The birds of Reserva Ecológica Guapiaçu (REGUA), Rio de Janeiro, Brazil

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É apresentada uma lista da avifauna da Reserva Ecológica de Guapiaçu (REGUA), uma reserva privada de 6.500 ha localizada no município de Cachoeiras de Macacu, vizinha ao Parque Estadual dos Três Picos, Estação Ecológica do Paraíso e Parque Nacional da Serra dos Órgãos, parte de um dos maiores conjuntos protegidos do Estado do Rio de Janeiro. Foram registradas um total de 450 espécies de aves, das quais 63 consideradas de interesse para conservação, como Leucopternis lacernulatus, Harpyhaliaetus coronatus, Triclaria malachitacea, Myrmotherula minor, Dacnis nigripes, Sporophila frontalis e S. falcirostris. A reserva também está desenvolvendo um projeto de reintrodução dos localmente extintos Crax blumembachii e Aburria jacutinga, e de reforço das populações locais de Tinamus solitarius.

The Atlantic Forest of eastern Brazil and neighbouring Argentina and Paraguay is among the most imperilled biomes in the world. At least 188 bird species are endemic to it, and 70 globally threatened birds occur there, most of them endemics^{4,8}. The Atlantic Forest is not homogeneous and both latitudinal and longitudinal gradients account for diverse associations of discrete habitats and associated bird communities. Another factor accounting for the heterogeneity of the biome is the frequently steep altitudinal gradient found in parts of south-east Brazil, where the Serra do Mar and associated ranges rise steeply to over 1,000 m from the surrounding lowlands and coastal plain 18. Forest at lower altitudes was the first to be impacted by humans and has been mostly cleared for agriculture and pasture, making it unsurprising that many threatened birds are associated with lowland habitats^{3,4,6,18}.

The Serra dos Órgãos is one of the ornithologically best-known areas in the Atlantic Forest¹⁴. Its foothills have been visited by naturalists since the early 19th century, and are the source of rarities such as Kinglet Calyptura Calvptura cristata^{10,14,15}. The foothills were largely cleared to make room to coffee plantations and to obtain timber and firewood, while most of the vast swamp forests covering the lowlands between the hills and Guanabara Bay are gone because of extensive drainage in the early 20th century, mostly as part of efforts to control mosquito-borne diseases^{5,19}. Nevertheless small patches of forest in the lowlands did survive and the steep terrain of higher elevations retains much larger forests, while the abandonment of former plantations has permitted forest regeneration at lower altitudes. In consequence, more forest perhaps remains today than at the peak of the coffee boom in the early 20th century.

Some information has been published on the birds of lower (90–500 m) elevations in the region^{10,13}, but few areas have been subject to long-term surveys. Here we present the cumulative list of a privately protected area, Reserva Ecológica Guapiaçu (REGUA), which includes both low-lying parts of the Serra dos Órgãos massif and nearby higher ground, now mostly incorporated within the recently decreed 46,350-ha Três Picos State Park^{12,13,19}. REGUA, the Três Picos park and Serra dos Órgãos National Park (11.800 ha) form a continuum of some 600 km², one of the most extensive protected patches of Atlantic Forest¹⁶. REGUA is renowned in the ornithological literature as the sole site where Rio de Janeiro Antwren Myrmotherula fluminensis has been recorded since its description³.

Study area and Methods

Reserva Ecológica de Guapiaçu (REGUA) is located near the village of Guapiaçu, Cachoeiras de Macacu, Rio de Janeiro. The reserve comprises 6,500 ha of forest, ranging from c.30 to 2,200 m, adjoining the 46,350-ha Três Picos State Park. The reserve is drained by the rio Macacu basin. Most areas of level ground, originally covered by swamp forest, have been drained and are now occupied by pastures with scattered huge fig trees *Ficus clusiifolia* and *F. enormis* clad in bromeliads. In some parts (Fazenda São José) man-made wetlands with dense herbaceous cover and open water are used by waterbirds.

In the rolling terrain of the foothills to c.500 m, vegetation is mostly old (>25 years) second growth, with many legumes (*Piptadenia gonoacantha*, *Anadenathera colubrina*, *Schizolobium parahyba* and *Inga* spp.), figs and Myrsinaceae (*Rapanea* spp., mostly at edges), spiny palms *Astrocaryum aculeatissimum* and palmito palms *Euterpe edulis*

Table I. Bird species recorded in Reserva Ecológica de Guapiaçu (REGUA), Rio de Janeiro, Brazil. Nomenclature follows CBRO (http://www.ib.usp/cbro).

Abundance: C = common (recorded in appropriate habitat 80% of field days); F = fairly common (50-80%); U = uncommon (20-50%); R = rare (> 20%).

Evidence: S = sight; V = voice; T = tape-recorded; M = mist-netted; P = photographed.

Habitat: W = wetlands; O = pasture and agricultural areas; E = edges; L = old second growth at 90-500 / 600 m; H = forest above 600 m.

* = introduced or feral, " = probable migrant, absent during part of year or subject to obvious changes in numbers, + = not recorded by us.

Species English name	recorded by as.		Abundance	Evidence	Habitat
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Noticiorax nycticorax Nycticorax nycticorax Black-crowned Night Heron C S,V,T,P W Butorides striata Striated Heron C S,V,T,P W Mobility ibis Cattle Egret C S,V,T,P W Mobility ibis Cattle Egret R Ardea cocoi White-necked Heron R S,P W Ardea alba Great Egret F S,P W Mistling Heron F Siph W Mistling Heron C S,P Wilterodius pileatus Capped Heron C S,P W Egretta caerulea Little Blue Heron THRESKIORNITHIDAE Theristicus caudatus Buff-necked lbis R R S,P W Theristicus caudatus Buff-necked lbis R R S,P O Phoenicopterus chilensis* Chilean Flamingo C S,P W CATHARTIDAE Cathartes aura Turkey Vulture Cathartes burrovianus Lesser Yellow-headed Vulture Coragyps atratus C S,P,P W NO,E,L	Ixobrychus exilis	Least Bittern	**	-	
Nyctorax nycticorax Back-crowned Night Heron Butorides striata Striated Heron C S,V,T,P W,O Bubulcus ibis Cattle Egret R S,P W Ardea cocoi White-necked Heron R S,P W Ardea alba Great Egret F S,P W Syrigma sibilatrix** Whistling Heron F S,P W Sprigma sibilatrix* Whistling Heron C S,P Wilterodius pileatus Capped Heron C S,P W Egretta tula Snowy Egret Egretta caerulea Little Blue Heron THRESKIORNITHIDAE Theristicus caudatus Buff-necked lbis R S,P W Theristicus caudatus Buff-necked lbis R S,P O Ploenicopterus chilensis* Chilean Flamingo C S,P W CATHARTIDAE Cathartes aura Turkey Vulture C S,P W,O,E,L Catartes burrovianus Black Vulture C S,P W,O,E,L,H	Ixobrychus involucris	Stripe-backed Bittern		,	
Butlorides striata Bublus ibis Cattle Egret Ardea cocoi White-necked Heron R S,P W Ardea alba Great Egret F S,P W Syrigma sibilatrix** Whistling Heron C Syrigma sibilatrix* Whistling Heron C Syrigma sibilatrix* Whistling Heron C S,P W Pilherodius pileatus Capped Heron C S,P W Egretta thula Snowy Egret Egretta caerulea Little Blue Heron THRESKIORNITHIDAE Theristicus caudatus Buff-necked lbis R S,P W Theristicus caudatus Buff-necked lbis R S,P O Ploenicopterus chilensis* Chilean Flamingo C CATHARTIDAE Cathartes aura Turkey Vulture Cathartes burrovianus Lesser Yellow-headed Vulture Coagyps atratus Black Vulture C S,N,T,P W,O S,P W C S,P W,O,E,L	Nycticorax nycticorax	ũ .			
Ardea cocoi White-necked Heron R S,P W Ardea cocoi White-necked Heron F S,P W Ardea alba Great Egret F S,P W Syrigma sibilatrix** Whistling Heron C S,P W Egretta thula Snowy Egret C S,V,T,P W Egretta caerulea Little Blue Heron R S,P W THRESKIORNITHIDAE Theristicus caudatus Buff-necked lbis R S,P O Platalea ajaja Roseate Spoonbill PHOENICOPTERIDAE Phoenicopterus chilensis* Chilean Flamingo CATHARTIDAE CATHARTIDAE Cathartes aura Turkey Vulture Cathartes burrovianus Black Vulture Coragyps atratus Black Vulture C S,P W,O,E,L,H	Butorides striata	Striated Heron			
Ardea alba Great Egret F S,P W Syrigma sibilatrix** Whistling Heron C S,P W F S,P W Whistling Heron C S,P W F S,P W F S,P W Whistling Heron C S,P W F S,P W,O,E,L F S,P W,O,E,L F S,P W,O,E,L,H	Bubulcus ibis	Cattle Egret			,
Ardea diba Great Egret Syrigma sibilatrix** Whistling Heron C S,P W Pilherodius pileatus Capped Heron C S,P W Egretta thula Snowy Egret R S,P W Egretta caerulea Little Blue Heron S THRESKIORNITHIDAE Theristicus caudatus Buff-necked Ibis R S,V,P O Platalea ajaja Roseate Spoonbill R S,P O PHOENICOPTERIDAE Phoenicopterus chilensis* Chilean Flamingo CATHARTIDAE Cathartes aura Turkey Vulture C S,P W,O,E,L Cathartes burrovianus Lesser Yellow-headed Vulture Coragyps atratus Black Vulture	Ardea cocoi	White-necked Heron			
Syrigma sibilatrix Whistling Heron Pilherodius pileatus Capped Heron C S,P W Egretta thula Snowy Egret Egretta caerulea Little Blue Heron THRESKIORNITHIDAE Theristicus caudatus Buff-necked Ibis R S,V,P O Theristicus caudatus R S,P O Platalea ajaja Roseate Spoonbill PHOENICOPTERIDAE Phoenicopterus chilensis* Chilean Flamingo CATHARTIDAE Cathartes aura Turkey Vulture Cathartes burrovianus Lesser Yellow-headed Vulture Coragyps atratus Black Vulture C S,P W,O,E,L,H	Ardea alba	Great Egret	•	,	
Egretta thula Snowy Egret C S,V,T,P W Egretta caerulea Little Blue Heron THRESKIORNITHIDAE Theristicus caudatus Buff-necked Ibis R S,P O Platalea ajaja Roseate Spoonbill PHOENICOPTERIDAE Phoenicopterus chilensis* Chilean Flamingo CATHARTIDAE Cathartes aura Turkey Vulture Cathartes burrovianus Lesser Yellow-headed Vulture Coragyps atratus Capped Heron C S,V,T,P W W S,P O S,P O W CALL Cathartes burrovianus C S,P W,O,E,L Cathartes burrovianus C S,P W,O,E,L,H	Syrigma sibilatrix ^m	Whistling Heron	•	.,	
Egretta caerulea Little Blue Heron THRESKIORNITHIDAE Theristicus caudatus Buff-necked Ibis R R S,V,P O Theristicus caudatus R Platalea ajaja Roseate Spoonbill PHOENICOPTERIDAE Phoenicopterus chilensis* Chilean Flamingo CATHARTIDAE Cathartes aura Turkey Vulture Cathartes burrovianus Lesser Yellow-headed Vulture Coragyps atratus R S,P W W CATHARTIDAE Cathartes burrovianus Lesser Yellow-headed Vulture Coragyps atratus R S,P W,O,E,L S,P W,O,E,L,H	Pilherodius pileatus	Capped Heron		,	
THRESKIORNITHIDAE Theristicus caudatus Buff-necked Ibis R R S,V,P O Platalea ajaja Roseate Spoonbill PHOENICOPTERIDAE Phoenicopterus chilensis† Chilean Flamingo R CATHARTIDAE Cathartes aura Turkey Vulture Cathartes burrovianus Lesser Yellow-headed Vulture F Coragyps atratus Black Vulture C S,P W,O,E,L,H	Egretta thula	Snowy Egret			
Theristicus caudatus Buff-necked lbis R R S,V,P O Platalea ajaja Roseate Sponbill PHOENICOPTERIDAE Phoenicopterus chilensis† Chilean Flamingo CATHARTIDAE Cathartes aura Turkey Vulture Cathartes burrovianus Lesser Yellow-headed Vulture Coragyps atratus Black Vulture R S,V,P O O O N S,P W V W V V V V V V V V V V V	Egretta caerulea	Little Blue Heron	N	3,1	V V
Therstous caudatus Platalea ajaja Roseate Spoonbill PHOENICOPTERIDAE Phoenicopterus chilensis† Chilean Flamingo CATHARTIDAE Cathartes aura Turkey Vulture Cathartes burrovianus Lesser Yellow-headed Vulture Coragyps atratus Black Vulture C S,P W,O,E,L F S,P W,O,E,L,H	THRESKIORNITHIDAE		D	CVD	0
PHOENICOPTERIDAE Phoenicopterus chilensis* Chilean Flamingo CATHARTIDAE Cathartes aura Cathartes burrovianus Cargyps atratus Cargyps atratus Cathartes Description Cossept Spoonbill Research Spoonbill Res	Theristicus caudatus	Buff-necked Ibis			
Phoenicopterus chilensis* Chilean Flamingo R S,P W CATHARTIDAE C S,P W,O,E,L Cathartes aura Turkey Vulture C S,P W,O,E,L Cathartes burrovianus Lesser Yellow-headed Vulture F S,P W,O,E Coragyps atratus Black Vulture C S,P W,O,E,L,H	,,	Roseate Spoonbill	r.	3,1	U
CATHARTIDAE Cathartes aura Cathartes burrovianus Coragyps atratus Consequence	PHOENICOPTERIDAE		D	C D	\\/
Cathartes aura Turkey Vulture C S,P W,O,E,L Cathartes burrovianus Lesser Yellow-headed Vulture F S,P W,O,E,L Coragyps atratus Black Vulture C S,P W,O,E,L,H	'	Chilean Flamingo	r,	3,F	VV
Cathorites dura larkey Vulture F S,P W,O,E Cathorites burrovianus Lesser Yellow-headed Vulture C S,P W,O,E,L,H Coragyps atratus Black Vulture	CATHARTIDAE		C	C D	WOEL
Cardinates purrovianus Lesser Tellow-neaded Vulture Coragyps atratus Black Vulture C S,P W,O,E,L,H	Cathartes aura	Turkey Vulture		,	
Coragyps atratus Black Vulture	Cathartes burrovianus	Lesser Yellow-headed Vulture			
PANDIONIDAE	Coragyps atratus	Black Vulture	C	5,1	vv,∪,£,L,H
	PANDIONIDAE				

Species	English name	Abundance	Evidence	Habitat
Pandion haliaetus	Osprey	R	S	W
ACCIPITRIDAE	,			
Leptodon cayanensis	Grey-headed Kite	R	S,T,P	L
Chondrohierax uncinatus	Hook-billed Kite	R	S	L
Elanus leucurus	White-tailed Kite	R	S,P	W,O
Rostrhamus sociabilis	Snail Kite	R	S	W
Harpagus diodon	Rufous-thighed Kite	R	S,P	L
Ictinia plumbea ^m	Plumbeous Kite	R	S,P	L
Accipiter striatus ⁺	Rufous-thighed Hawk	R	S	L
Accipiter bicolor	Bicoloured Hawk	R	S	L
Geranospiza caerulescens	Crane Hawk	U	S,P	L
Leucopternis lacernulatus	White-necked Hawk	R	S,P	L
Leucopternis polionotus	Mantled Hawk	U	S,T,P	L,H
Buteogallus urubutinga	Great Black Hawk	R	S	E
Heterospizias meridionalis	Savanna Hawk	С	S,T,P	W,O,E
Harpyhaliaetus coronatus	Crowned Eagle	R	S,V,T,P	L
Parabuteo unicinctus	Harris's Hawk	R	S	W
Percnohierax leucorrhous	White-rumped Hawk	R	S	L
Rupornis magnirostris	Roadside Hawk	С	S,M,T,P	W,O,E,L
Buteo albicaudatus	White-tailed Hawk	R	S, P	W,O
Buteo nitidus [†]	Grey Hawk	R	S	L
Buteo hiddus Buteo brachyurus	Short-tailed Hawk	R	S,P	L,H
Spizaetus tyrannus	Black Hawk-Eagle	С	S,V,T,P	L,H
Spizaetus tyrannus Spizaetus melanoleucus	Black-and-white Hawk-Eagle	U	S,V,T,P	L,H
Spizaetus ornatus ⁺	Ornate Hawk-Eagle	R	S	L
FALCONIDAE	Offiate Hawk-Lagie			
Caracara plancus	Southern Caracara	С	S,V,P	W,O,E
Milvago chimachima	Yellow-headed Caracara	С	S,V,T,P	W,O,E
Milvago chimango [†]	Chimango Caracara	R	S	L
	•	F	S,V,T,P	W,O,E
Herpetotheres cachinnans	Laughing Falcon Barred Forest Falcon	U	S,V,T,M,P	L,H
Micrastur ruficollis	Collared Forest Falcon	R	S,V,T,P	E,L
Micrastur semitorquatus	American Kestrel	R	S,V,P	0
Falco sparverius		R	S	W,O
Falco rufigularis	Bat Falcon	U	S	W,O
Falco femoralis	Aplomado Falcon			
ARAMIDAE	1:1:	U	S,V,P	W
Aramus guarauna	Limpkin		, ,	
RALLIDAE	C	R	S,V,T	W
Aramides cajanea	Grey-necked Wood Rail	F	S,V,T	W
Aramides saracura	Slaty-breasted Wood Rail	R	S,V,T	W
Amaurolimnas concolor	Uniform Crake	C	S,V,T	W
Laterallus viridis	Russet-crowned Crake	C	S,V,T,P	W
Laterallus melanophaius	Rufous-sided Crake	C	S,V,T,P	W
Porzana albicollis	Ash-throated Crake	C	S,V,P	W
Pardirallus nigricans	Blackish Rail	R	S,V,T,P	W
Pardirallus sanguinolentus	Plumbeous Rail	C	S,V,T,P	W
Gallinula chloropus	Moorhen	R	S,P	W
Gallinula melanops	Spot-flanked Gallinule	C	S,V,T,P	W
Porphyrio martinica	Purple Gallinule	•	٠, ٠, ١,١	* *
HELIORNITHIDAE		R	S,P	W
Heliornis fulica	Sungrebe	13	٥,,	* *
CARIAMIDAE		R	S,V,P	0
Cariama cristata	Red-legged Seriema	13	٥, , , , ,	J
CHARADRIIDAE		С	S,V,T,P	W,O
Vanellus chilensis	Southern Lapwing	C	٥,٧,١,٢	¥¥,O
SCOLOPACIDAE		D	CVT	\\/
Gallinago paraguaiae	South American Snipe	R	S,V,T	W
Gallinago undulata	Giant Snipe	C	S,V,T,P	W
Actitis macularius ⁺	Spotted Sandpiper	R	S	W
Tringa solitaria ^m	Solitary Sandpiper	R	S,V,P	W

Species	English name	Abundance	Evidence	Habitat
ACANIDAE		С	S,V,T,P	W
acana jacana	Wattled Jacana	C	3, 7, 1,1	**
STERNIDAE	C .1 A	R	S,P	W
Sterna hirundinacea [†]	South American Tern		-,-	
COLUMBIDAE	District Control	R	S,V,T,P	0
Columbina minuta	Plain-breasted Ground Dove	C	S,V,T,M,P	0
Columbina talpacoti	Ruddy Ground Dove	R	S,V,P	W,E
Columbina squamata	Scaled Dove	R	S,V,P	E
Claravis pretiosa	Blue Ground Dove	R	S .	0
Columba livia	Rock Pigeon	C	S,V,P	0
Patagioenas picazuro	Picazuro Pigeon	R	S,V	O.E
Patagioenas cayennensis	Pale-vented Pigeon	R	S,V	L,H
Patagioenas plumbea	Plumbeous Pigeon	С	S,V,T,M	Ĺ
Leptotila verreauxi	White-tipped Dove	F	S,V,T	L,H
Leptotila rufaxilla	Grey-fronted Dove	U	S,V,T,M	Ĺ
Geotrygon montana	Ruddy Quail-Dove			
PSITTACIDAE	Diversional M	R	S,V	Е
Primolius maracana	Blue-winged Macaw	R	S,V	E
Aratinga leucophthalma	White-eyed Parakeet	R	S,P	E
Aratinga aurea*	Peach-fronted Parakeet	C	S,V,T,P	E,L,H
Pyrrhura frontalis	Maroon-bellied Parakeet	C	S,V,T,P	E,L,H
Forpus xanthopterygius	Blue-winged Parrotlet	C	S,V,T,P	L,H
Brotogeris tirica	Plain Parakeet	R	S,V	L,H
Touit melanonotus	Brown-backed Parrotlet	F	S,V,T	L,H
Touit surdus	Golden-tailed Parrotlet	F	S,V,T,P	L,H
Pionopsitta pileata	Pileated Parrot	C	S,V,T	L,H
Pionus maximiliani	Scaly-headed Parrot	Ü	S,V,P	W,O,E
Amazona amazonica	Orange-winged Parrot	R	S, v, i	L
Amazona aestiva*	Blue-fronted Amazon	C	S,V,T,P	L,H
Triclaria malachitacea	Blue-bellied Parrot	Č	5, 7, 1,1	L,1 1
CUCULIDAE		С	S,V,T,M,P	E,L,H
Piaya cayana	Squirrel Cuckoo	R	S,V,P	E, _,
Coccyzus melacoryphus	Dark-billed Cuckoo	R	S,P	E
Coccyzus americanus	Yellow-billed Cuckoo	R	S,P	Ē
Coccyzus euleri	Pearly-breasted Cuckoo	R	S,V,T,P	W,E
Crotophaga major	Greater Ani	C	S,V,T,P	W,O
Crotophaga ani -	Smooth-billed Ani	C	S,V,T,P	W,O
Guira guira	Guira Cuckoo	C	S,V,T,P	W,E
Tapera naevia	Striped Cuckoo	C	3, 7, 1,1	* * ,L
TYTONIDAE		U	S,V,P	0
Tyto alba	Barn Owl	O	3, 4,1	0
STRIGIDAE		F	S,V,P	E,L
Megascops choliba	Tropical Screech Owl	U	S,V,T,P	L,L
Megascops atricapilla	Variable Screech Owl	C	S,V,T,P	E,L
Pulsatrix koeniswaldiana	Tawny-browed Owl	R	5, V, T, F S, V	E,L
Strix virgata	Mottled Owl	R	S,P	L L
Strix huhula	Black-banded Owl	F		Н
Glaucidium minutissimum	Least Pygmy Owl	C	S,V,T,P	E,L
Glaucidium brasilianum	Ferruginous Pygmy Owl	C	S,V,T,M,P	
Athene cunicularia	Burrowing Owl	F	S,V,T,P	O E,L
Asio clamator NYCTIBIIDAE	Striped Owl		S,V,P	
Nyctibius aethereus	Long-tailed Potoo	R	S,P	L
, Nyctibius griseus CAPRIMULGIDAE	Common Potoo	F	S,V,P	W,E,L
Lurocalis semitorquatus	Short-tailed Nighthawk	R	S,V	L
Nyctidromus albicollis	Pauraque	С	S,V,P	E,L
Caprimulgus longirostris	Band-winged Nightjar	R	S,V	W,E
Caprimulgus maculicaudus	Spot-tailed Nightjar	R	S,V	W,O
	Scissor-tailed Nightjar	R	S,P	W,E

Species	English name	Abundance	Evidence	Habitat
APODIDAE		R	S	L
Cypseloides fumigatus	Sooty Swift	C	S,V,T,P	O,L,H
Streptoprocne zonaris	White-collared Swift	R	S, v, i,i	L
Streptoprocne biscutata	Biscutate Swift	C	S,V,T	L,H
Chaetura cinereiventris	Grey-rumped Swift	C	S,V,1	E,L
Chaetura meridionalis ^m	Ashy-tailed (Sick's) Swift	R	S, v	L,L
Panyptila cayennensis TROCHILIDAE	Lesser Swallow-tailed Swift			
Ramphodon naevius	Saw-billed Hermit	C	S,V,T,M,P	L,H
Glaucis hirsutus	Rufous-breasted Hermit	С	S,V,T,M,P	E,L
Phaethornis squalidus	Dusky-throated Hermit	R	S,M,P	L,H
Phaethornis idaliae [†]	Minute Hermit	R C	S,M,P	L
Phaethornis ruber	Reddish Hermit		S,V,T,M,P	L,H
Phaethornis pretrei	Planalto Hermit	R	S	H
Phaethornis eurynome	Scale-throated Hermit	F	S,V,P	L,H
Eupetomena macroura	Swallow-tailed Hummingbird	C	S,V,M,P	E,L
Aphantochroa cirrochloris	Sombre Hummingbird	R	S	H
Florisuga fusca ^m	Black Jacobin	С	S,V,M,P	E,L,H
Colibri serrirostris	White-vented Violet-ear	R	S,P	E,L
Anthracothorax nigricollis	Black-throated Mango	R	S	E
Stephanoxis lalandi	Plovercrest			
Lophornis magnificus	Frilled Coquette	U	S,P	L
Chlorostilbon lucidus	Glittering-bellied Emerald	R	S	L
Thalurania glaucopis	Violet-capped Woodnymph	C	S,V,M,P	E,L,H
Hylocharis cyanus	White-chinned Sapphire	F	S,V,P	E
Leucochloris albicollis	White-throated Hummingbird	C	S,V,P	L,H
Amazilia versicolor	Versicoloured Emerald	U	S	L,H
Amazilia fimbriata	Glittering-throated Emerald	С	S,P	E,L
Amazilia lactea	Sapphire-spangled Emerald	F	S	L
Clytolaema rubricauda	Brazilian Ruby	U	S,V,T,P	L,H
Calliphlox amethystina TROGONIDAE	Amethyst Woodstar	R	S	L
Trogon viridis	White-tailed Trogon	R	S,V	L
Trogon surrucura aurantius	Surucua Trogon	С	S,V,T,P	L,H
Trogon rufus ALCEDINIDAE	Black-throated Trogon	F	S,V,T,P	L
Megaceryle torquata	Ringed Kingfisher	С	S,V,P	W
Chloroceryle amazona	Amazon Kingfisher	F	S,V,P	W
Chloroceryle americana MOMOTIDAE	Green Kingfisher	U	S,V,P	W
Baryphthengus ruficapillus GALBULIDAE	Rufous-capped Motmot	F	S,V,T	L
Galbula ruficauda BUCCONIDAE	Rufous-tailed Jacamar	С	S,V,T,M,P	E,L
Notharchus swainsoni	Buff-bellied Puffbird	R	S,V,T,P	L
Nystalus chacuru	White-eared Puffbird	R	S,V,T,P	0
, Malacoptila striata	Crescent-chested Puffbird	С	S,V,T,P	E,L
RAMPHASTIDAE	T T	R	S,V	W,E
Ramphastos toco	Toco Toucan Channel-billed Toucan	С	S,V,M,T,P	L,H
Ramphastos vitellinus		R	\$	L,H
Ramphastos dicolorus	Red-breasted Toucan	C	S,V,T,P	L,H
Selenidera maculirostris	Spot-billed Toucanet	Ü	S,V,T,P	L,H
Pteroglossus bailloni	Saffron Toucanet	R	S,V,	E
Pteroglossus aracari PICIDAE	Black-necked Aracari	C	S,V,T,P	E,L,H
Picumnus cirratus	White-barred Piculet	U	S,V,T	W,O,E
Melanerpes candidus	White Woodpecker	C	5, V, T	L,H
Melanerpes flavifrons	Yellow-fronted Woodpecker	C	5, v, T S, V, T, P	L,H
Veniliornis maculifrons	Yellow-eared Woodpecker	C	5, v, T, F S, V, T, P	L,FT
Piculus flavigula	Yellow-throated Woodpecker	C	٠, ۲ , ۱ ,۱	L

Colaptes melanochloros Green-barre Colaptes campestris Campo Flick Celeus flavescens Blond-creste Dryocopus lineatus Lineated Wo THAMNOPHILIDAE	d Woodpecker C	S,V,T,P S,V,T S,V,T,P S,V,M,P	H W,L,H O
Coloptes campestris Campo Flick Celeus flavescens Blond-creste Dryocopus lineatus Lineated Wo THAMNOPHILIDAE	er C d Woodpecker	S,V,T,P S,V,M,P	0
Celeus flavescens Blond-creste Dryocopus lineatus Lineated Wo THAMNOPHILIDAE	d Woodpecker	S,V,M,P	
Dryocopus lineatus Lineated Wo	1 Woodpecker		E 1
THAMNOPHILIDAE	odpecker K	CVTD	E,L
		S,V,T,P	L,H
The state of the s	6	CVID	1.11
Hypoedaleus guttatus Spot-backed	Antshrike C	S,V,T,P	L,H
Batara cinerea Giant Antshi	ike R	S,V,T	L,H
Mackenziaena severa Tufted Antsh	rike R	S,V,T,P	L,H H
Biatas nigropectus White-beard	ed Antshrike	S,V,T	E
Thamnophilus ruficapillus Rufous-cappe	d Antshrike C	S,V	E
	ked Antshrike	S,V,T,P S,V,T,P	E.L
Thamnophilus ambiguus Sooretama S	aty Antshrike	S,V,T,P	E,L H
Thamnophilus caerulescens Variable Ant	hrike	S,V,T,P	Ĺ
Dysithamnus stictothorax Spot-breaste	d Antvireo C	S,V,T,P	L.H
Dysithamnus mentalis Plain Antvire	D D	5, v, 1, F S, V	ц,п Н
Dysithamnus xanthopterus Rufous-back	d Antvireo	3, v V	Ĺ
Thamnomanes caesius Cinereous A	ntshrike	s,v,T,M,P	L.H
Myrmotherula gularis Star-throated	Antwren	S,V,T,M,P	E,L
Myrmotherula axillaris White-flanke	d Antwren	S,V,T,P	L,H
Myrmotherula minor Salvadori's A	ntwren	S,V,T,M,P	L,rı
Myrmotherula unicolor Unicoloured	Antwren	S,V,T,	Ĺ
Herpsilochmus rufimarginatus Rufous-wing	d Antwren	S,V,T,P	L.H
Drymophila ferruginea Ferruginous	Antbird	S,V,T,P	Н
Drymophila rubricollis Bertoni's An	bird	S,P	H
Drymophila genei [†] Rufous-tailed	Antbird	S,V,T,P	L.H
Drymophila ochropyga Ochre-rump	ed Antbird	S,V,T,P	Н
Drymophila malura Dusky-tailed	Antbird	S,V,T,M,P	Ľ
Drymophila squamata Scaled Antbi	ď	S,V,T	L,H
Terenura maculata Streak-cappe	d Antwren	S,V,T,M,P	L,H
, 3	lered rire-eye	S,V,T,M,P	L,H
Myrmeciza loricata White-bibbe	d Antbird	3, 7, 1, 1, 1, 1	<u>-,</u>
CONOPOPHAGIDAE	. F	S,V,T,P	L,H
Conopophaga lineata Rufous Gnat	eater	S,V,T,M,P	L
Conopophaga melanops Black-cheeke	d Gnateater	-, -, -,,-	
GRALLARIIDAE	C	S,V,T	L,H
Grallaria varia Variegated A	ntpitta	.,.,	,
RHYNOCRYPTIDAE	F	S,V,T	Н
Psilorhamphus guttatus Spotted Bam	C	S,V,T,P	L,H
Merulaxis ater Slaty Bristlef	D	S,V	H
Scytalopus notorius Mouse-colou FORMICARIIDAE	red Tapaculo		
Formicarius colma Rufous-cappi	d Anethorish C	S,V,T,P	L
	E E	S,V,T	L,H
Chamaeza campanisoma Short-tailed Chamaeza meruloides Cryptic Antt	E	S,V,T	Н
Chamaeza ruficauda Rufous-tailea	В	S,V,T	Н
SCLERURIDAE	Alltuli usii		
	ted Leaftosser C	S,V, T,M,P	L,H
DENDROCOLAPTIDAE	ted Leartosser		
	Voodcreeper C	S,V,T,M,P	L,H
	Voodcreeper C	S,V,T,M,P	L,H
	red Woodcreeper F	S,V,T	L,H
Dendrocolaptes platyrostris Planalto Wo	· II	S,V,P	L,H
Xiphorhynchus fuscus Lesser Woo		S,V,T,M,P	L,H
Lepidocolaptes squamatus Scaled Woo	' F	S,V,T,P	Н
Campylorhamphus falcularius Black-billed S	· II	S,V,T,P	L,H
FURNARIIDAE	-,		
	(Band-tailed) Hornero	S,V,T,P	W,O
Furnarius rufus Rufous Horr	ero	S,V,T,P	W,O
Synallaxis ruficapilla Rufous-capp	E	S,V,T	L,H

Consider	For History	Abundance	Evidence	Habitat
Species	English name	U	S,V,T,P	L
Synallaxis cinerascens	Grey-bellied Spinetail	R	S,V,T,P	W
Synallaxis albescens	Pale-breasted Spinetail	Ü	S,V,T	E,L
Synallaxis spixi	Spix's Spinetail	F	S,V,T	H
Cranioleuca pallida	Pallid Spinetail	C	S,V,T,P	W
Certhiaxis cinnamomeus	Yellow-chinned Spinetail	C	S,V,T	0
Phacellodomus rufifrons	Rufous-fronted Thornbird	C	S,V,P	Н
Phacellodomus erythrophthalmus	Red-eyed Thornbird	F	S,V,T	Н
Anabacerthia amaurotis	White-browed Foliage-gleaner	F	S,V,T	H
Syndactyla rufosuperciliata	Buff-browed Foliage-gleaner	F	S,V,P	L,H
Philydor lichtensteini	Ochre-breasted Foliage-gleaner	C	S,V,M,P	L,H
Philydor atricapillus	Black-capped Foliage-gleaner	C	S,V,T	L,H
Philydor rufum	Buff-fronted Foliage-gleaner	C	S,V,T	Н
Anabazenops fuscus	White-collared Foliage-gleaner	F	S,V,T,P	L,H
Cichlocolaptes leucophrus	Pale-browed Treehunter	C	S,V,T,M,P	L,H
Automolus leucophthalmus	White-eyed Foliage-gleaner	U	S,V,T,M,P	L,H
Lochmias nematura	Sharp-tailed Streamcreeper	F	S,V,P	<u> </u>
Heliobletus contaminatus	Sharp-billed Treehunter	C		L,H
Xenops minutus	Plain Xenops	C	S,V,T,P	
Xenops rutilans	Streaked Xenops	C	S,V,P	L,H
TYRANNIDAE		С	CVTMD	EI
Mionectes oleagineus	Ochre-bellied Flycatcher	C	S,V,T,M,P	E,L
Mionectes rufiventris	Grey-hooded Flycatcher	C	S,V,T,M,P	L,H
Leptopogon amaurocephalus	Sepia-capped Flycatcher		S,V,T,M,P	L,H
Corythopis delalandi	Southern Antpipit	C	S,V,T,M,P	L
Hemitriccus diops	Drab-breasted Bamboo Tyrant	С	S,V,T,P	H
Hemitriccus orbitatus	Eye-ringed Tody-Tyrant	С	S,V,T,M,P	L
Hemitriccus nidipendulus	Hangnest Tody-Tyrant	R .	S,V,P	E,L
Myiornis auricularis	Eared Pygmy Tyrant	F	S,V,T,P	E,L
Poecilotriccus plumbeiceps	Ochre-faced Tody-Tyrant	F	S,V,T,P	L,H
Todirostrum poliocephalum	Yellow-lored Tody-Flycatcher	С	S,V,T,P	E
Todirostrum cinereum	Common Tody-Flycatcher	C	S,V,T,P	W,E
Phyllomyias burmeisteri	Rough-legged Tyrannulet	F	S,V,T,P	L,H
Phyllomyias virescens	Greenish Tyrannulet	U	S,V,P	H
Phyllomyias fasciatus ^m	Planalto Tyrannulet	С	S,V,T,P	L,H
Phyllomyias griseocapilla	Grey-capped Tyrannulet	R	S,V,T,P	L,H
Myiopagis viridicata	Greenish Elaenia	R	S,V,T,P	E
Elaenia flavogaster	Yellow-bellied Elaenia	C	S,V,T,P	W,O,E
Elaenia parvirostris ^m	Small-billed Elaenia	R	S,V,P	E
Elaenia mesoleuca ^m	Olivaceous Elaenia	R	V	Н
Ornithion inerme	White-lored Tyrannulet	R	S,V	L
Camptostoma obsoletum	Southern Beardless Tyrannulet	С	S,V,T,P	E,L
Serpophaga nigricans	Sooty Tyrannulet	R	S,P	W
Serpophaga subcristata	White-crested Tyrannulet	R	S	Ε
Capsiempis flaveola	Yellow Tyrannulet	C	S,V,T,P	E,L,H
Phylloscartes ventralis	Mottle-cheeked Tyrannulet	С	S,V,T	H
Phylloscartes paulista	São Paulo Tyrannulet	R	S	L
Phylloscartes oustaleti	Oustalet's Tyrannulet	F	S,V,T,P	Н
Phylloscartes difficilis	Serra do Mar Tyrannulet	R	S,V,P	Н
Tolmomyias sulphurescens	Yellow-olive Flycatcher	С	S,V,T,P	L,H
Tolmomyias flaviventris	Yellow-breasted Flycatcher	F	S,V,T,P	E
Platyrinchus mystaceus	White-throated Spadebill	С	S,V,T,P	L,H
Platyrinchus leucoryphus	Russet-winged Spadebill	U	S,V,T,P	L,H
Myiophobus fasciatus	Bran-coloured Flycatcher	F	S,V,T,P	W,O
Myiobius barbatus	Sulphur-rumped Flycatcher	F	S,V,M,P	L,H
Myiobius atricaudus	Black-tailed Flycatcher	U	S,P	Н
Hirundinea ferruginea	Cliff Flycatcher	U	S,V,T,P	L,H
Lathrotriccus euleri	Euler's Flycatcher	С	S,V,T,M,P	L,H
Cnemotriccus fuscatus	Fuscous Flycatcher	U	S,V,T,P	E
Contopus cooperi	Olive-sided Flycatcher	R	S	L
	•	F	S,V,T,P	L,H
Contopus cinereus	Tropical Pewee		,	•

Pyrocepholas rabinus Vermillon Pyratcher R S.P Kniploegus cyaninatriri Kniploegus cyaninatri	Species	English name	Abundance	Evidence	Habitat
Knjolegus (portioestrio Knjolegus (portioestrio Knjolegus (portioestrio Knjolegus (portioestrio Knjolegus (portioestrio Knjolegus (pagerimus Velvety Black Tyrant Velvety Black Velvety Mustcephore Velvety Velvety Black Tyrant Velvety Black Water Tyrant Colonic colonics Velvety Black Water Tyrant Velvety Black Water Tyrant Colonic colonics Long-tailed Tyrant Colonic colonics Long-tailed Tyrant Velvety Black Water Tyrant Colonic colonics Long-tailed Tyrant Velvety Black Water Tyrant Colonic colonics Long-tailed Tyrant Colonic colonics Velvety Black Water Tyrant Velvety Black Water Tyrant Velvety Black Water Tyrant Velvety Black Water Tyrant Colonic colonics Long-tailed Tyrant Velvety Black Water Tyrant Velvety Black Water Tyrant Velvety Black Water Tyrant Velvety Black Water Tyrant Colonic colonics Velvety Black Water Tyrant Colonic colonics Velvety Black Water Tyrant Velvety Black Water Tyrant Colonic colonics Velvety Black Water Tyrant Velvety Black Water Tyrant Colonic colonics Velvety Black Water Tyrant Velvety Black Water Tyrant Colonic colonics Velvety Black Water Tyrant Velvety Black Water Tyrant Velvety Black Water Tyrant Velvety Black Water Tyrant Colonic Colonic Velvety Black Water Tyrant Velvety Black W	•	_	R	S,P	W,O
Knjolegus hiphotos Crestel Black Tyrant Satopo interophys Velvery Black Tyrant Satopo interophys Yellow-browed Tyrant U S.P. Xofinis cinerus Crey Monjita U S.P. Xofinis cinerus U S.P. XVT.P. Rusciplibra vesula Shear-ailed Grya Tyrant F. S.V.T.P. Rusciplibra vesula Shear-ailed Grya Tyrant C S.V.T.P. Rusciplibra vesula Macciplibra Macciplibra vesula Macciplibra Maccipli	, ,	•	R	S,P	L,H
Knjoblegus nigerimus Velvey Black Tyrant Valors chereus Velvey Black Tyrant Volus Valors velus Grey Monita U S.P Xolins velus Grey Monita U S.P Xolins velus White-uniped Monita U S.P Velow-browed Tyrant R S.V.P Gubernetes yetapa Muscipipro velus Muscipipro velus Shear-ailed Grey Tyrant C S.V.T.P Phivicala nengeta Autolinicale leacocephala Colonia colonia Monitaria Colonia colonia Ung-ailed Tyrant Colonia Coloni		*	R	S	0
Satropi ictrarphys Valinis cinereus Grey Monjita White-umped Monjita R S.V.P Sireamer-alied Tyrant Gubernetes yetopi White-playe vetulo Shear-alied Grey Tyrant C S.V.T.P Fluvicion nengeta Masked Water Tyrant C S.V.T.P Fluvicion nengeta Masked Water Tyrant C S.V.T.P Modeterias issue Long-talled Tyrant C S.V.T.P Modeterias issue Catel Tyrant C S.V.T.P Modeterias issue Catel Tyrant C S.V.T.P Modeterias issue C S.V.T.P Modeterias issue C S.V.T.P Mipicatetes similis Social Flycatcher R S.V.T.P Phangus sulphutus Great Kiskadee R S. Three-striped Flycatcher C S.V.T.P Phangus sulphutus Great Kiskadee R S. Three-striped Flycatcher C S.V.T.P Mogindratus modelaus Megathyrdus pitangua Emploimonus woris* Tyrannas melancholicus* Tyronas sorona* Tyronas sorona* Fork-talled Flycatcher C S.V.T.P Tyrannas melancholicus* Tropical Kingbird F S.V.P Tyrannas sorona* Fork-called Flycatcher Mipicarbus tuberculfer Mipicarbus swamoni Mipicarbus tuberculfer Mipicarbus swamoni Soral-or-talled Cotinga R S.P Protenias nucleoties* Wing-barred Piprites R S.V.T.P S.V.T.P Monorcus monocus Colinicalistis* S. Wallow-talled Cotinga R S.P Piprites clinics S.V.T.P Monorcus monocus Chirosphine cudedta Tiryra inquisitor Back-curded Hanakin C S.V.T.P S.V		•	R	S	Н
Nolmis violtus Volties violtus Nolmis violtus Nolmi			U	S,P	W,O
Authins velotius White-rumped Monijita Gubensetes yetopa Streamer-tailed Tyrant F S.V.T.P Shear-tailed Gryrant F S.V.T.P Shear-tailed Gryrant F S.V.T.P Fluxicolo nengeta Masked Water Tyrant C S.V.T.P Aundinicol loucocephola Colonia colonus Long-tailed Tyrant C S.V.T.P Modeleoris rivosa Cattle Tyrant C S.V.T.P Priatis Flystcher C S.V.T.P Myiozetetes similis Social Flycatcher Myiozetetes similis Social Flycatcher Myiozetetes similis Social Flycatcher C S.V.T.P Myiozetes similis Social Flycatcher C S.V.T.P Tyronians melecinolisus* Three-striped Flycatcher S S.V.T.P Syryes Siyrises sibilator* Siyrises sibilator* Syryes Syr		,	U	S,P	0
Gubernetes yetopa Musopipro vetud Shea-tailed Grey Tyrant Sh.V.T.P Musopipro vetud Shea-tailed Grey Tyrant Sh.V.T.P Masked Water Tyrant C S.V.T.P Musopipro vetud White-headed Marsh Tyrant C S.V.T.P Musopipro Vetud White-headed Marsh Tyrant C S.V.T.P Mochetomis rivosa Lagotus leucopholus" Pratic Flycatcher Myiozetes soyunensis Myiozetes similis Social Flycatcher Myiozetes similis Social Flycatcher C S.V.T.P Mingus subjhurutus Conopies trivigotus Three-striped Flycatcher C S.V.T.P Myiodynates moculotus Streaked Flycatcher Flyonomis voinis* Variegated Flycatcher Flyonomis voinis* Variegated Flycatcher Flyonomis voinis* Variegated Flycatcher Flyonomis sounism Fork-tailed Flycatcher Flyonomis sounism Fork-tailed Flycatcher Myiorchus tuberculifor Dusky-capped Flycatcher Myiorchus tuberculifor Dusky-capped Flycatcher R S.V.T Myiorchus tuberculifor Myiorchus tuberculifor Dusky-capped Flycatcher R S.V.T Myiorchus tuberculifor Svalinon's Flycatcher R S.V.T Myiorchus tuberculifor Svalinon's Flycatcher R S.V.T Myiorchus tuberculifor Svalinon's Flycatcher R S.V.T Myiorchus tuberculifor R S.V.T Myiorchus tuberculifor Svalinon's Flycatcher R S.V.T Myiorchus tuberculifor R S.V.T Svali		, ,	U	S,P	0
Muschpira vetula Shear-tailed Grey Tyvant C S.V.T.P Fluvicola nengeta Masked Water Tyvant C S.V.T.P Aundinicial euscephala Colonia colonus Long-tailed Tyvant C S.V.T.P Mochetennis insosa Legetus leucophalus Priate Flyvanther R S.V.T.P Mochetennis insosa Legetus leucophalus Priate Flyvanther R S.V.T.P Mojuzetetes coyanemia Mylizetetes coyanemia Mylizetetes coyanemia Mylizetetes coyanemia Mylizetetes coyanemia Mylizetetes millis Great Kisladee C S.V.T.P Floranges sulphuratus Great Kisladee C S.V.T.P S.V.T.P Florandes sulphuratus Great Kisladee C S.V.T.P S.V.T.P Tyrannus melancholicus T Tropical Kingbird F S.V.P Tyrannus melancholicus T Tropical Kingbird F S.V.P Tyrannus sorona Fort-tailed Flycatcher F S.V.P Myliarchus storotaus Greyshod Mourner F S.V.T.M.P Myliarchus storotaus Frort-tailed Flycatcher R S.V.T.P Myliarchus fronx S.V.T.P S.V.T.P Myliarchus fronx S.V.T.P Myliarchus fronx S.V.T.P S.V.T.P Myliarchus fronx S.V.T.P Myliarchus fronx S.V.T.P Myliarchus fronx S.V.T.P S.V.T.P Myliarchus fronx S.V.T.P S.V.T.P			R	S,V,P	W
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Transco regeta Transc			С		W
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region selectorious Mytozetetes connents Mytozetetes similis Social Pycatcher C S,V.T.P Mytorques sulphuratus Great Kiskadee C C S,V.T.P Megarhynchus pitangus Fire-estriped flycatcher Mytorques sunduntus Streaked flycatcher Megarhynchus pitangua Boat-billed flycatcher Megarhynchus pitangua Fropical Kingbird C S,V.T.P Mytornus sovanon Frof-tcailed flycatcher F S,V.P Mytornus sovanon Fork-tailed flycatcher F S,V.P Sirystes sibilator Sirystes R S,V.P Mytorchus swinisson Swalisson's flycatcher Mytorchus swainsoni Swalisson's flycatcher Mytorchus swainsoni Swalisson's flycatcher Mytorchus ferox Short-crested flycatcher Mytorchus frox Short-crested flycatcher C S,V.T.P Attila rufis Grey-hooded Attila C COTINGIDAE Phoblaura florivistris Swallow-tailed Cotinga R S,P Phoblaura florivistris Sowallow-tailed Cotinga R S,P Prox.nics nudcollis Bare-throated Belibird C S,V.T.P Prox.nics nudcollis Bare-throated Belibird C S,V.T.P Mochoeropterus regulus Back-and-gold Cotinga R S,P Phytose C S,V.T.P Mochoeropterus regulus Back-dang-gold Cotinga R S,V.T Mochoeropterus regulus Back-dang-gold Cotinga R S,V.T Mochoeropterus R S,V.T Mochoeropterus R S,V.T Mochoeropterus R S,V.T P S		•			Ĺ
Anyozetetes cyonensis Mysozetetes similis Social Flycatcher Conpolis trivigatus Three-striped Flycatcher Rogor sulphuratus Great Kiskadee Conpolis trivigatus Three-striped Flycatcher Megarhynchus pitangua Boat-billed Flycatcher Megarhynchus pitangua Boat-billed Flycatcher Conpolis trivigatus Mysomether moulatus Megarhynchus pitangua Boat-billed Flycatcher Emplobonomus varius Variegated Flycatcher Flyrannus melancholicus Tyrannus melancholicus Tyrannus savanam Fork-tailed Flycatcher Fork-tailed Flycatcher Fork-tailed Flycatcher Riviptierna simplex Greyish Mourner Syrtes sibilator Mysorthus tuberculifer Mysorthus tuberculifer Dusky-capped Flycatcher Mysorthus swainsoni Swainson's Flycatcher Mysorthus swainsoni Swainson's Flycatcher Romphotrigon megacepholum Large-headed Flatbill Roy-tailed Flycatcher Romphotrigon megacepholum Large-headed Flatbill Roy-tailed Cotinga Roy-tailed Cotinga Roy-tailed Cotinga Roy-tailed Cotinga Roy-tailed Cotinga Roy-tailed Roy-t		*			W,E
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Crack Instances Mylodynastes maculatus Three-striped Plycatcher Copolist trivingatus Three-striped Plycatcher Copolist viringatus Streaked Flycatcher Copolist viringatus Boat-billed Plycatcher Emplodonomus varius Tyrannus melancholicus Tropical Kingbird Copolist Tyrannus sovana Fork-tailed Plycatcher Robytems simplex Sirystes sibilator Sirystes Robytems tuberculifer Dusky-capped Plycatcher Robyterius tuberculifer Dusky-capped Plycatcher Robyterius tuberculifer Dusky-capped Plycatcher Robyterius Mylorathus tuberculifer Dusky-capped Plycatcher Robyterius Robyterius Swinson Swinson's Flycatcher Robyterius Robyterius Robyterius Swinson's Swinson's Flycatcher Robyterius Ro	,	,			W,O,E
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Anglophychus pitangua Boat-billed Flycatcher F S.V.P. P. S.V.P. P. S.V.P. P. P. P. S.V.P. P. P. P. S.V.P. P. P. P. P. S.V.P. P. P. P. S.V.P. P. P. P. S.V.P. P. P. P. P. S.V.P. P. P. P. P. S.V.P. P. P. P. S.V.P. P. P. P. P. S.V.P. P. P. P. S.V.P. P. P. P. P. S.V.P. P. P. S.V.P. P. P. S.V.P. P		Three-striped Flycatcher			L,H
Integrativishins pitangua boat-olited ry-actorier per Empidonomus varius" Variesgated Flycatcher C S.V.T.P. Tyrannus melancholicus" Tropical Kingbird F S.V.P Fork-tailed Flycatcher F S.V.P P. Styrstes sibilator Sirystes Sibilator Sirystes S.V.P Sirystes sibilator Sirystes S.V.P Sirystes sibilator Sirystes C S.V.T.P. Myiarchus tuberculifer Dusky-capped Flycatcher R S.V.T.P. Myiarchus tuberculifer Dusky-capped Flycatcher R S.V.T.P. Myiarchus swainsoni Swainson's Flycatcher C S.V.T.P. Myiarchus swainsoni Swainson's Flycatcher C S.V.T.P. Myiarchus swainsoni Serox Short-crested Flycatcher C S.V.T.P. Attila artfus Grey-hooded Attila C S.V.T.P. COTINGIDAE Phibalura florirostris" Swallow-tailed Cotinga R S.P. Phibalura florirostris" Swallow-tailed Cotinga R S.P. Phibalura florirostris Bare-throated Belibird C S.V.T.P. Carponis cucullata Hooded Berrysater U S.V.T.P. Forcias nudicollis" Bare-throated Belibird C S.V.T.P. Procias nudicollis" Bare-throated Floritcrow R S.P. Phibalura florirostris Red-ruffed Fruitcrow R S.P. Phibalura florirostris Red-ruffed Fruitcrow R S.P. Phibalura florirostris Pin-tailed Manakin C S.V.T.P. Finitailed Manakin C S.V.T.P. Manacus manacus White-bearded Manakin C S.V.T.P. Manacus manacus White-bearded Manakin C S.V.T.P.P. Manacus manacus White-bearded Manakin C S.V.T.P.P. Schiffornis turdina Swallow-tailed (Blue) Manakin C S.V.T.P.P. Schiffornis turdina Thrush-like Schiffornis R S.V.T. Schiffornis turdina Thrush-like Schiffornis R S.V.T.P. Schiffornis turdina Thrush-like Schiffornis R S.V.T.P. Schiffornis turdina Thrush-like Schiffornis R S.V.T.P. Pachyramphus viridis Green-backed Becard R S.V.P. Pachyramphus polychopterus White-winged Becard C S.V.T.P. Pachyramphus wiridis Green-backed Becard C S.V.T.P. Pachyramphus wiridis Red-eyed Vireo C S.V.T.P. Pachyramphus wiridis Red-eyed Vireo C	Myiodynastes maculatus	Streaked Flycatcher			
Tyranus wordencholaus" Tyranus savand" Fork-tailed Flycatcher Fyranus sipher Greyish Mourner Sirystes sibilator" Sirystes sibilator" Myiarchus tuberculifer Myiarchus swainsoni Myiarchus swainsoni Myiarchus ferox Short-crested Flycatcher Myiarchus ferox Short-crested Flycatcher Myiarchus swainsoni Myiarchus ferox Short-crested Flycatcher Myiarchus ferox Short-crested Flycatcher Myiarchus ferox Short-crested Flycatcher Myiarchus swainsoni Swainson's Flycatcher Myiarchus ferox Short-crested Flycatcher Myiarchus ferox Short-crested Flycatcher Myiarchus swainsoni Swainson's Flycatcher C SV.T.P Myiarchus ferox Short-crested Flycatcher R SV.T Myiarchus ferox Short-crested Flycatcher R SV.T Myiarchus ferox Short-crested Flycatcher R SV.T.P SV.T.P SV.T.P SV.T.P SV.T.P SV.T.P SV.T.P SV.T.P Svallow-tailed Cotinga R S.P Pibalura flavirostris* Swallow-tailed Cotinga R S.P Procnios nudicollis* Bare-throated Bellbird C SV.T.P SV.T.P SV.T.P SV.T.P SV.T.P SV.T.P SV.T.P SV.T.P Pyroderus scutatus Red-ruffed Fruitcrow R S.P Piprites chloris Wing-barred Piprites R S.V.T Machaeropterus regulus Red-ruffed Fruitcrow R S.P Piprites chloris Wing-barred Piprites R S.V.T Machaeropterus regulus Acchaeropterus regulus Eastern Striped Manakin C SV.T.M.P Machaeropterus regulus Machaeropterus regulus Sv.T.P Sv.T.P Sv.T.P Schiffornis urdina C SV.T.M.P Schiffornis urdina Thrush-like Schiffornis R S.V.T Sv.T.P Schiffornis urdina Thrush-like Schiffornis R S.V.T Sv.T.P Schiffornis urdina Black-tailed Tityra R S.V.T Sv.T.P Pachyramphus virids Green-backed Becard C S.V.T.P Sv.P. Pachyramphus virids Green-backed Becard C S.V.T.P Sv.P. Pachyramphus virids C S.V.T.P Sv.P Sv.P Pachyramphus polychopterus Pachyramphus urdidus C S.V.T.P Sv.P	Megarhynchus þitangua	Boat-billed Flycatcher			E,L,H
Iyranius melincholous Iropical Ingelira F	Empidonomus varius ^m	Variegated Flycatcher			W,E,L
Iyranius sovian" Fork-tailed Prycatcher Byripterma simplex Greyish Mourner Sirystes sibilator* Sirystes Sirystes Sirystes Sirystes Sirystes Sirystes R SV,P Myiarchus tuberculifer Dusky-capped Flycatcher R Sy,T Myiarchus swainsoni Swainson's Flycatcher R Sy,T,P Swainson's Flycatcher C Sy,T,P Ramphotrigon megocephalum Large-headed Flycatcher C Sy,T,P Sy,T,P Sy,T,P Sy,T,P Sy,T,P Sy,T,P Sy,T,P Corporais cucullata C COTINGIDAE Phibalura floriviostris* Swallow-tailed Cotinga R S,P Proceins nudicollis* Bare-throated Bellbird C Sy,T,P Proceins nudicollis* Bare-throated Bellbird C Sy,T,P Proceins nudicollis* Bare-throated Bellbird C Sy,T,P Profess nudicollis* Bare-throated Bellbird C Sy,T,P Profess nudicollis* Black-and-gold Cotinga R S,P Piprites chloris Red-urified Fruitcrow R PIPRIDAE Piprites chloris Red-urified Privitcrow R Piprites chloris C Sy,T,M,P R Mondoeropterus regulus Eastern Striped Manakin C Sy,T,M,P Mondoeropterus regulus Eastern Striped Manakin C C Sy,T,M,P Mondoeropterus regulus Swallow-tailed (Blue) Manakin TTYRIDAE Oxyruncus cristatus Sharpbill F Sy,T,P Schiffornis iurcina Thrush-like Schiffornis F Sy,T,P Schiffornis iurcina Thrush-like Schiffornis R Sy,T,P Schiffornis iurcina Thrush-like Schiffornis R Sy,T,P Schiffornis turdina Thrush-like Schiffornis R Sy,T,P Rochyramphus virids Green-backed Becard C Sy,T,P Pochyramphus castaneus Chestnut-crowned Becard C Sy,T,P Pochyramphus containeus Chestnut-crowned Becard C Sy,T,P Pochyramphus marginatus Black-caped Becard C Sy,T,P Pochyramphus marginatus Black-caped Becard C Sy,T,P Pochyramphus undidus Crested Becard F Sy,P Pochyramphus polychopterus Pochyramphus vaidus Crested Becard F Sy,P Pochyramphus polidus C Sy,T,P Sy,P	Tyrannus melancholicus ^m	Tropical Kingbird			W,O,E
Krytypterna simplex Sirystes Sirystes sibilator** Myiarchus tuberculifer Myiarchus swainsoni Myiarchus ferox Kont-crested Flycatcher Kamphotrigon megacephalum Large-headed Flatbill Coty,T,P Attila rufus COTINGIDAE Phibalura flavirostris** Swallow-tailed Cotinga Carpornis cucullata Hooded Berryeater Procnias nudicollis** Bare-throated Bellbird City,T,P Procnias nudicollis** Red-ruffed Fruitcrow Piprites chloris Wing-barred Piprites Ricy,T Piprites chloris Wing-barred Piprites Ricy,T,M,P Piprites chloris Wing-barred Piprites Ricy,T,M,P Nonacus manacus White-barded Manakin City,T,M,P Manacus manacus White-barded Manakin City,T,M,P Manacus manacus White-barded Manakin City,T,M,P Sv,T,M,P Sv,T,M,P Sv,T,M,P Sv,T,M,P Sv,T,M,P Sv,T,T,P Sv,T,P Sv,T,T,P	Tyrannus savana ^m	Fork-tailed Flycatcher			W,O
Sirystes Myiarchus tuberculifer Myiarchus swainsoni Myiarchus swainsoni Myiarchus swainsoni Myiarchus swainsoni Myiarchus swainsoni Myiarchus ferox Short-crested Flycatcher Ramphotrigon megacephalum Large-headed Flatbill Ramphotrigon megacephalum Attila rufus Grey-hooded Attila COTINGIDAE Phibalura flavirostris** Swallow-tailed Cotinga Raprofis cucullota Hooded Berryeater Carponis cucullota Hooded Berryeater Us,V,T,P Procrios nudicollis** Bare-throated Bellbird Carponis cucullota Hooded Berryeater Us,V,T,P Profiss nudicollis** Bare-throated Bellbird Cs,V,T,P Profiss cutatus Red-ruffed Fruitcrow Red-ruffed Fruitcrow Riccard Black-and-gold Cotinga Raprofiser Suratus Red-ruffed Fruitcrow Red-ruffed Fruitcrow Riccard Black-and-gold Cotinga Raprofiser Suratus Red-ruffed Fruitcrow Raprofiser Suratus Red-ruffed Fruitcrow Raprofiser Suratus Red-ruffed Fruitcrow Raprofiser Suratus Red-ruffed Black-and-gold Cotinga Raprofiser Suratus Red-ruffed Fruitcrow Raprofiser Suratus Red-ruffed Fruitcrow Raprofiser Suratus Ra	Rhytipterna simplex	Greyish Mourner			L
Myiarchus swainsoni Swainsoni Swainsoni's Flycatcher C S,V.T.P Myiarchus swainsoni Swainsoni's Flycatcher C S,V.T.P Ramphotrigon megacephalum Large-headed Flatbill R S,V.T.P Attila rufus Grey-hooded Attila C S,V.T.P COTINGIDAE Phibolura florirostris''' Swallow-tailed Cotinga R S,P Carpornis cucullata Hooded Berryeater U S,V.T.P Tijuca atra Black-and-gold Cotinga R S,P Pyroderus scutatus Red-ruffed Fruitcrow R S,P PiPRIDAE Piprites chloris Wing-barred Piprites R S,V.T Rilicura militaris Pin-tailed Manakin C S,V.T.M.P Machaeropterus regulus Eastern Striped Manakin C S,V.T.M.P Chiroxiphia caudata Swallow-tailed (Blue) Manakin TITYRIDAE Oxyruncus cristatus Sharpbill F S,V.T Schiffornis virescens Greenish Schiffornis R S,V.T Schiffornis virescens Greenish Schiffornis R S,V.T Tityra cayana Black-tailed Tityra R S,V.P Pachyramphus viridis Green-backed Becard R S,V.T.P Pachyramphus viridis Green-backed Becard C S,V.T.P.P Pachyramphus viridis C S,V.T.P.P Pachyramphus viridis C Sestaute C S,V.T.P.P Pachyramphus viridis C S,V.T.P.P Pachyramphus viridis C S,V.T.P.P Pachyramphus varidis C S S,V.T.P.P Pac	Sirystes sibilator ^m	Sirystes			L,H
Mylarchus swainsoni Mylarchus ferox Short-crested Flycatcher Ramphotrigon megacephalum Attila rufus COTINGIDAE Phibalura flavirostris** Swallow-tailed Cotinga Carpornis cucullata Hooded Berryeater Procnias nudicollis** Bare-throated Bellbird Tijuca atra Black-and-gold Cotinga Ryyrt Syrt, P PlPRIDAE Pliprites chloris Monacus manacus Mochaeropterus regulus Manacus manacus Chiroxiphia caudata Swallow-tailed (Blue) Manakin TITYRIDAE Oxyruncus cristatus Schiffornis turdina Schiffornis turdina Schiffornis turdina Thrush-like Schiffornis Schiffornis wirescens Greenish Schiffornis Ryrt, P Syrt, P Sy	Myiarchus tuberculifer	Dusky-capped Flycatcher			L
Myiarchus ferox Ramphotrigon megacephalum Large-headed Flatbill Right S,V,T,P Attila rufus Grey-hooded Attila CCTINGIDAE Phibalura flavirostris** Carpornis cucullata Procnias nudicollis** Bare-throated Bellbird Tijuca atra Pyroderus scutatus Piprites chloris Wing-barred Piprites Richronis Pin-tailed Manakin CS,V,T,P Manacus manacus White-bearded Manakin CS,V,T,M,P Chrioxiphia caudata Swallow-tailed (Blue) Manakin TITYRIDAE Oxyruncus cristatus Sharpbill FS,V,T Schiffornis turdina Laniistora Black-aralled fityra Richry S,V,T Richry S,V,P Richry S,	Myiarchus swainsoni	Swainson's Flycatcher			L
Ramphotrigon megacephalum	Myiarchus ferox				W,E
Attila rufus COTINGIDAE Phibibulura flavirostris** Swallow-tailed Cotinga R S,P Procnias nudicollis** Frocnias nudicollis** Froncias nudicollis** Froncias nudicollis** Froncias nudicollis** Froncias nudicollis** Froncias nudicollis** Bare-throated Bellbird C S,V,T,P Procnias nudicollis** Froncias nudicollis** Froncias nudicollis** Bare-throated Bellbird C S,V,T,P Procnias nudicollis** Froncias nudicollis* Froncias		•		S,V,T,P	L,H
COTINGIDAE Phibalura flavirostris** Swallow-tailed Cotinga R S,P S,V,T,P S,V,T,P Procnias nudicollis** Bare-throated Bellbird C S,V,T,P Procnias nudicollis** Bare-throated Bellbird C S,V,T,P Proderius scutatus Pipritas scutatus Pipritas chloris Wing-barred Pipritas R S,V,T Machaeropterus regulus Machaeropterus regulus Machaeropterus regulus Manacus manacus White-bearded Manakin C S,V,T,M,P Chiroxiphia caudata Swallow-tailed (Blue) Manakin C S,V,T,M,P Schiffornis virescens Schiffornis turdina TITYRIDAE Osyruncus cristatus Sharpbill F Schiffornis turdina Thrush-like Schiffornis R S,V,T S,V,T,P S,V,T,P S,V,P S,		•	С	S,V,T,P	L,H
Phibalura flovirostris** Carpornis cucullata Hooded Berryeater C S.V.T.P. Procnias nudicallis** Procnias nudicallis** Tijuca atra Black-and-gold Cotinga R S.P. Piprites chloris R S.P. Piprites chloris Ving-barred Piprites R S.V.T.P. Piprites chloris Pin-tailed Manakin C S.V.T.M.P. Machaeropterus regulus Eastern Striped Manakin C S.V.T.M.P. Manacus manacus White-bearded Manakin C S.V.T.M.P. TITYRIDAE TITYRIDAE TITYRIDAE Oxyruncus cristatus Sharpbill F S.V.T. Schiffornis virescens Greenish Schiffornis R S.V.T. Schiffornis virescens Greenish Schiffornis R S.V.T.P. Schiffornis turdina Thrush-like Schiffornis R S.V.T.P. Schiffornis turdina Thrush-like Schiffornis R S.V.T.P. Tityra cayana Black-tailed Tityra R S.V.P. Pachyramphus castaneus Chestnut-crowned Becard R S.V.P. Pachyramphus castaneus Chestnut-crowned Becard C S.V.T.P. Pachyramphus marginatus Black-capped Becard C S.V.T.P. Pachyramphus marginatus Black-capped Becard C S.V.T.P. Pachyramphus validus Crested Becard F S.V.T.P. Pachyramphus validus Crested Becard C S.V.T.P. Pachyramphus validus Crested Becard F S.V.P. Pachyramphus polychopterus White-winged Becard C S.V.T.P. Pachyramphus validus Crested Becard F S.V.P. Pachyramphus policitis Rufous-browed Peppershrike C S.V.T.P. Pachyramphus policitis Rufous-browed Peppershrike C S.V.T.P. Piprites cluded Cotinga R S.V.P. S.V.T.P. S.V	•	,			
Carpornis cucullata Procnias nudicollis** Bare-throated Bellbird C S,V,T,P Tijuca atra Black-and-gold Cotinga R S,P Proderus scutatus Piprites chloris Wing-barred Piprites R S,V,T Blicura militaris Wing-barred Piprites R S,V,T,P Piprites chloris Wing-barred Piprites R S,V,T,M,P Blicura militaris Pin-tailed Manakin C S,V,T,M,P Manacus manacus White-bearded Manakin C S,V,T,M,P Manacus manacus White-bearded Manakin C S,V,T,M,P TITYRIDAE Oxyruncus cristatus Sharpbill F S,V,T,P Schiffornis virescens Greenish Schiffornis R S,V,T Schiffornis turdina Thrush-like Schiffornis R S,V,T,T Schiffornis turdina Thrush-like Schiffornis R S,V,T,T Tityra inquisitor Tityra cayana Black-crowned Tityra R S,V,P Pachyramphus viridis Green-backed Becard C S,V,T,P Pachyramphus castaneus Chestnut-crowned Becard C S,V,T,P Pachyramphus marginatus Black-capped Becard Pachyramphus validus C S,V,T,P Pachyramphus validus C S,V,T,P S,V,T C S,V,T,P S,V,T C S,V,T,P S,V,T S,V,T C S,V,T,P S,V,T,P S,V,T,P S,V,P Pachyramphus validus C S,V,T,P Pachyramphus validus C S,V,T,P S,V,T,P S,V,T,P Pachyramphus validus C C S,V,T,P S,V,P		Swallow-tailed Cotinga	R	S,P	L,H
Procnias nudicollis** Tijuca atra Black-and-gold Cotinga R S,V,T Pyroderus scutatus Red-ruffed Fruitcrow R S,P Piprites chloris Wing-barred Piprites R S,V,T Pintalled Manakin C S,V,T,M,P Machaeropterus regulus Eastern Striped Manakin U S,V,T,P Manacus manacus White-bearded Manakin C S,V,T,M,P Chiroxiphia caudata Swallow-tailed (Blue) Manakin C S,V,T,M,P TITYRIDAE Oxyruncus cristatus Sharpbill F S,V,T Schiffornis virescens Greenish Schiffornis R S,V,T Laniisoma elegans Elegant Mourner F S,V,T,P Tityra inquisitor Black-crowned Tityra R S Pachyramphus viridis Green-backed Becard R Pachyramphus castaneus Chestnut-crowned Becard C S,V,T,P Pachyramphus marginatus Black-capped Becard C S,V,T,P Pachyramphus validus Crested Becard F S,V,T,P Pachyramphus validus	'	•	U	S,V,T,P	L,H
Tijuca atra Black-and-gold Cotinga R S,Y,T Pyroderus scutatus Red-ruffed Fruitcrow PIPRIDAE Piprites chloris Wing-barred Piprites R S,V,T Ilicura militaris Pin-tailed Manakin C S,V,T,M,P Machaeropterus regulus Eastern Striped Manakin C S,V,T,M,P Manacus manacus White-bearded Manakin C S,V,T,M,P TITYRIDAE Oxyruncus cristatus Sharpbill F S,V,T,P Schiffornis virescens Greenish Schiffornis R S,V,T,P Schiffornis turdina Thrush-like Schiffornis R S,V,T Ilivra inquisitor Black-crowned Tityra R S,V,P Pachyramphus viridis Green-backed Becard C S,V,T,P Pachyramphus validus Crested Becard C S,V,T,P Pachyramphus validus Crested Becard C S,V,T,P Pachyramphus validus Crested Becard F S,V,P Pachyramphus validus Crested Becard C S,V,T,P Pachyramphus validus Crested Becard F S,V,P Pachyramphus validus Crested Becard C S,V,T,P Pachyramphus validus Crested Becard F S,V,P	•	•	С	S,V,T,P	L,H
Pyroderus scutatus PIPRIDAE Piprites chloris Wing-barred Piprites R S,V,T Bicura militaris Pin-tailed Manakin C S,V,T,M,P Machaeropterus regulus Manacus manacus White-bearded Manakin C Chiroxiphia caudata Swallow-tailed (Blue) Manakin C Cyruncus cristatus Schiffornis virescens Schiffornis turdina Laniisoma elegans Fityra inquisitor Tityra cayana Pachyramphus viridis Pachyramphus marginatus Black-capped Becard Piprites R S,V,T S,V,T R S,P S,V,T R S,V,T R S,V,T,M,P S,V,T,P S,V,P S,V,P S,V,P S,V,T,P S,V,P S,V,T,P S,V,P S,V,P S,V,P S,V,P S,V,P S,V,P S,V,P			U	S,V,T	Н
PIPRIDAE Piprites chloris Wing-barred Piprites R S,V,T Ilicura militaris Pin-tailed Manakin C S,V,T,M,P Machaeropterus regulus Eastern Striped Manakin C S,V,T,P Manacus manacus White-bearded Manakin C S,V,T,M,P Chiroxiphia caudata Swallow-tailed (Blue) Manakin C Syruncus cristatus Sharpbill F Sy,T,T Schiffornis virescens Greenish Schiffornis F S,V,T,T Schiffornis turdina Thrush-like Schiffornis R S,V,T Schiffornis turdina Thrush-like Schiffornis R S,V,T,T Schiffornis turdina Thrush-like Ityra R Sityra inquisitor R Sityra inquisitor R Sityra cayana Black-crowned Tityra R Schyramphus viridis Green-backed Becard R C S,V,T,P Pachyramphus castaneus Chestnut-crowned Becard C S,V,T,P Pachyramphus maginatus Black-capped Becard C S,V,T,P Pachyramphus maginatus R Suffous-browed Peppershrike C S,V,T,P S,V,P Hylophilius poicilotis Rufous-crowned Greenlet F S,V,P	•		R	S,P	L
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Schiffornis virescens Schiffornis Thrush-like Schiffornis R S,V,T F S,V,T,P S,V,T,P S,V,T,P R S,V,T,P R S,V,P R S,V,T,P R S,V,		01 1.111	F	S.V.T	L,H
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Pachyramphus viridis Pachyramphus viridis Pachyramphus castaneus Pachyramphus castaneus Pachyramphus polychopterus Pachyramphus marginatus Pachyramphus marginatus Pachyramphus marginatus Pachyramphus viridis Pachyramphus marginatus Pachyramphus viridis Pachyramphus viridis Pachyramphus marginatus Pachyramphus varidius Crested Becard VIREONIDAE Cyclarhis gujanensis Rufous-browed Peppershrike C S,V,T,P Vireo olivaceus Red-eyed Vireo Phylophilius poicilotis Rufous-crowned Greenlet F S,V,P	' '	•			Ĺ
Pachyramphus viriais Pachyramphus castaneus Pachyramphus castaneus Chestnut-crowned Becard C S,V,T,P Pachyramphus polychopterus White-winged Becard C S,V,T,P Pachyramphus marginatus Black-capped Becard F S,V,P Pachyramphus validus Crested Becard VIREONIDAE Cyclarhis gujanensis Rufous-browed Peppershrike C S,V,T,P Vireo olivaceus Red-eyed Vireo C S,V,T,M,P Hylophilius poicilotis Rufous-crowned Greenlet F S,V,P	Tityra cayana	,			L
Pachyramphus castaneus Pachyramphus polychopterus Pachyramphus marginatus Pachyramphus marginatus Pachyramphus marginatus Pachyramphus wardidus Crested Becard VIREONIDAE Cyclarhis gujanensis Rufous-browed Peppershrike Cyclarhis gujanensis Red-eyed Vireo Cylarhis gujanensis Red-eyed Vireo Cylarhis piciplatis Red-eyed Vireo F S,V,P Hylophilius poiciplatis Rufous-crowned Greenlet F S,V,P	Pachyramphus viridis	Green-backed Becard			L,H
Pachyramphus polycnopterus Pachyramphus marginatus Black-capped Becard Pachyramphus validus Crested Becard VIREONIDAE Cyclarhis gujanensis Rufous-browed Peppershrike C S,V,T,P C S,V,T,P C S,V,T,P C S,V,T,P C S,V,T,P C S,V,T,P C S,V,T,M,P Hylophilius poicilotis Rufous-crowned Greenlet F S,V,P	Pachyramphus castaneus	Chestnut-crowned Becard			
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VIREONIDAE Cyclarhis gujanensis Rufous-browed Peppershrike C S,V,T,P C S,V,T,M,P Vireo olivaceus Red-eyed Vireo C S,V,T,M,P Hylophilius poicilatis Rufous-crowned Greenlet F S,V,P	Pachyramphus marginatus	Black-capped Becard			L
Cyclarhis gujanensis Rufous-browed Peppershrike C S,V,T,P Vireo olivaceus Red-eyed Vireo C S,V,T,M,P F S,V,P	Pachyramphus validus	Crested Becard	٢	5, ۷, ۲	E,L
Vireo olivaceus Red-eyed Vireo C S,V,T,M,P Hylobhilus poicilatis Rufous-crowned Greenler F S,V,P	VIREONIDAE		6	C)/T5	
Vireo olivaceus Red-eyed Vireo C S,V,T,M,P Hylobhilus poicilotis Rufous-crowned Greenler F S,V,P	Cyclarhis gujanensis	Rufous-browed Peppershrike			L,H
Hylophilus poicilotis Rufous-crowned Greenlet F S,V,P		Red-eyed Vireo			L,H
	Hylophilus poicilotis	•			H
Hylophilus thoracicus Lemon-chested Greenlet C S,V,T,P	, , ,	Lemon-chested Greenlet	С	S,V,T,P	Е

Species	English name	Abundance	Evidence	Habitat
CORVIDAE Cyanocorax cristatellus	Curl-crested Jay	R	S,V,P	W,O
HIRUNDINIDAE		С	S,V,P	O,E
Pygochelidon cyanoleuca	Blue-and-white Swallow	U	5,V,F	L L
Atticora tibialis	White-thighed Swallow	C		W,O,E
Stelgidopteryx ruficollis	Southern Rough-winged Swallow	C	S,V,P	, ,
Progne tapera	Brown-chested Martin	C	S,V,T,P	W,O O
Progne chalybea ^m	Grey-breasted Martin	F	S,P	
Tachycineta leucorrhoa ^m	White-rumped Swallow	r R	S,V,T,P S	W,O
Hirundo rustica ^m TROGLODYTIDAE	Barn Swallow			0
Troglodytes musculus	House Wren	C	S,V,T,P	W,O,E
Pheugopedius genibarbis	Moustached Wren	F	S,V,T,P	E
Cantorchilus longirostris DONACOBIIDAE	Long-billed Wren	С	S,V,T,M,P	E,L
Donacobius atricapilla POLIOPTILIDAE	Black-capped Donacobius	F	S,V,T,P	W
Ramphocaenus melanurus	Long-billed Gnatwren	R	S,V	Н
TURDIDAE	Vallanda and The d	С	S,V,T,P	L,H
Turdus flavipes ^m	Yellow-legged Thrush	C	S,V,T,M,P	E,L
Turdus rufiventris	Rufous-bellied Thrush	C	S,V,T,P	L,H
Turdus leucomelas	Pale-breasted Thrush	C	S,V,T,M,P	E
Turdus amaurochalinus ^m	Creamy-bellied Thrush	R	S,V,P	Ĺ
Turdus subalaris ^m	Eastern Slaty Thrush	C	S,V,T,M,P	L,H
Turdus albicollis ^m MIMIDAE	White-necked Thrush	С	S,V,T,P	W,O,E
Mimus saturninus MOTACILLIDAE	Chalk-browed Mockingbird			
Anthus lutescens	Yellowish Pipit	C	S,V,T,P	0
Anthus hellmayri COEREBIDAE	Hellmayr's Pipit	F	S,V,T,P	Н
Coereba flaveola THRAUPIDAE	Bananaquit	С	S,V,T,P	E,L,H
Saltator fuliginosus	Black-throated Grosbeak	С	S,V,T,P	L,H
Saltator maximus	Buff-throated Saltator	С	S,V,T,P	E,L
Saltator similis	Green-winged Saltator	F	S,V,T,P	L,H
Orchesticus abeillei	Brown Tanager	F	S,V,T,P	Н
Schistochlamys ruficapillus	Cinnamon Tanager	R	S,V	Н
Cissopis leverianus	Magpie Tanager	R	S,V,P	Н
Nemosia pileata	Hooded Tanager	С	S,V,T,P	E
Orthogonys chloricterus	Olive-green Tanager	F	S,V,T,P	L,H
Pyrrhocoma ruficeps	Chestnut-headed Tanager	R	S	L,H
Trichothraupis melanops	Black-goggled Tanager	С	S,V,T,P	L,H
Tachyphonus cristatus	Flame-crested Tanager	С	S,V,T,M,P	L
Tachyphonus coronatus	Ruby-crowned Tanager	F	S,V,T,M,P	L,H
Ramphocelus bresilius	Brazilian Tanager	С	S,V,T,M,P	E,L
Thraupis sayaca	Sayaca Tanager	С	S,V,T,P	E
Thraupis sayaca Thraupis cyanoptera	Azure-shouldered Tanager	F	S,V,T,P	L,H
Thraupis cyanoptera Thraupis ornata	Golden-chevroned Tanager	С	S,V,T,P	L,H
Thraupis ornata Thraupis palmarum	-	С	S,V,T,P	E,L
	Palm Tanager	R	S,V,P	E,L
Pipraeidea melanonota	Fawn-breasted Tanager	С	S,V,T,P	E,L
Tangara brasiliensis	White-bellied Tanager	С	S,T,M,P	Ĺ
Tangara seledon Tangara syanosobbala	Green-headed Tanager	F	S,V,T,M,P	L,H
Tangara cyanocephala	Red-necked Tanager	F	S,V,T,P	L,H
Tangara desmaresti	Brassy-breasted Tanager	R	S	Ĺ
Tangara cyanoventris	Gilt-edged Tanager	C	S,V,P	E
Tangara cayana Tangara bawwina at	Burnished-buff Tanager	R	S .	E,L
Tangara þeruviana⁺ Taroina vividio™	Black-backed Tanager	F	S,V,T,P	E,L
Tersina viridis ^m	Swallow Tanager	U	S,V,T,P	E,L
Dacnis nigriþes ^m	Black-legged Dacnis	-	-, . , . ,*	-,-

		Alexander ex	Evidence	11-1-2
Species	English name	Abundance C	S,V,T,P	Habitat
Dacnis cayana	Blue Dacnis	R		E,L,H E,L
Cyanerpes cyaneus	Red-legged Honeycreeper	C	S,V,T,P S,V,T,P	L,H
Hemithraupis ruficapilla	Rufous-headed Tanager	C	S,V,T,P	E,L
Hemithraupis flavicollis	Yellow-backed Tanager	C	S,V,T,P	E,L
Conirostrum speciosum	Chestnut-vented Conebill	C	3, 4, 1,1	L,L
EMBERIZIDAE		R	S,V,T,P	O,E
Zonotrichia capensis	Rufous-collared Sparrow	C	S,V,T,P	O,E
Ammodramus humeralis	Grassland Sparrow	F	S,V,T,M,P	L,H
Haplospiza unicolor™	Uniform Finch	C	S,V,T,P	O,E
Sicalis flaveola	Saffron Finch	F	S,V,T,P	O,E
Emberizoides herbicola	Wedge-tailed Grass Finch	C	S,V,T,P	0
Volatinia jacarina	Blue-black Grassquit	U	S,V,T,P	L,H
Sporophila frontalis ^m	Buffy-fronted Seedeater	U	S,V,T	L,H
Sporophila falcirostris ^m	Temminck's Seedeater	C	S,V,T,P	O,E
Sporophila lineola ^m	Lined Seedeater	U	S,P	0,2
Sporophila nigricollis	Yellow-bellied Seedeater	C	S,V,T,P	0
Sporophila caerulescens ^m	Double-collared Seedeater	F	S,V,T,P	O,E
Sporophila leucoptera	White-bellied Seedeater	R	S,V,T	W,O,E
Sporophila angolensis	Chestnut-bellied Seed Finch	U	S,V,T,P	L,H
Tiaris fuliginosus	Sooty Grassquit	R	S,V,T	ь,п Н
Arremon semitorquatus	Half-collared Sparrow	F	S,V,T,P	W,O,E
Coryphospingus pileatus	Pileated Finch	R	S,V,P	0
Paroaria dominicana*	Red-cowled Cardinal	IX.	3, 7,1	O
CARDINALIDAE		С	S,V,T,M,P	L,H
Habia rubica	Red-crowned Ant Tanager	C	S,V,T,P	L,III
Caryothraustes canadensis	Yellow-green Grosbeak	C	3, 7, 1,1	L
PARULIDAE		С	S,V,T,P	L
Parula pitiayumi	Tropical Parula	R	S,P	E
Dendroica striata ^m	Blackpoll Warbler	U	S,V,T,P	W,E
Geothlypis aequinoctialis	Masked Yellowthroat	C	S,V,T,P	L,H
Basileuterus culicivorus	Golden-crowned Warbler	F	S,V,T,P	Н
Basileuterus leucoblepharus	White-browed Warbler	R	S,V,1,1	Ľ
Phaeothlypis rivularis	Neotropical River Warbler	IX	5, 7	-
ICTERIDAE		R	S,V,P	L,H
Psarocolius decumanus	Crested Oropendola	C	S,V,T,P	L,H
Cacicus haemorrhous	Red-rumped Cacique	F	S,V,T,P	W,O
Gnorimopsar chopi	Chopi Blackbird	C	S,V,T,P	W
Chrysomus ruficaþillus	Chestnut-capped Blackbird	R	S,V,T,P	O,E
Molothrus oryzivorus	Giant Cowbird	R	S,V,P	0,2
Molothrus bonariensis	Shiny Cowbird	C	S,V,P	0
Sturnella superciliaris ^m	White-browed Blackbird	C	3, 7,1	O
FRINGILLIDAE		R	S,V,T,P	0
Sporaga magellanica™	Hooded Siskin	C	S,V,T,P	E
Euphonia chlorotica	Purple-throated Euphonia	C	S,V,T,M,P	E,L
Euphonia violacea	Violaceous Euphonia	U	S,V,T,P	H
Euphonia chalybea	Green-chinned Euphonia	R	S,V,P	L,H
Euphonia cyanocephala	Golden-rumped Euphonia	C	S,V,T,M,P	E,L
Euphonia xanthogaster	Orange-bellied Euphonia	C	S,V,T,P	L,H
Euphonia pectoralis	Chestnut-bellied Euphonia	F	S,V,T,P	E,L,H
Chlorophonia cyanea	Blue-naped Chlorophonia		3, 7, 1,1	L,L,I I
ESTRILDIDAE	0 14 14	F	S,V,P	0
Estrilda astrild	Common Waxbill	•	-, -, -	-
PASSERIDAE		U	S,V	0
Passer domesticus	House Sparrow	=		-

but comparatively few epiphytes. Patches of old banana groves and scattered jackfruit Artocarpus jaca are testimony to recent cultivation. Damp areas along creeks and in low-lying bowls possess dense Maranthaceae and banana-like Heliconia that attract hummingbirds. Higher, forest epiphytes, especially bromeliads, become much more common and there are more Myrtaceae, Sapotaceae and Lauraceae, indicative of more mature forest, as well as scattered very large Cariniana estrellensis trees. Above 600 m the forest is much like mature Atlantic Forest elsewhere. Bamboo thickets (especially a large Guadua sp.) are common only above 600 m, with only scattered plants in lower areas.

Higher elevation areas (above 900 m) are accessed from the northern edge of the Serra dos Órgãos massif, via Nova Friburgo and Teresópolis and local properties like Fazenda Campestre (22°21'42.50"S 42°40'30.77"E), and from there walking to REGUA through the forest. This area is the source of most high-elevation species. Another higher elevation site, recently incorporated into REGUA, is Casa do Waldenoor (22°25'14.22"S 42°49'00.30"W), near Teresópolis.

The main study sites were the trails leading to and around the research quarters (22°25'14.5"S 42°44'19.3"W; 90 m), Casa do Aníbal (22°24'47.8"S 42°45'17.6"W; 60–355 m), the Green Trail (22°22'52.8"S 42°43'34.7"W; 170–1,300 m), Red Trail (22°23'27.7"S 42°44'22.8"W; 400–950 m), Orange Trail (22°23'03.8"S 42°43'47.7"W), Blue Trail (22°24'22.8"S 42°44'37.8"W; 80–615 m) and the wetlands near the lodge of Vila São José (22°26'52"S 42°46'14"W). A brief description of these follows.

Green Trail: one of the most important and frequently covered, with a length of 4.8 km, starting at the Casa de Pesquisa and cutting a transect from 130 to 1,300 m. Up to 500 m the forest is old second growth with few palms and epiphytes. Above 500 m older, primary-looking forest appears, especially at 600–800 m. There are pockets with large trees >30 m, many *Euterpe edulis* palms, epiphytes and giant bamboos *Guadua* spp.

Red Trail: this cuts through some of the best forest in the reserve, and is a branch of the Green Trail. With a length of 3.3 km at elevations of 400–900 m, the lower montane forest along the trail has many trees >25 m laden with epiphytes, and many palms. Above 700 m the understorey is rich in *Guadua* bamboos, and at 800–900 m to the hilltops there is elfin forest clad in epiphytes such as orchids.

Blue Trail: a branch of the Green Trail, with a length of 4.2 km and a gradient of 80–615 m. Below 500 m the second-growth forest is dominated by legumes, has few palms and epiphytes but many old banana orchards. Higher, the forest is much

better, with trees >25 m, some quite large. Euterpe palms are common as well as epiphytes. The highest stretch, at c.600 m, cuts through Chusquea bamboo thickets.

Casa do Aníbal: one of the best areas for lowland species. The trail cuts a transect of 2.8 km at 60–350 m, with second-growth forest <80 years old but very few epiphytes and *Euterpe* palms.

Wetland: in 2004 a project aiming to restore the wetlands commenced and this site was created. It is located in the lowest part of the reserve, at c.30 m, and is surrounded by pasture being planted with native trees or secondary forest edge.

Part of the survey was undertaken along the Red Trail, at 600–900 m, during a period when the common giant bamboos (Guadua spp.) were seeding, attracting the specialist Buffy-fronted Sporophila frontalis and Temminck's Seedeaters S. falcirostris. Another area of special attention was the wetland, where monitoring was deemed important, as was the 'antwren trail', near the Casa de Pesquisa, where Rio de Janeiro Antwrens were reportedly recorded. Other sites around the headquarters (younger forest and edge) were also surveyed.

The first bird list for REGUA was compiled during the 1990s by S. Knapp and A. Foster, who made extensive observations and mist-netted over the entire altitudinal gradient, and observed or photographed species not reported since, e.g. Chilean Flamingo *Phoenicopterus chilensis* and Minute Hermit *Phaethornis idaliae*. Subsequently, FO surveyed birds on 5–10 October (Casa de Pesquisa and Casa de Maria) and 9–16 November 2003 (the same), and on 31 May–8 June 2004 (all sites). LP has made observations in the area since November 2005, this paper presenting his results prior to May 2008. His total effort sums c.1,620 field hours.

Surveys were undertaken from dawn to about noon, and in late afternoon before sunset. Bird vocalisations were documented using a Sony TCM-EV5000 tape-recorder and a Sennheiser ME67 microphone. Reference recordings were used to locate selected species through playback. Whenever possible birds were documented with photographs and sound-recordings, the latter being available at http://www.xeno-canto.org (cited as XC hereafter).

During October–November 2003 mist-nets were placed along the trail near the Casa de Pesquisa where Rio de Janeiro Antwrens² had been reportedly seen, in an attempt to document the species. Fifteen 10-m nets were placed for two days in October and thirty on two days in November. Another ten mist-nets were used on one day near Casa de Maria in November. Trapped birds were photographed and released.



Figure I. Black Hawk-Eagle Spizaetus tyrannus, Reserva Ecológica Guapiaçu, Rio de Janeiro, south-east Brazil, August 2007 (Leonardo Pimentel)



Figure 2. Male White-bearded Antshrike *Biatas nigropectus*, Reserva Ecológica Guapiaçu, Rio de Janeiro, south-east Brazil, August 2010 (Leonardo Pimentel)



Figure 3. Male Salvadori's Antwren *Myrmotherula minor*, Reserva Ecológica Guapiaçu, Rio de Janeiro, south-east Brazil, May 2008 (Leonardo Pimentel)



Figure 4. Female Slaty Bristlefront *Merulaxis ater*, Reserva Ecológica Guapiaçu, Rio de Janeiro, south-east Brazil, September 2009 (Leonardo Pimentel)



Figure 5. Oustalet's Tyrannulet Phylloscartes oustaleti, Reserva Ecológica Guapiaçu, Rio de Janeiro, south-east Brazil, August 2007 (Leonardo Pimentel)



Figure 6. Russet-winged Spadebill Platyrinchus leucoryphus, Reserva Ecológica Guapiaçu, Rio de Janeiro, south-east Brazil, October 2007 (Leonardo Pimentel)



Figure 7. Elegant Mourner Laniisoma elegans, Reserva Ecológica Guapiaçu, Rio de Janeiro, south-east Brazil, October 2007 (Leonardo Pimentel)

Results and Discussion

A total of 453 bird species has been recorded at REGUA, 443 by us. The cumulative list for REGUA includes birds documented by other observers, such as Minute Hermit *Phaethornis idaliae* and

Rufous-tailed Antbird *Drymophila genei* (both photographed) but not recently. This remarkable total owes much to the dramatic altitudinal gradient and habitat diversity of the area, and the large forest in the adjoining Três Picos State Park.

The presence of wetlands surrounded by young second growth adds to species richness. Some 114 species use the wetlands, most of them restricted to that habitat. Some (Wing-banded Hornero Furnarius figulus and Masked Water Tyrant Fluvicola nengeta) are recent colonisers that appeared only during the most recent decades^{15,21}. The same appears true of a few open-country species such as Whistling Heron Syrigma sibilatrix and Rufous-fronted Thornbird Phacellodomus rufifrons. Deforestation has permitted species such as Toco Toucan Ramphastos toco, Curl-crested Jay Cyanocorax cristatellus and Pale-breasted Spinetail Synallaxis albescens to invade the environs of the reserve. The record of a pair of Blue-fronted Amazon Amazona aestiva certainly refers to escapees, but this species has become established and nests in other parts of south-east Brazil (even in São Paulo city¹¹).

Other species such as Magnificent Frigatebird Fregata magnificens, Black-bellied Whistling Duck Dendrocygna autumnalis, Phoenicopterus chilensis and South American Tern Sterna hirundinacea are stragglers from Guanabara Bay, where the first two and last-named are common (A. Aroeira in litt. 2009), while the flamingo has been recorded several times²⁰.

The results show an obvious bias to lower elevation areas where most effort was expended. It is probable that many species recorded to date only in the lowlands will be found higher (especially raptors), while more time spent in montane forest and bamboo thickets will produce additional species.

REGUA lies at the southernmost tip of the range of several species of Amazonian affinity that occur in the northern Atlantic Forest lowlands¹⁷. These include White-flanked Antwren Myrmotherula axillaris luctuosa, Sooretama Slaty Antshrike Thamnophilus ambiguus, Cinereous Antshrike Thamnomanes caesius, White-lored Tyrannulet Ochre-bellied Flycatcher Ornithion inerme, Mionectes oleagineus, Dusky-capped Flycatcher Myiarchus tuberculifer, Eastern Striped Manakin Machaeropterus regulus, White-bellied Tanager Tangara brasiliensis, Yellow-green Grosbeak Caryothraustes canadensis and Orange-bellied Euphonia Euphonia xanthogaster. Other lowland species include Orange-winged Parrot Amazona amazonica, which is common around Rio de Janeiro city and at Pocos das Antas Biological Reserve.

REGUA harbours several species of conservation concern, mostly Near Threatened taxa or birds considered threatened in the state of Rio de Janeiro. It should be noted that the populations of some species found at REGUA and elsewhere around the Serra dos Órgãos (e.g. Unicoloured Antwren *Myrmotherula unicolor*, Spot-breasted Antvireo *Dysithamnus stictothorax* and Eye-ringed

Tody-Tyrant *Hemitriccus orbitatus*) contributed to their being downlisted by BirdLife International⁴.

As might be expected, following prolonged human impact, several species appear to be locally extinct and others no longer breed. Among the latter, we recorded a single Crested Oropendola *Psarocolius decumanus*, which species has been occasionally recorded along the rio Macacu, near REGUA¹⁴, and may be recolonising the region.

Locally extinct species include Red-billed Curassow Crax blumenbachii, Black-fronted Piping Guan Aburria jacutinga (all but extinct in Rio de Janeiro except, perhaps, near the border with São Paulo^{1,7}), Yellow-legged Tinamou Crypturellus noctivagus (considered extinct in Rio de Janeiro¹), Little Tinamou C. soui (another lowland bird still found at União and Poço das Antas biological reserves; J. F. Pacheco in litt. 2009), Variegated Tinamou C. variegatus (apparently extinct in Rio de Janeiro but recorded from lower areas around Cachoeiras de Macacu in the late 1960s1,17) and Blue-headed Parrot Pionus menstruus reichenowi (probably extinct in Rio de Janeiro¹). Solitary Tinamou Tinamus solitarius is still present above 600 m, but is apparently unknown in the lowlands¹⁴. REGUA is promoting the reintroduction of Red-billed Curassow and Black-fronted Piping Guan^{1,2}, and plans to do likewise with the extinct tinamous and to augment the depleted population of Solitary Tinamou.

These 'missing' birds (and mammals such as Brazilian Tapir *Tapirus terrestris* and White-lipped Peccary *Tayassu pecari*) are poached, showing the impact this activity has on sensitive species, especially those restricted to low elevations. Human persecution may also account for the absence or extreme rarity of cagebirds such as Chestnut-bellied Seed Finch *Sporophila angolensis*, Rusty-collared Seedeater *S. collaris* and Ultramarine Grosbeak *Cyanocompsa brissonii*. Reintroductions and translocations could restore all of these species.

Continuous protection is needed to guarantee populations of species currently uncommon (such as guans and Solitary Tinamou) to increase and, eventually, to reintroduce some of the 'lost' species.

Selected species accounts

Solitary Tinamou Tinamus solitarius Uncommon throughout Rio de Janeiro, where considered threatened¹. In the reserve, found only above 500 m, where rare. On 10 October 2008 one observed on the Red Trail following playback, while a nest with four eggs found on 15 November 2007 was predated. Captive-bred birds have been released at lower elevations since early 2009. A globally Near Threatened species⁴.

Bicoloured Hawk Accipiter bicolor Not previously recorded in the Serra dos Órgãos¹⁴. Rare with only

two records: one seen perched at 15 m on a *Cecropia* near Casa do Aníbal, on 10 November 2006, and, more recently, one was seen on 15 October 2007, on the São José Trail.

White-necked Hawk Leucopternis lacernulatus Found only in the lower part of the reserve, with records year-round, sometimes following army ant swarms. One seen perched low (c.2 m) along the trail to Casa de Maria on 7 October 2003. A large half-eaten Leptodactylus frog found nearby was a potential prey. This globally Vulnerable species⁴ seems commonest at lower elevations but does occur higher such as in the outskirts of São Paulo city. A lone Mantled Hawk L. polionotus (Near Threatened) was recorded along the same trail on 8 June 2004.

Mantled Hawk *Leucopternis polionotus* Fairly common throughout the reserve, with most observations of soaring birds. Also seen following army ant swarms and catching large insects such as cockroaches. Considered Near Threatened in Rio de Janeiro¹ and globally³. Tape-recorded (XC13726).

Crowned Eagle Harpyhaliaetus coronatus Rare in the Serra dos Órgãos, where associated with montane grassland¹⁴. Recorded once, on 5 June 2007, when a pair was observed soaring low above forest until mobbed by a Black-and-white Hawk-Eagle Spizaetus melanoleucus. Tape-recorded (XC14006). The Museu de Zoologia da Universidade de São Paulo has two juveniles collected near Rio de Janeiro (Niterói) suggesting dispersal to lower areas. A globally threatened species⁴.

Black Hawk-Eagle Spizaetus tyrannus Perhaps the commonest large raptor in the reserve and over much of the southern Atlantic Forest. Detected by its conspicuous calls almost daily in higher areas of REGUA, and commonly seen soaring over lower parts (Fig. 1). Records of juveniles suggest breeding in the area. Considered probably threatened in Rio de Janeiro¹. Tape-recorded (XC14001, XC13981).

Black-and-white Hawk-Eagle Spizaetus melanoleucus Recorded throughout the reserve, most frequently in the second half of the year. A pair seen soaring with a Grey-headed Kite Leptodon cayanensis on 15 November 2003 at the start of the trail to Casa de Maria and three soaring low over forest in October 2007. Usually at low density and uncommon throughout the Atlantic Forest, it is considered Vulnerable in Rio de Janeiro¹.

Brown-backed Parrotlet *Touit melanonotus* A rare and globally threatened species³ with few records in the Serra dos Órgãos¹⁴. A flock of four heard calling in low flight over the Green Trail on 26 May 2008.

Golden-tailed Parrotlet *Touit surdus* This genus of small, inconspicuous parrots is notoriously difficult to identify to species. Two seen in flight near the Casa de Pesquisa on 7 October 2003 could have been either *T. surdus* or *T. melanonotus*. Calls tape-recorded (XC13972) on 3 June 2004 were identified as being of *T. surdus* (J. F. Pacheco *in litt*. 2009). Positive sightings of small groups have been made with some frequency at 200–700 m. On 5 May 2006 a group of six was observed feeding in the canopy of a Lauraceae. Considered globally Vulnerable⁴.

Blue-bellied Parrot Triclaria malachitacea Pairs or small groups (3–4) can be seen or heard daily (sometimes on the ground) above 500 m, especially along the Green, Red and Orange trails. REGUA appears to harbour a significant population of this species, and may be its stronghold in Rio de Janeiro¹². Considered globally Near Threatened⁴. Tape-recorded (XC12828).

Lesser Swallow-tailed Swift Panyptila cayennensis Rarely recorded in the Serra dos Órgãos¹⁴, there are several records by visiting birdwatchers, who sometimes misidentified it for the similar Neotropical Palm Swift *Tachornis squamata*, and one by FO of a single bird over the wetlands in 27 November 2006.

White-bearded Antshrike *Biatas nigropectus* A bamboo specialist with a patchy and local distribution, it is globally Vulnerable^{4,17}. Rare in the reserve, where occasionally recorded in *Guadua*-dominated areas above 700 m (Fig. 2).

Cinereous Antshrike Thamnomanes caesius One responded to playback (but did not approach), near the Casa de Pesquisa on 7 October 2003, but not recorded since. This species reaches the southern limit of its range in Rio de Janeiro, where it is known from very few sites^{10,14}.

Salvadori's Antwren *Myrmotherula minor* First recorded on 10 November 2003, the species is rare and has been recorded above 400 m along the Green, Red, Grey and Blue trails, always in pairs or small groups of up to five, sometimes with mixed-species flocks, moving c.3–4 m above ground (Fig. 3). Considered globally Vulnerable⁴ and not previously recorded in the Serra dos Órgãos¹⁴.

Rio de Janeiro Antwren Myrmotherula fluminensis Documenting this species was one of the main goals of the surveys in 2003–04. Observations along the 'antwren trail' produced only several records of M. axillaris luctuosa and M. unicolor, and one M. minor. Mist-nets covering the area where M. fluminensis was reported by other observers produced several M. minor and



Figure 8. Male Black-legged Dacnis *Dacnis nigripes*, Reserva Ecológica Guapiaçu, Rio de Janeiro, south-east Brazil, August 2007 (Leonardo Pimentel)

M. a. luctuosa. M. a. luctuosa does not show the conspicuous white flanks of other taxa in the M. axillaris group (especially Amazonian populations) and the elongated flank plumes are various shades of grey (pearly or bluish) rather than pure white, and some have quite dark plumes, as observed in specimens (L. F. Silveira in litt. 2008). For now, we prefer to consider the records of Rio de Janeiro Antwren at REGUA as involving M. a. luctuosa, especially as all available M. fluminensis soundrecordings are identical to contact calls of M. a. luctuosa 10. The taxonomic status of M. fluminensis is controversial. That the type (a male) was collected with a female M. a. luctuosa suggests it is either a hybrid or even a melanistic M. a. luctuosa (L. F. Silveira in litt. 2008), something currently being investigated through genetic analysis (A. Aleixo in litt. 2009).

Unicoloured Antwren *Myrmotherula unicolor* Recorded daily below 500 m, both in old second growth and in dense, tangled vegetation along creeks. Formerly considered Vulnerable, this Atlantic Forest endemic is now treated as Near Threatened⁴, and REGUA can be considered as a stronghold. Tape-recorded (XC11809).

Slaty Bristlefront Merulaxis ater Common >700 m, but lower only in two areas along the Green and Blue trails (Fig. 4). Globally Near Threatened⁴. Tape-recorded (XC15839).

Pale-breasted Spinetail Synallaxis albescens One record, on 30 October 2007, when two birds called repeatedly from tangled vegetation in the wetland area. They readily approached to playback and were tape-recorded (XC15858).

Eye-ringed Tody-Tyrant *Hemitriccus orbitatus* Fairly common in lower areas and was mist-netted several times. As in other areas near the Serra



Figure 9. Buffy-fronted Seedeater Sporophila frontalis, Reserva Ecológica Guapiaçu, Rio de Janeiro, south-east Brazil, May 2008 (Leonardo Pimentel)

dos Órgãos this species appears to be among the commonest forest insectivores⁷. Considered globally Near Threatened⁴, a designation it perhaps does not merit. Tape-recorded (XC13027).

Greenish Elaenia Myiopagis viridicata REGUA is the site of the first record for Rio de Janeiro¹⁵. One foraged at the edge of secondary forest by the reserve headquarters on 5 May 2008 and several times thereafter; also seen around the lodge's gardens in early morning. Tape-recorded (XC20642).

White-lored Tyrannulet Ornithion inerme One bird observed on 8 October 2004 by the 'antwren trail' while perched in the lower canopy. The species reaches the southern edge of its range in Rio de Janeiro, where it is considered Vulnerable¹. This appears to be the first record for the Serra dos Órgãos¹⁴.

São Paulo Tyrannulet *Phylloscartes paulista* One seen in the midstorey on 8 June 2003 with a large mixed-species flock near Casa de Maria. Considered globally Near Threatened⁴, the species' distribution and taxonomy still pose problems (J. F. Pacheco pers. comm.). A globally Near Threatened species⁴, this appears to be the first record for the Serra dos Órgãos region¹⁴.

Oustalet's Tyrannulet *Phylloscartes oustaleti* Records in the Serra dos Órgãos are based on old specimens and it was considered probably extinct there¹⁴. In 2006 it was rediscovered at Nova Friburgo within the Três Picos park¹². On 6 October 2003 a pair was present in a mixed-species canopy flock in mature forest at Base 1, one individual descending in response to playback. Several records since, always >500 m, especially along the Red, Green and Black trails (Fig. 5). Tape-recorded (XC13714).

Russet-winged Spadebill *Platyrinchus leucoryphus* First recorded by us on 5 June 2007 at c.500 m on the Red Trail. Since found regularly throughout the reserve, always singly in the lower understorey foraging for insects (Fig. 6). Regular in at least five places on the Green, Red and Grey trails. Globally Vulnerable^{1,4}. Tape-recorded (XC13716).

Olive-sided Flycatcher *Contopus cooperi* A Nearctic migrant that is uncommon in south-east Brazil²¹. One present for two weeks in March 2006 flycatching from a dead *Cecropia* at Casa do Aníbal is the first record for the Serra dos Órgãos¹⁴.

Bare-throated Bellbird Procnias nudicollis Easily recorded throughout the reserve, most conspicuously after May–June, when vocal activity is more intense. Scarce in Rio de Janeiro and elsewhere in the Atlantic Forest because of heavy trapping and considered globally Vulnerable⁴. Tape-recorded (XC12851, XC15833).

Red-ruffed Fruitcrow *Pyroderus scutatus* Rare and threatened in Rio de Janeiro¹, its presence in the Serra dos Órgãos is documented only by old specimens and the species was feared locally extinct¹³. Scattered records available in the reserve, below 200 m. On 14 July 2007, one at the edge of secondary forest in the wetland area responded promptly to playback, and two were seen next day on the Green Trail at c.150 m while perched in the canopy, but were very wary.

Wing-barred Piprites Piprites chloris On 18 August 2008 one with a mixed-species canopy flock at c.500 m along the Grey Trail; it responded immediately to playback. The first documented record for Rio de Janeiro¹⁷. Tape-recorded (XC29562).

Thrush-like Mourner Schiffornis turdina Uncommon in Rio de Janeiro, where it reaches the southern edge of its range near REGUA. Scattered records along the Blue and Red trails, always responding strongly to playback. Tape-recorded (XC14003).

Elegant Mourner Laniisoma elegans Frequent at REGUA, where almost common. During February–August it is found at lower elevations (50–300 m), moving to 500–800 m thereafter. Always found alone, hairy caterpillars are a common food item. This Atlantic Forest endemic is considered globally Near Threatened⁴. Tape-recorded (XC14005) and photographed (Fig. 7).

Long-billed Gnatwren Ramphocaenus melanurus A pair observed for several minutes and photographed at Base 1 on 6 October 2003

foraging in the canopy; the species is usually found at lower elevations in the southern Atlantic Forest. Considered Vulnerable in Rio de Janeiro¹, this is the first documented record for the Serra dos Órgãos¹⁴.

Eastern Slaty Thrush Turdus subalaris On 2 September 2008 one was singing constantly in the canopy along the Green Trail at c.150 m. The next week two birds were found along the same trail, at 400 m, when photographs were taken. This is the first documented record for the Serra dos Órgãos of this inter-tropical migrant¹⁴.

White-bellied Tanager Tangara brasiliensis Formerly treated as a subspecies of T. mexicana, T. brasiliensis in eastern Brazil is as genetically distinct from T. mexicana in Amazonia as other Tangara⁶. This Atlantic Forest endemic is considered Vulnerable in Rio de Janeiro, at the southern end of its range, and may merit listing as globally Near Threatened or even Vulnerable. A group of 3–4 were first recorded along the 'antwren trail' on 9–11 October 2003, occasionally with other tanagers. Common in open areas and at forest edge, frequently visiting fruiting fig trees in adjoining pastures. Seen in family groups of 2–8 birds. Tape-recorded (XC13062).

Black-legged Dacnis Dacnis nigripes First recorded when three females (or immatures) were seen on 8 October 2003 along the 'antwren trail' in a canopy flock (including Rufous-winged Antwren Herpsilochmus rufimarginatus) that may also have included one male (not seen well). Easily overlooked and few records since, usually involving small flocks of up to five visiting lower areas during winter (Fig. 8). On 20 August 2007 a flock of four was at Casa do Aníbal. Considered globally Near Threatened⁴.

Buffy-fronted Seedeater Sporophila frontalis A globally threatened^{1,4} specialist tracking mast-seedings of Guadua and Merostachys bamboos. First recorded at REGUA on 11 July 2006, when flocks numbering >100 were feeding on seeds of Guadua bamboo at 700–1,000 m on the Green and Red trails. When seeding was over in higher areas they moved to secondary forests at c.300 m where they fed on seeds of an abundant Cyperaceae (apparently a Scleria sp.) on the forest floor and in clearings. Tape-recorded (XC11727).

Temminck's Seedeater Sporophila falcirostris Another threatened bamboo specialist^{1,4} it was recorded during the same bamboo seeding as the previous species, but in smaller numbers. After the bamboo set seed at higher elevations, the species was also observed between 50 and 400 m. Males

were seen alone singing constantly atop the tallest trees, while females and young occurred in small flocks in the understorey and bamboo tickets. Tape-recorded (XC12826).

Chestnut-bellied Seed Finch Sporophila angolensis Considered probably extinct in the Serra dos Órgãos, the last record was made in 1950¹⁴. An adult male was singing in a dead tree at the wetland on 2 April 2007, and was seen for the next three weeks until it disappeared, probably caught by bird trappers living nearby. Tape-recorded (XC13103).

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