MC, M	S			Fraktis ani a sainis asia	Euphonia	м	S		
Dendroica striata	Blackpoll Warbler	MC, M	S			Euphonia trinitatis	Trinidad Euphonia	М	-		
Dendroica fusca	Blackburnian Warbler	MC	S			Euphonia violacea	Violaceous Euphonia	MC	S, R		
Setophaga ruticilla	American Redstart	М	S			Euphonia chrysopasta	Golden-bellied Euphonia	MC	S		
Parkesia noveboracensis	Northern Waterthrush	MC, M	S, R			Euphonia rufiventris	Rufous-bellied Euphonia	MC	S		
ICTERIDAE						SI: Sight record b	pased on feather onl	v			
Psarocolius viridis	Green Oropendola	MC	S, R			S2: Species added	I to list by J. Kvarnba	, äck in v			ripa,
Psarocolius bifasciatus	Olive Oropendola	MC	S, R			Las Trincheras an 15–18 June 2012	d the lower Caura,	I-4 Ap	ril 201	2 and	

Tawny-throated Leaftosser *Sclerurus mexicanus* One sound-recorded by a project participant (subsequently identified by the authors) on 25 June 2009 at 06°19'58"N 64°30'04"W (site 4), near the top of the Pará Falls. This represents a small range extension into the Caura watershed, and at c.170 m, is also significant for being lower than other records in Venezuela; typically 300–1,100 m south of the Orinoco⁴. The middle and upper Caura support extensive foothill and pre-montane forests where this species may occur, but access is very limited.

Tennessee Warbler Leiothlypis peregrina

One on 9 March 2006 at 06°20'11"N 64°58'01"W (site 10) foraging in a vine tangle in secondary vegetation near the Nichare River (IS). Outside its known range, although a few records exist for Bolívar including singles at the lower Caura¹ and in the Gran Sabana on 25 April 2011 (M. Pyhälä).

Lawrence's Thrush Turdus lawrencii

A noteworthy range extension for Venezuela, we found it fairly common in our study area, especially in the vicinity of the Nichare River. Called 'Wishichaimö' by the Ye'kwana and 'Kāíatimawai' by the Sanema, local familiarity with this distinctive song mimic suggests that the species is a regular part of the avifauna.

Glossy-backed Becard Pachyramphus surinamus
One sound-recorded on 5 November 2009 at
06°23'42"N 64°57'29"W (site 6) is the third record
for Venezuela (BO); the first was also from the
Caura watershed. This infrequently seen canopy /
subcanopy species occurs locally in French Guiana,
Surinam and the lower Amazon of Brazil, but
species limits north of Manaus are poorly known¹⁰.

White-throated Kingbird Tyrannus albogularis One on 12 April 2009 at 06°04'57"N 64°25'53"W (site 5) on a small river island in the middle of the Caura (IS). Probably breeds in extreme south-east Venezuela, with records elsewhere in country suspected to be austral migrants⁴. Migratory behaviour between southern Bolívar and the Orinoco is known (D. Ascanio pers. comm.; El Manteco, Bolívar, 16 August 2010). The individual reported here was perhaps following the Caura on migration.

White Bellbird Procnias albus

Uncommon but regular over much of the Caura watershed; recordings on 29 June 2007 (06°21'43"N 64°57'37"W, site 9), 15 November 2008 (06°20'33"N 65°01'21"W, site 7), 9 November 2009 (06°19'30"N 64°54'48"W, site 12) and a sight record by D. Ascanio, at Pará Falls on 13 August 2009. Well known to the Ye'kwana as 'Quecau' (which mimics the species' distinctive call), suggesting that it has been previously overlooked, despite its distinctiveness.

Bare-necked Fruitcrow Gymnoderus foetidus

Detected on four of six visits, with other reports by project participants. Also noted by D. Ascanio on the Nichare River (4 August 2009), considered 'uncommon' by C. Marantz & A. Nagy on the lower Caura in April / May 2009, and seen by J. Kvarnbäck in the lower Caura on 1 April and 18 June 2012. Collectively, these sightings suggest the species has been overlooked in the watershed despite its distinctive appearance.

Slate-coloured Seedeater *Sporophila schistacea* Poorly known throughout its range, it was sound-recorded at two locations, on 10 June 2008 (06°38'16"N 64°47'23"W, site 3) and 10 August 2009 (06°19'58"N 64°30'04"W, site 4).

In addition, the following less significant range extensions were noted. An asterisk indicates the species was also detected by C. Marantz & A. Nagy between 1 April and 14 May 2009, in the vicinity of Maripa, Las Trincheras or El Raudalo, which are all in the lower Caura).

Barred Forest-Falcon *Micrastur ruficollis** Fairly common, and sound-recorded 11 times, mostly along the Nichare River, but also near the confluence of the Nichare and Caura.

Red-and-green Macaw Ara chloroptera* Uncommon, and greatly outnumbered by Scarlet Macaw A. macao, yet regularly encountered throughout the study area.

White-eyed Parakeet Aratinga leucophthalma* Uncommon in the vicinity of Maripa.

Hoatzin *Opisthocomus hoazin** Very common at Si'pao River lagoon (near the Caura / Orinoco confluence), where expected, but also encountered along the Nichare River, south of the known range.

White-chinned Swift Cypseloides cryptus Three seen by J. Kvarnbäck over Maripa on 15 June 2012. Known from few, widely scattered records in Venezuela⁴, although the very similar Black Swift C. niger cannot be entirely eliminated.

Tawny-tufted Toucanet Selenidera nattereri One record, from the middle Nichare River.

Painted Tody-Flycatcher Todirostrum pictum* Uncommon in forest canopy throughout the study area

Yellow-throated Flycatcher Conopias parvus One record, from the upper Nichare River.

Cinnamon Attila Attila cinnamomeus Uncommon; sound-recorded three times on the middle Nichare River

Grey-chested Greenlet *Hylophilus semicinereus** Sound-recorded once on the middle Nichare River.

Blackburnian Warbler *Dendroica fusca* One seen with a mixed flock near the Nichare River at site 10 on 2 February 2008. A widespread transient and non-breeding resident in Venezuela, but at c.60 m this record is significant for being well below the species' usual elevation range (1,000–2,800 m) south of the Orinoco⁴.

More than 70 years ago, the Caura Basin was described as Venezuela's most sparsely populated region¹¹, and today it remains the last major tributary of the Orinoco that has not been subjected to hydroelectric development or large-scale deforestation. In recent years gold mining has dramatically increased in the watershed, and this poses a significant and expanding threat to both fauna and the Caura's indigenous population. Market hunting for bushmeat, including large birds, is common. Despite these pressures, we found an abundance of both large mammals and birds such as tinamous and curassows, and 99% of bird species we detected have an IUCN threat status of Least Concern.

Access beyond the lower Caura is difficult. Many visiting birders do not travel south of Las Trincheras, as the watershed lacks road south of this point, and river travel requires the ability to navigate small motorboats through rapids subject to frequent fluctuations in water level. With the exception of species noted at Maripa, our study sites were 2-3 days upriver from the nearest road, and we relied upon our indigenous hosts for navigation on the river and in the forest. Despite this, we were unable to access many of the steep and remote foothill and montane forests that border the Caura and its tributaries. Additional ornithological expeditions to the Caura that can breach these barriers will surely improve our understanding of the status and distribution of Venezuela's avifauna.

Acknowledgements

We thank the many Ye'kwana and Sanema people who participated in the project through interviews, and the smaller number that directly assisted by developing a bird vocalisation library and indigenous names database. Emilio & Felicia Rodríguez invited us to assist their broader cultural library project, as part of their non-profit Caura Weichojo. They provided extensive logistical support both in the field and in Maripa. Philip Desenne and David Wilson aided the project via support to Caura Futures and Caura Weichojo, and Desenne provided additional information on birds in the Caura watershed. David Ascanio provided valuable comments on our noteworthy sightings and brought to our attention other relevant records. Gustavo Rodríguez, Christopher Sharpe and Guy Kirwan provided constructive comments and edits that improved the manuscript. John Kvarnbäck assisted the project through additional interviews to record indigenous bird names and knowledge, and provided bird sightings from visits in April and June 2012.

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