

## Birds of the Potaro Plateau, with eight new species for Guyana

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La meseta Potaro, en Guyana occidental, es un tepui de 11.655 ha. La meseta es la pieza más occidental del Escudo Guayanés. Con una altitud que va entre 500 y 2.042 m, la vegetación oscila entre el matorral de arena blanca, bosque ribereño inundado, bosque de montaña típico de los tepuis, y matorral de tepui alto. Entre el 20 de junio y el 3 de agosto de 1998 se estudiaron las aves de la meseta, como parte de relevamientos zoológicos generales. Se registraron 187 especies de aves, de las cuales ocho (*Colibri coruscans*, *Polytmus milleri*, *Automolus roraimae*, *Lochmias nematura*, *Myrmothera simplex*, *Troglodytes rufulus*, *Diglossa major* y *Gymnomystax mexicanus*) son nuevas para Guyana. Siete de estas especies son especialistas de bosque de montaña, y ya fueron registradas en la porción venezolana del Monte Roraima, a menos de 100 km al oeste de la meseta. La recopilación de datos, en su mayor parte inéditos, de la región de la meseta Potaro, resultó en un listado de 334 especies de aves, o 43% de las aves terrestres de Guyana. En la meseta habitan 21 de las 22 especies endémicas del Escudo Guayanés, y dos tercios de las especies de bosque de montaña en Guyana. Esta región debe ser considerada importante para la conservación de aves a nivel regional y nacional.

### Introduction

We report here on bird observations from the Potaro Plateau, western Guyana (see Fig. 1). The plateau covers an area of some 11,655 ha<sup>38,67</sup> and forms the easternmost extension of the Guiana Highlands<sup>24,34</sup>. The plateau, effectively a huge tepui, has a basal altitude of 600 m, with stud-like peaks reaching over 1,200 m (e.g. Mts. Ayanganna at 2,042 m, Kopinang at 1,594 m, Wokamung at 1,470 m and Kowa at 1,300 m). Soil, derived mostly from 1,600–1,800 million year-old Proterozoic sandstones, is poor and vegetation varies from white-sand scrub to flooded riparian forest, basi-montane forest, montane forest, upper montane forest, high tepui forest and high tepui scrub<sup>28</sup>. Located on the plateau's eastern edge, the Kaieteur Falls is a popular tourist destination<sup>2,67</sup>.

The tepuis of neighbouring Venezuela and Brazil (e.g. Mts. Roraima, Duida and others) have been subject to considerable ornithological work<sup>7,14–18,20,21,28–42</sup>, while in Guyana avifaunal research has been conducted in the Kanuku Mountains<sup>35</sup>, with reports from Guyana's Mt. Twek-Quey<sup>9,49</sup> and Merume Mountains<sup>50</sup>, both of which are within 150 km of Potaro (Fig. 1). However, little has been published on the ornithology of the Potaro Plateau<sup>59</sup>. Specimens were collected at Kaieteur Falls by E. F. im Thurn in October 1878<sup>29,52</sup> and by C. Bovallius in 1905<sup>22</sup>, and a small collection from Mt. Ayanganna was made by A. Thompson in 1960<sup>47,48</sup>. Snyder<sup>58</sup> and Stephens & Traylor<sup>59</sup> make occasional reference to collections from Ayanganna, Paramakatoi village and Kaieteur Falls. Gyldenstolpe<sup>22</sup> reported a new, subsequently discredited, subspecies of *Cyanerpes cyaneus* from Potaro. We know of no other published records for the birds of the area.

With permission from Guyana's Environmental Protection Agency, field work was undertaken

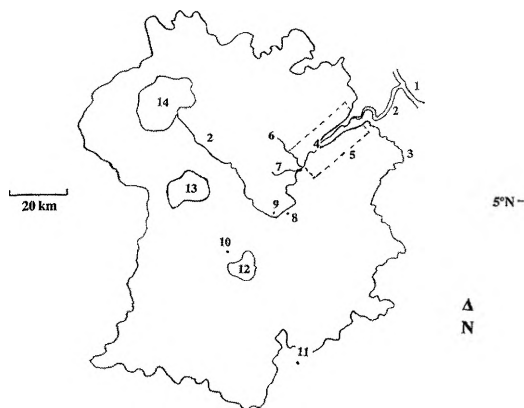
on the Potaro Plateau from 13 June to 4 August 1998 (the late wet season). All our data are based solely on sight records. Species were identified in the field using Meyer de Schauensee & Phelps<sup>37</sup> and confirmed by subsequently comparing field notes with the literature<sup>14,26,27,31,32,36,37,44,45,53,57,58,61</sup>. Final



#### Key to localities:

- |                        |                     |
|------------------------|---------------------|
| 1 Cerro Duida          | 10 Potaro Plateau □ |
| 2 Quaiquinima          | (see also Fig. 2)   |
| 3 Ayan Tepui           | 11 Parakakatoi      |
| 4 Pararaima Mts (part) | 12 Iwokrama Mts.    |
| 5 Mt. Roraima          | 13 Karanambo        |
| 6 Mt. Twek-quay        | 14 Kanuku Mts.      |
| 7 Alaroo River         | 15 Acari Mts.       |
| 8 Merume Mts           | 16 Maracá           |
| 9 Mt. Ayanganna        |                     |

Figure 1. Relative location of the Potaro Plateau to other localities mentioned in the text.



#### Legend

- 1 lower Potaro River
- 2 upper Potaro River
- 3 Plateau limits (taken at 600 m contour)
- 4 Kaieteur Falls
- 5 National Park, current limits
- 6 Muri-muri Creek
- 7 Anamuri Creek
- 8 Tiger Bay village
- 9 Chenapou village
- 10 Tappa airstrip
- 11 Paramakatoi village
- 12 Mt. Kowa
- 13 Mt. Wokamung
- 14 Mt. Ayanganna

Figure 2. Relative locations of study sites on the Potaro Plateau.

checks on these identifications were made by study of bird skins in the collection of the Academy of Natural Sciences, Philadelphia (ANSP).

Observations were made at the following sites (see Fig. 2): Kaieteur Falls (05°10'N 59°28'W, 500 m; 20–21 June 1998, 26 July and 1–3 August), Muri-muri (05°09'N 59°30'W, 550 m) and Anamuri creeks (05°07'N 59°32'W) (28 July–1 August), Chenapou village (04°59'N 59°34'W, 600 m; 21 June–3 July and 25–27 July), Tiger Bay (04°59'N 59°50'W, 600 m; 21 June–3 July and 25–27 July), Tappa airstrip (04°53'N 59°32'W, 800 m; 6 and 21–23 July) and Mt. Kowa (04°51'N 59°41'W, 1,300 m; 8–20 July) and in transit between these locations.

### Vegetation

Oreographic and altitudinal effects give the plateau a highly varied flora. The vegetation is as follows.

#### Kaieteur Top

An area of white-sand scrub characterised by the terrestrial bromeliad *Brocchinia reducta*, other smaller, carnivorous plants including *Drosera rotundifolia* (Droseraceae), *Genlisea nigrocaulis* and *Utricularia amethystina* (Lentibulariaceae) and

sclerophyllous shrubs such as *Martinella odorata* (Bignoniaceae), *Cyrilla racemosa* (Cyrillidaceae) and *Doliocarpus tetracera* (Delleniaceae), as well as occasional small trees of *Andira grandistipula* and *Ephra jenmanii* (Papilionaceae: Caesalpinoidae).

#### Kaieteur Falls

A mist-laden environment characterised by giant terrestrial bromeliads *Brocchinia micrantha* and small trees of *Distictella elongata* (Bignoniaceae), *Clusia grandiflora* and *Moroubea jenmanii* (Guttiferaceae), and clump wallaba *Dicymbe altsonii* (Papilionaceae: Caesalpinoidae).

#### Chenapou village and surrounding forest

The forest around the village (population c.300) includes *Ocotea radioi*, *Dimorphandra mora*, *Carapa guianensis*, *Ephra* sp., and species of *Parkia*, *Inga* and *Hymenaea* (Fabaceae), as well as *Caryocar nuciferum* (Caryocaraceae). Maximum canopy height is 20–25 m and there is a well-developed understorey of Melastomataceae and Rubiaceae shrubs. Vines are large and frequent, macro-epiphytic cover moderate and consists mostly of Araceae. The village has fruit trees and cassava fields, but the surrounding forest is still largely intact.

#### Tappa airstrip and surrounding forests

The following were common to abundant: *Pithecellobium racemosum* (Papilionaceae: Mimosoideae), *Eschweilera decolorans* (Lecythidaceae) (in valley bottoms), *E. pernetorum* (replaces *E. decolorans* on ridges and higher ground), *Eperua falcata* (Papilionaceae: Caesalpinoidae), *Aspidosperma excelsum* (Apocynaceae), *Arrabidaea nigrescens* (Bignoniaceae) and *Caryocar nuciferum* (Caryocaraceae). Canopy height is 15–20 m. Understorey is sparser than at Chenapou, with some well-developed cane breaks. Epiphyte flora is more diverse, with more ferns and mosses.

#### Mt. Kowa

Twenty-eight species of fruiting tree were identified using van Roosmalen<sup>46</sup>. Atop Mt. Kowa (1,300 m), common tree species included: *Eschweilera odorata* (Lecythidaceae), *Spondias mombin* (Anacardiaceae), *Guarea silvatica* (Meliaceae), *Dioclea macrantha* (Papilionaceae: Papilionoidae), *Catostemma fragrans* (Bombacaceae), *Cheiloclinium* sp. (Celastriaceae). Canopy height is 10–12 m. Epiphyte cover was extensive and rich, covering both boles and limbs, and included many small orchids (notably *Lepanthes* and *Pleurothallis*), epiphytic Ericaceae (including *Cavendishia* and *Psamisia*) and abundant ferns (including Hymenophyllaceae), mosses and lichens. There is an extensive open understorey of melastomes,

Marantaceae and gesneriad shrubs (including *Alloplectus savannarum*). Air is perpetually misty and the mountain often cloud-covered. Along watercourses *Swartzia grandiflora* (Papilionaceae: Papilionoideae) and *Pagamea* aff. *capitata* (Rubiaceae) are locally abundant. In a low-lying area there is a swamp dominated by itare palms *Euterpe* sp. The approach to the summit is via a rubble-filled gorge, dominated by extensive groves of *Heliconia* sp. (Heliconiaceae) and *Phenakospermum* (*guyanense*?) (Strelitziaceae). The steep walls were covered with lithophilous gesneriads (*Nautilocalyx* sp.), piperomias, aroids, ferns and mosses.

Based on the classification of Huber *et al.*<sup>28</sup>, Kaieteur Top's flora would be 'upland scrub savanna', that at Chenapou 'tall/medium evergreen pre- and basi-montane forest', Tappa 'tall/medium lower montane forest', and Mt. Kowa 'low evergreen upper montane forest'.

### Previous ornithological work

Part of the plateau has been a national park since 1923<sup>67</sup>. A combination of protection and the region's remoteness and isolation has left much of the natural vegetation intact<sup>67</sup>. Though some birds (including parrots, Black Curassow *Crax alector*, Grey-winged Trumpeter *Psophia crepitans* and Sungrebe *Heliornis fulica*) are kept locally as pets, the high densities of primates, parrots and cracids attest to low hunting pressure<sup>5,6</sup>. Even the region's Patamona Amerindian people very rarely visit Mt. Kowa. The area has received no ornithological attention. The only previous confirmed scientific study there, a brief botanical visit, was in 1966. Consequently, Mt. Kowa has pristine forest and the birds are confident. As Tate<sup>60</sup> recorded at a similar altitude and habitat on Mt. Roraima, birds under such conditions are generally inquisitive and not wary. Many approached us or could be approached to within a few metres, greatly facilitating identification.

A total of 187 bird species was observed, eight of which are new for Guyana. Details of these, and other species of interest, are presented below. To furnish a more comprehensive list for the Potaro Plateau, we added to our observations the unpublished sight records of S. Lehman (pers. comm. 1999) made in March 1997, and unpublished field data from visits to the Kaieteur area by D. Finch and colleagues (January 1991, September 1993, February, September and November 1994, September 1995, February 1996, April 1997 and April 1998), by C. Perrins (August and October 1959), R. Brown (April 1991), I. D. K. Whiteley (July–August 1991), A. Warren (July 1988, July–August 1969)<sup>65</sup> and birds known to occur there by R. S. Ridgely (pers. comm. 2001). In addition, we compiled information on those species collected on Mt. Ayanganna by A. Thompson in January–April 1960<sup>47,48</sup>, and records for Mt. Ayanganna, Kaieteur

and Paramakatoi in Snyder<sup>58</sup>. The combined total is 334 species. This represents 43% of the 786 species reported from Guyana by Braun *et al.*<sup>11</sup>. The list, the first for the Potaro Plateau, forms Table 1. Order follows Parker *et al.*<sup>39</sup>. Taxonomy and English names follow Ridgely & Tudor<sup>44,45</sup> and Meyer de Schauensee & Phelps<sup>37</sup>, except for parrot taxonomy which follows Juniper & Parr<sup>32</sup>.

### Selected species accounts

#### Grey-bellied Hawk *Accipiter poliogaster*

Two, both near Chenapou village. On 25 July an adult was perched c.25 m up on an exposed bough of a dead tree beside the village compound, and was identified through a telescope at a range of 300 m. Separated from Bicoloured Hawk *A. bicolor* by the presence of white (not rufous) thigh feathers and from Slaty-backed Forest-falcon *Micrastur mirandollei* by its lack of bare yellow facial skin. The second, a juvenile, was observed on 26 July from a canoe at less than 15 m. It was perched 10 m up in a dead tree beside the Potaro River and was identified by the rufous nape and post-ocular area, black malar stripe and strongly black-spotted white belly. Snyder<sup>58</sup> considered it to be 'rare...spottily distributed' in Guyana. Deemed rare by Parker *et al.*<sup>39</sup>, Braun *et al.*<sup>11</sup> considered it probably an austral migrant, typically present in May–September.

#### Harpy Eagle *Harpia harpyja*

An adult observed in flight 10 m above the canopy at Muri-muri Creek (1 August). Distinguished from Crested Eagle *Morphnus guianensis* by its black chest-band and barred wing lining. Interviews with hunters suggested that the species is still relatively common on the plateau and is not hunted. Listed as Near Threatened by BirdLife International<sup>6</sup> and rare by Parker *et al.*<sup>39</sup>, while Braun *et al.*<sup>11</sup> considered it scarce in Guyana.

#### Fiery-shouldered Parakeet *Pyrrhura egregia*

Observed in groups of 5–8 within open scrubby vegetation bordering forest near Tappa airstrip (800 m). They were noisily active among dense stands of shrubs (Solanaceae and Boraginaceae). Our records are well within the range given by Juniper & Parr<sup>32</sup>, who, like Braun *et al.*<sup>11</sup>, consider it to be a fairly common Pantepui endemic. Not seen in similar open habitats around Chenapou and Tiger Bay (c.600 m), consistent with Juniper & Parr<sup>32</sup> who give the lower altitudinal limit for *P. egregia* as 700 m.

#### Red-fan Parrot *Deroptyus accipitrinus*

Known to 400 m<sup>32</sup>, but recorded at Kaieteur Falls (500 m). A small party observed twice in forest adjacent to the falls, and a single individual seen once. This parrot is patchily distributed across its wide range<sup>32</sup>.

Table 1. Bird species known from the Potaro Plateau

## KEY

## Locations (for birds recorded by the authors)

Kai = Kaieteur (Kaieteur Falls, Kaieteur Top, Menzie's Landing and adjacent areas of the upper Potaro River, including Muri-muri and Anamuri Creeks. 'Kaieteur Falls' refers to the falls and to the moist forest on the immediately surrounding cliffs. 'Kaieteur Top' refers to the drier forest and white-sand scrub vegetation types not immediately adjacent to the falls and cliffs.)

Chenapou = forest and agricultural lands around Chenapou and Tiger Bay villages and the stretch of the upper River Potaro between them.

En route = trail through forest between Chenapou and Mt. Kowa, including Tappa airstrip.

Kowa base = in pre-montane forest at the base of Mt. Kowa.

Kowa top = top of Mt. Kowa.

## Habitats

F = forest, Fw = forest streams, S = natural scrub or open areas, U = village/agricultural, W = open water (rivers, marshes, lakes, soaks).

## Frequency

1 = abundant: 100+ records and/or seen many times per day

2 = common: 50–99 records and/or several sightings each day

3 = frequent: 20–49 records and/or one or two sightings each day

4 = occasional: 6–19 records but not seen every day

5 = rare: 1–5 records, few sightings.

U = uncommon (1–4 pairs per km<sup>2</sup>), R = rare (less than one bird/km<sup>2</sup>), C = easily seen during brief periods of field work (>15 birds/km<sup>2</sup>) (after Parker et al.<sup>39</sup>).

## Additional authorities and sites

AT (ay) = A. Thompson (Mt. Ayanganna), listed by Roth<sup>48</sup>.

AW = A. Warren (records from 1968, 1969 and 1971)

B (kt,up) = recorded by R. Brown (unpubl., 1991: Kaieteur Top, upper Potaro River).

CP = records from C. Perrins (pers. comm.) from two-month visit in 1959: (t) = Turkait, (kf) = Kaieteur Falls, (a) = Mt Aladaima (near Chenapou), (e) = Echerak.

DF (kf) = records from ten short visits to Kaieteur Falls by D. Finch (pers. comm.) and colleagues.

DS (ay)\* = record from Ayanganna credited by Snyder<sup>58</sup> to the Thompson-Williams Expedition of 1960, but not on Roth's<sup>48</sup> list of the expedition's specimens.

DS (kf) = reported by Snyder<sup>58</sup> (Kaieteur Falls).

DS (pk) = reported by Snyder<sup>58</sup> (Paramakatoi).

DS (sr-ay)\* = record from Sukabi River credited by Snyder<sup>58</sup> to the Thompson-Williams Expedition of 1960, but not on Roth's<sup>48</sup> list of the expedition's specimens.

RR (kf) = records from Kaieteur Falls, R. S. Ridgely (pers. comm.).

SL (kt) = records from Kaieteur Top, S. Lehman (pers. comm.).

TH = T. Henkel: (ir) = Ireng River, (kf) = Kaieteur Falls.

W (kt) = records of Mr. Whitelesey (unpubl., 1991; Kaieteur Top).

WE = Wilderness Explorers (collation of records from multiple trips to Kaieteur since the early 1990s).

## Notes

1 = reported in interviews by the villagers of Chenapou. 2 = species reported by Roth (1960b), but not reported from Guyana by Parker et al.<sup>39</sup> and status of record currently unclear. 3 = as *Glyphorhynchus cuneatus*. 4 = as *Synallaxis poliophrys*. 5 = as *Lathria cinera*. 6 = *Legatus albicollis* successor.

Scientific name	English name	Kai	Chenapou	en route	Kowa Base	Kowa Top	Other records
<i>Tinamus major</i>	Great Tinamou						AW, CP (t), CP (a)
<i>Crypturellus soui</i>	Little Tinamou						
<i>Phalacrocorax brasilianus</i>	Neotropic Cormorant	-	W2	-	-	-	
<i>Anhinga anhinga</i>	Anhinga	-	W2	-	-	-	
<i>Tigrisoma fasciatum</i>	Fasciated Tiger-heron						TH (ir)
<i>Tigrisoma</i> sp.	juv. tiger-heron sp.						CP (c) I
<i>Ardeola ibis</i>	Cattle Egret						TH (kf), WE
<i>Ardea alba</i>	Great Egret						DF
<i>Butorides striatus</i>	Striated Heron	-	W3	-	-	-	CP (kt-e), TH (kf), WE
<i>Egretta caerulea</i>	Little Blue Heron	-	W4	-	-	-	
<i>Mesembrinibis cayennensis</i>	Green Ibis	-	W5	-	-	-	CP (kt-e), DF
<i>Cathartes aura</i>	Turkey Vulture						AW, DF
<i>Cathartes melambrotus</i>	Greater Yellow-headed Vulture	F3	F3			F5	DF
<i>Coragyps atratus</i>	Black Vulture						TH (kf), W
<i>Sarcoramphus papa</i>	King Vulture	-	-	F5	-	-	AW, DF, TH (ir)

<i>Pandion haliaetus</i>	Osprey	-	F5	-	-	-	TH (ir)
<i>Leptodon cayanensis</i>	Grey-headed Kite						DF
<i>Elanoides forficatus</i>	Swallow-tailed Kite	F4	F3	-	F4	F2	
<i>Gampsonyx swainsonii</i>	Pearl Kite						DF, WE, W
<i>Rostrhamus sociabilis</i>	Snail Kite	-	W4	W5	-	-	
<i>Ictinia plumbea</i>	Plumbeous Kite	-	F5	-	-	-	
<i>Accipiter bicolor</i>	Bicoloured Hawk	-	F5	-	-	-	
<i>Accipiter poliogaster</i>	Grey-bellied Hawk	-	F5	-	-	-	
<i>Leucopternis albicollis</i>	White Hawk	-	-	-	F5	F5	AT, DF
<i>Leucopternis melanops?</i>	Black-faced Hawk						CP (c)
<i>Buteogallus albicaudatus</i>	White-tailed Hawk						AW, DF
<i>Buteogallus urubitinga</i>	Great Black-hawk						AT, DF
<i>Buteo brachyurus</i>	Short-tailed Hawk						TH (ir)
<i>Buteo magnirostris</i>	Roadside Hawk	-	-	F5	-	-	DF, TH (kf), WE
<i>Asturina nitida</i>	Grey Hawk	-	F5	-	-	-	TH (ir)
<i>Morphnus guianensis</i>	Crested Eagle						DF
<i>Harpia harpyja</i>	Harpy Eagle	F5	-	-	-	-	AW
<i>Caracara plancus</i>	Crested Caracara	-	-	-	-	-	
<i>Spizaetus ornatus</i>	Ornate Hawk-eagle	-	-	-	F5	F5	
<i>Daptrius americanus</i>	Red-throated Caracara	-	F4	F3	F3	F3	AW, CP (kf), DF, W
<i>Milvago chimachima</i>	Yellow-headed Caracara						DF, TH (ir)
<i>Micrastur gilvicolis?</i>	Lined Forest-falcon						CP (kf)
<i>Micrastur semitorquatus</i>	Collared Forest-falcon						TH (ir)
<i>Falco deiroleucus</i>	Orange-breasted Falcon						DF, RR
<i>Falco femoralis</i>	Aplomado Falcon	W5	-	-	-	-	TH (ir)
<i>Falco rufigularis</i>	Bat Falcon	-	F4	-	-	-	DF, SL
<i>Falco sparverius</i>	American Kestrel						TH (ir)
<i>Ortalis motmot</i>	Little Chachalaca	S5	-	-	-	-	AT
<i>Penelope jacquacu</i>	Spix's Guan						AW
<i>Penelope marail</i>	Marail Guan						W, WE
<i>Penelope sp.</i>	Spix's Guan/Marail Guan	-	-	-	F4	F4	
<i>Crax alector</i>	Black Curassow	-	-	-	-	F4	AW
<i>Colinus cristatus</i>	Crested Bobwhite						SL, TH (ir)
<i>Odontophorus guianensis</i>	Marbled Wood-quail	-	-	-	F5	-	DF, DS (kf)
<i>Psophia crepitans</i>	Grey-winged Trumpeter	-	F5	F5	-	-	CP (a, kf)
<i>Aramides cajanea</i>	Grey-necked Wood-rail						WE
<i>Heliornis fulica</i>	Sungrebe	-	W5	-	-	-	CP (e-c)
<i>Hoploxypterus cayanus</i>	Pied Lapwing						DF
<i>Actitis maculata</i>	Spotted Sandpiper						DF, TH (ir)
<i>Calidris minuta</i>	Least Sandpiper						B
<i>Columba cayennensis</i>	Pale-vented Pigeon						DF, TH (kf), W
<i>Columbina passerina</i>	Common Ground-dove	S3	-	-	-	-	AW, DF, TH (ir)
<i>Columbina talpacoti</i>	Ruddy Ground-dove	-	U4	-	-	-	
<i>Leptotila rufaxilla</i>	Grey-fronted Dove	-	-	-	-	F5	AT2, CP (kf)
<i>Leptotila verreauxi</i>	White-tipped Dove						DF
<i>Ara ararauna</i>	Blue-and-yellow Macaw	-	-	-	-	-	WE
<i>Ara chloroptera</i>	Red-and-green Macaw	F3	F3	F4	-	-	B, CP (c), DF, W
<i>Ara macao</i>	Scarlet Macaw						AW
<i>Aratinga pertinax</i>	Brown-throated Parakeet						AT, TH (kf), W
<i>Pyrrhura egregia</i>	Fiery-shouldered Parakeet	-	-	S2	-	-	TH (ir)
<i>Forpus passerinus</i>	Green-rumped Parrotlet	F3	U3	-	-	-	
<i>Brotogeris chrysopterus</i>	Golden-winged Parakeet	-	-	F4	-	-	TH (ir)
<i>Nannopsittaca panychlora</i>	Tepui Parrotlet	-	-	-	-	F2	
<i>Pionites melanocephala</i>	Black-headed Parrot	F5	-	-	-	-	
<i>Pionopsitta caica</i>	Caica Parrot	-	F5	-	-	-	B
<i>Pionus fuscus</i>	Dusky Parrot	-	F5	-	-	-	
<i>Pionus menstruus</i>	Blue-headed Parrot	-	F3	-	-	-	AT
<i>Pionus sordidus</i>	Red-billed Parrot						TH (ir)
<i>Amazona amazonica</i>	Orange-winged Parrot	-	F2	-	-	-	TH (ir)
<i>Amazona dufresniana</i>	Blue-cheeked Parrot						CP (c, kf), DS (kf)
<i>Amazona ochrocephala</i>	Yellow-headed Parrot	-	F3	-	-	-	
<i>Derophtys accipitrinus</i>	Red-fan Parrot	F5	-	-	-	-	
<i>Crotophaga ani</i>	Smooth-billed Ani	-	U4	-	-	-	
<i>Playa cayana</i>	Squirrel Cuckoo	-	F5	-	F5	F5	AT, CP (t), DF
<i>Playa melanogaster</i>	Black-bellied Cuckoo	F5	-	-	-	-	DF, W
<i>Playa minuta</i>	Little Cuckoo	-	-	-	F5	F5	
<i>Steatornis caripensis</i>	Oilbird						DS (kf)
<i>Nyctibius griseus</i>	Common Potoo	-	-	-	-	F5	
<i>Lurocalis semitorquatus</i>	Short-tailed Nighthawk						AW
<i>Caprimulgus cayennensis</i>	White-tailed Nightjar						DF

<i>Caprimulgus nigrescens</i>	Blackish Nightjar						CP(c), WE
<i>Cypseloides cryptus</i>	White-chinned Swift	W2	W3	-	-	-	DF, DS (kf)
<i>Cypseloides phelpsi</i>	Tepui Swift	W4	-	-	-	W4	TH (ir)
<i>Streptoprocne zonaris</i>	White-collared Swift	W1	-	-	-	-	DF, SL, TH (ir)
<i>Chaetura andrei</i>	Ashy-tailed Swift						TH (ir)
<i>Chaetura brachyura</i>	Short-tailed Swift						CP (t), TH (ir, kf), W
<i>Chaetura cinereiventris</i>	Grey-rumped Swift						TH (ir)
<i>Chaetura spinicauda</i>	Band-rumped Swift	W2	-	-	-	-	
<i>Aeronautes montivagus</i>	White-tipped Swift	W1	-	-	-	-	DF, TH (kf), WE
<i>Tachornis squamata</i>	Fork-tailed Palm-swift						AW, TH (ir, kf), W
<i>Panyptila cayennensis</i>	Lesser Swallow-tailed Swift						CP (kf), DF
<i>Doryfera johannae</i>	Blue-fronted Lancebill	F4	-	-	-	-	AW, CP (c)
<i>Glaucis hirsute</i>	Rufous-breasted Hermit	F5	-	-	-	-	
<i>Threnetes leucurus</i>	Pale-tailed Barbthroat						AW
<i>Phaethornis augsti</i>	Sooty-capped Hermit	-	F4	-	-	-	
<i>Phaethornis bourcierii</i>	Straight-billed Hermit	-	-	-	F4	-	AT, CP (a)
<i>Phaethornis longuemareus</i>	Little Hermit						AW
<i>Phaethornis ruber</i>	Reddish Hermit	F5	-	-	-	-	CP(c, kf, t), DF, TH (ir)
<i>Phaethornis squolidus</i>	Dusky-throated Hermit						TH (ir)
<i>Phaethornis superciliosus</i>	Long-tailed Hermit	F4	F2	-	F2	F2	AT, B, CP (t), DF
<i>Campylopterus hyperythrus</i>	Rufous-breasted Sabrewing	-	-	-	-	F5	
<i>Campylopterus largipennis</i>	Grey-breasted Sabrewing	-	F5	-	-	F5	AW, CP (kf), WE
<i>Florisuga mellivora</i>	White-necked Jacobin						DF, TH (ir)
<i>Colibri coruscans</i>	Sparkling Violetear	F3	-	-	-	-	
<i>Chrysolampis mosquitus</i>	Ruby-topaz Hummingbird						TH (ir)
<i>Lophornis ornata?</i>	Tufted Coquette						CP(c)
<i>Discosura longicauda</i>	Racket-tailed Coquette						TH (ir)
<i>Chlorestes notatus</i>	Blue-chinned Sapphire	-	-	-	-	-	
<i>Chlorostilbon mellisugus</i>	Blue-tailed Emerald	-	-	-	F4	-	
<i>Thalurania furcata</i>	Fork-tailed Woodnymph	F5	F3	-	F5	F3	AW, CP (t), DF, TH (ir)
<i>Hylocharis cyanus</i>	White-chinned Sapphire						CP (c), TH (ir), WE
<i>Polytmus guainumbi</i>	White-tailed Goldenthrout	-	F5	-	-	-	
<i>Polytmus milleri</i>	Tepui Goldenthrout	-	-	-	-	F5	
<i>Polytmus theresiae</i>	Green-tailed Goldenthrout						DF
<i>Amazilia brevirostris</i>	White-chested Emerald	F5	-	-	-	-	DS (pk)
<i>Amazilia fimbriata</i>	Glittering-throated Emerald	F3	F3	-	-	-	DF, DS (pk), TH (kf)
<i>Amazilia leucogaster</i>	Plain-bellied Hummingbird						DS (pk)
<i>Topaza pella</i>	Crimson Topaz						AW00
<i>Heliodoxa xanthogonyx</i>	Velvet-browed Brilliant	-	-	-	-	F3	AT, TH (ir)
<i>Heliotryx aurita</i>	Black-crowned Fairy						AT, B, CP (t), DF
<i>Calliphlox amethystina</i>	Amethyst Woodstar	-	U5	-	-	F5	
<i>Trogon personatus</i>	Masked Trogon	-	-	-	F5	F5	AT
<i>Trogon rufus</i>	Black-throated Trogon						AT
<i>Trogon violaceus</i>	Violaceous Trogon	F5	F4	-	F4	-	
<i>Trogon viridis</i>	White-tailed Trogon	F5	-	-	-	F5	DF, TH (ir)
<i>Ceryle torquata</i>	Ringed Kingfisher	W3	W2	-	-	-	CP (e), TH (ir)
<i>Chloroceryle aenea</i>	American Pygmy Kingfisher	W5	W5	-	-	-	
<i>Chloroceryle amazona</i>	Amazon Kingfisher	W3	W3	-	-	-	AT, CP (e), TH (ir)
<i>Chloroceryle americana</i>	Green Kingfisher	W3	W3	-	-	-	CP (e), TH (ir)
<i>Chloroceryle inda</i>	Green-and-rufous Kingfisher						AW, CP (e-c)
<i>Momotus momota</i>	Blue-crowned Motmot						AT, TH (ir)
<i>Galbula albirostris</i>	Yellow-billed Jacamar	W5	-	-	-	-	
<i>Galbula dea</i>	Paradise Jacamar	F5	-	-	-	-	
<i>Jacamerops aurea</i>	Great Jacamar						TH (ir)
<i>Bucco tamatia</i>	Spotted Puffbird	-	-	-	-	F5	
<i>Monasa atra</i>	Black Nunbird						CP (c)
<i>Chelidoptera tenebrosa</i>	Swallow-winged Puffbird						AY, CP (kf), TH (ir)
<i>Capito niger</i>	Black-spotted Barbet						AT
<i>Aulacorhynchus derbianus</i>	Chestnut-tipped Toucanet	-	F4	-	-	-	
<i>Pteroglossus aracari</i>	Black-necked Aracari	-	F5	-	-	-	TH (ir)
<i>Pteroglossus viridis</i>	Green Aracari						AT (ay), AW
<i>Selenidera culik</i>	Guianan Toucanet						AT
<i>Ramphastos tucanus</i>	White-throated Toucan	F3	F3	-	-	-	AT, DF, TH (ir)
<i>Ramphastos vitellinus</i>	Channel-billed Toucan	-	F4	-	-	-	CP (e), DF, TH (ir)
<i>Picumnus exilis</i>	Golden-spangled Piculet	-	-	-	-	F5	DS (pk)
<i>Melanerpes cruentatus</i>	Yellow-tufted Woodpecker	-	-	-	-	F5	AT, TH (ir)
<i>Veniliornis passerinus</i>	Little Woodpecker						TH (ir)
<i>Piculus chrysochloros?</i>	Golden-green Woodpecker	-	F5	-	-	-	
<i>Piculus rubiginosus</i>	Golden-olive Woodpecker	F4	F4	-	F4	F3	DS (pk)
<i>Dryocopus lineatus</i>	Lineated Woodpecker	-	F5	-	-	-	AT, TH (ir)

<i>Celeus elegans</i>	Chestnut Woodpecker							AW, TH (ir)
<i>Celeus undatus</i>	Waved Woodpecker							W, WE
<i>Campephilus rubricollis</i>	Red-necked Woodpecker							AT, TH (ir)
<i>Dendrocincla fuliginosa</i>	Plain-brown Woodcreeper	-	-	-	F3	F3		DS (kf)
<i>Sittasomus griseicapillus</i>	Olivaceous Woodcreeper							TH (ir)
<i>Glyphorhynchus spirurus</i>	Wedge-billed Woodcreeper							AT3, CP (a, kf, t)
<i>Xiphocolaptes promeropirhynchus</i>	Strong-billed Woodcreeper							TH (ir)
<i>Xiphorhynchus guttatus</i>	Buff-throated Woodcreeper	-	-	-	-	F5		CP (kf)
<i>Xiphorhynchus pardalotus</i>	Chestnut-rumped Woodcreeper							AT
<i>Synallaxis albescens</i>	Pale-breasted Spinetail							TH (ir)
<i>Synallaxis gujanensis</i>	Plain-crowned Spinetail							DF
<i>Synallaxis rutilans</i>	Ruddy Spinetail							TH (ir)
<i>Cranioleuca demissa</i>	Tepui Spinetail	-	-	-	F3	F3		
<i>Roraimia adusta</i>	Roraiman Barbtail							DS (ay) * acc.
<i>Philydor erythrocercus</i>	Rufous-rumped Foliage-gleaner	-	-	-		F4		
<i>Philydor ruficaudatus</i>	Rufous-tailed Foliage-gleaner							TH (ir)
<i>Automolus ochrolaemus</i>	Buff-throated Foliage-gleaner	-	-	-	-	F5		
<i>Automolus roraimae</i>	White-throated Foliage-gleaner	-	U5	-	-	F5		
<i>Xenops minutus</i>	Plain Xenops	-	-	-	F3	F3		AW
<i>Sclerurus caudacutus</i>	Black-tailed Leaf-tosser							AT
<i>Sclerurus mexicanus</i>	Tawny-throated Leaf-tosser	-	-	-	-	Fw4		AT
<i>Sclerurus rufifigularis</i>	Short-billed Leaf-tosser	-	F5	-	-	-		
<i>Lochmias nematura</i>	Sharp-tailed Streamcreeper	-	-	-	-	Fw4		
<i>Taraba major</i>	Great Antshrike	-	-	-	-	F5		AT
<i>Thamnophilus doliatus</i>	Barred Antshrike	F4	-	-	-	-		
<i>Thamnophilus murinus</i>	Mouse-coloured Antshrike							AT, TH (ir)
<i>Thamnophilus punctatus</i>	Eastern Slaty-antshrike	-	F4	-	-	-		
<i>Myrmotherula axillaris</i>	White-flanked Antwren							CP (a)
<i>Myrmotherula behni</i>	Plain-winged Antwren							TH (ir)
<i>Myrmotherula brachyura</i>	Pygmy Antwren							DF
<i>Myrmotherula menetriesii</i>	Grey Antwren	-	F3	-	-	-		TH (ir), WE
<i>Myrmotherula surinamensis</i>	Guianan Streaked-antwren							DF
<i>Conopophaga aurita</i>	Chestnut-belted Gnateater					F5		
<i>Herpsilochmus roraimae?</i>	(Roraiman) Antwren	-	-	-	-	F5		
<i>Formicivora grisea</i>	White-fringed Antwren							TH (ir)
<i>Cercocacra tyrannina</i>	Dusky Antbird	-	-	-	-	F5		AT, CP (t)
<i>Myrmoborus leucophrys</i>	White-browed Antbird	-	-	-	-	Fw5		
<i>Hypocnemis cantator</i>	Warbling Antbird	-	-	-	-	F5		AT, CP (e), TH (ir)
<i>Scateria naevia</i>	Silvered Antbird							CP (a)
<i>Schistocichla leucostigma</i>	Spot-winged Antbird	F4	F4	-	-	-		AT, DF
<i>Pithys albifrons</i>	White-plumed Antbird	-	-	-	-	F5		AT, CP (kf, t)
<i>Gymnopithys rufigula</i>	Rufous-throated Antbird	-	F5	-	-	-		
<i>Hylophylax poecilinota</i>	Scale-backed Antbird							AT
<i>Formicarius colma</i>	Rufous-capped Antthrush							CP (t)
<i>Chamaeza campanisona</i>	Short-tailed Antthrush	-	-	-	-	F5		AT
<i>Myrmornis torquata</i>	Wing-banded Antbird							AT
<i>Myrmothera simplex</i>	Tepui Antpitta	-	-	-	-	F5		
<i>Zimmerius gracilipes</i>	Slender-footed Tyrannulet							TH (ir)
<i>Ornithion inerne</i>	White-lored Tyrannulet							TH (ir)
<i>Elaenia cristata</i>	Plain-crested Elaenia							DS (pk), TH (ir)
<i>Elaenia dayi</i>	Great Elaenia							TH (ir)
<i>Elaenia flavogaster</i>	Yellow-bellied Elaenia	-	F4	-	-	-		CP (kf)
<i>Elaenia ruficeps</i>	Rufous-crowned Elaenia	-	F5	-	-	F5		B, DF
<i>Mionectes macconnelli</i>	McConnell's Flycatcher							CP (a), DF
<i>Mionectes oleagineus</i>	Ochre-bellied Flycatcher							DF
<i>Lophotriccus galeatus</i>	Helmeted Pygmy-tyrant							TH (ir)
<i>Atalotriccus pilaris</i>	Pale-eyed Pygmy-tyrant							TH (ir)
<i>Todirostrum sylvia</i>	Slate-headed Tody-flycatcher	F5	-	-	-	-		
<i>Tolmomyias poliocephalus</i>	Grey-crowned Flycatcher	F4	F4	-	-	-		DS (ay), TH (ir)
<i>Platyrinchus coronatus</i>	Golden-crowned Spadebill							TH (ir)
<i>Platyrinchus mystaceus</i>	White-throated Spadebill							AT
<i>Terentriccus erythrurus</i>	Ruddy-tailed Flycatcher							CP (kf)
<i>Myiobius barbatus</i>	Sulphur-rumped Flycatcher	F5	-	-	-	-		
<i>Contopus fumigatus</i>	Smoke-coloured Pewee							TH (ir)
<i>Knipolegus poecilurus</i>	Rufous-tailed Tyrant							CP (kf)
<i>Fluvicola pica</i>	Pied Water-tyrant	-	W5	-	-	-		
<i>Attila cinnamomeus</i>	Cinnamon Attila							TH (ir)
<i>Rhytipterna simplex</i>	Greyish Mourner							TH (ir)
<i>Satrapa icterophrys</i>	Yellow-browed Tyrant							CP (kf)
<i>Hirundinea ferruginea</i>	Cliff Flycatcher							B, CP, DF, WE

<i>Myiarchus tuberculifer</i>	Dusky-capped Flycatcher	S3	U3	-	-	-	DF
<i>Pitangus sulphuratus</i>	Great Kiskadee	U3	U3	-	-	-	
<i>Megarynchus pitangua</i>	Boat-billed Flycatcher						AT, TH (ir)
<i>Conopias parva</i>	Yellow-throated Flycatcher	S3	U3	-	-	-	CP(c), DF, DS (pk)
<i>Legatus leucophaeus</i>	Piratic Flycatcher						AT6
<i>Myiozetetes cayanensis</i>	Rusty-margined Flycatcher	-	U4	-	-	-	DF
<i>Myiozetetes similis</i>	Social Flycatcher						TH (ir)
<i>Tyrannus melancholicus</i>	Tropical Kingbird	-	U2	-	-	-	CP, DF, TH (ir, kf)
<i>Tyrannus savana</i>	Fork-tailed Flycatcher						TH (kf), WE
<i>Pachyrhamphus minor</i>	Pink-throated Becard	-	F5	-	-	-	
<i>Tityra cayana</i>	Black-crowned Tityra						AT, CP (c), DF
<i>Schiffornis turdinus</i>	Thrush-like Schiffornis	F3	F3	F3	F3	F3	
<i>Chloropipo uniformis</i>	Olive Manakin						AT
<i>Corapipo gutturalis</i>	White-throated Manakin						AT
<i>Chiroxiphia pareola</i>	Blue-backed Manakin						DS (pk)
<i>Pipra cornuta</i>	Scarlet-horned Manakin	-	-	-	-	F3	
<i>Pipra erythrocephala</i>	Golden-headed Manakin	-	-	-	-	F5	AT, CP (c)
<i>Pipra pipra</i>	White-crowned Manakin						AT, AW, CP (t), DF
<i>Pipra savvissima</i>	Orange-bellied Manakin	F5	-	-	-	F4	AT, CP (kf)
<i>Pipreola whitelyi</i>	Red-banded Fruiteater	-	-	-	-	Fw5	
<i>Lipaugus streptophorus</i>	Rose-collared Piha	F2	F2	F2	F2	F2	
<i>Lipaugus vociferans</i>	Screaming Piha						AT5, CP, TH (ir)
<i>Cotinga cayana</i>	Spangled Cotinga	-	-	-	-	F5	AT, DF
<i>Xipholena punicea</i>	Pompadour Cotinga						AT
<i>Perissocephalus tricolor</i>	Capuchinbird	-	-	-	F5	-	TH (ir)
<i>Procnias alba</i>	White Bellbird						AT, SL
<i>Procnias averano</i>	Bearded Bellbird	-	F4	F3	F3	F3	
<i>Rupicola rupicola</i>	Guianan Cock-of-the-rock	F5	-	-	-	F3	AT, AW, B, CP (a), DF, SL
<i>Tachycineta albiventer</i>	White-winged Swallow	W2	W2	-	-	-	WE
<i>Notiochelidon cyanoleuca</i>	Blue-and-white Swallow	W4	W4	-	-	-	CP (kf)
<i>Atticora fasciata</i>	White-banded Swallow	W4	W4	-	-	-	AT, B, CP (kf)
<i>Stelgidopteryx ruficollis</i>	Southern Rough-winged Swallow						TH (ir, kf), WE
<i>Hirundo rustica</i>	Barn Swallow						CP (kf), DF, W
<i>Thryothorus coraya</i>	Coraya Wren	-	-	-	-	F4	AT
<i>Tragodytes aedon</i>	House Wren	-	U5	-	-	-	
<i>Tragodytes rufulus</i>	Tepui Wren	-	-	-	-	F5	
<i>Henicorhina leucosticta</i>	White-breasted Wood-wren						CP (kf), DF
<i>Cyborhinus aradus</i>	Musician Wren						AT, CP (a)
<i>Microcerculus ustulatus</i>	Flutist Wren	-	-	-	F3	F3	
<i>Mimus gilvus</i>	Tropical Mockingbird	-	U5	-	-	F5	TH (ir, kf), WE
<i>Turdus albicollis</i>	White-throated Thrush						AT, CP (a)
<i>Turdus fumigatus</i>	Cocoa Thrush	-	F4	-	-	F4	
<i>Turdus ignobilis</i>	Black-billed Thrush						DS (pk)
<i>Turdus leucomelas</i>	Pale-breasted Thrush	-	F4	-	-	F4	
<i>Turdus olivater</i>	Black-hooded Thrush	-	F5	-	-	-	
<i>Zonotrichia capensis</i>	Rufous-collared Sparrow						AW, TH (ir)
<i>Cyanocompsa cyanoides</i>	Blue-black Grosbeak						TH (ir)
<i>Ramphocaelus melanurus</i>	Long-billed Gnatwren						DF
<i>Volatinia jacarina</i>	Blue-black Grassquit	U5	-	-	-	-	TH (ir)
<i>Sporophila bouvronides</i>	Lesson's Seedeater	-	U2	U2	-	-	CP (kf)
<i>Sporophila intermedia</i>	Grey Seedeater						CP (kf)
<i>Sporophila nigricollis</i>	Yellow-bellied Seedeater	-	-	F3	-	-	
<i>Sporophila plumbea</i>	Plumbeous Seedeater	-	U5	-	-	-	
<i>Paroaria gularis</i>	Red-capped Cardinal	-	-	-	-	-	CP (t), W
<i>Arremon taciturnus</i>	Pectoral Sparrow						AT, TH (ir)
<i>Caryothraustes canadensis</i>	Yellow-green Grosbeak	-	F5	-	-	-	AT, CP (t), TH (ir)
<i>Schistochlamys melanopsis</i>	Black-faced Tanager						TH (ir)
<i>Hemithraupis flavicollis</i>	Yellow-backed Tanager						DS (sr-ay) *acc.
<i>Nemosia pileata</i>	Hooded Tanager	U3	U3				DS (pk), TH(ir)
<i>Mitrospingus oleagineus</i>	Olive-backed Tanager	F2	F2	-	F2	F2	AT
<i>Eucometis penicillata</i>	Grey-headed Tanager	F5	-	-	-	-	
<i>Lanio fulvus</i>	Fulvous Shrike-tanager	-	-	-	F5	-	AT
<i>Tachyphonus luctuosus</i>	White-shouldered Tanager						DS (pk)
<i>Tachyphonus phoenicius</i>	Red-shouldered Tanager	F5	-	-	-	-	DF, RR
<i>Tachyphonus rufus</i>	White-lined Tanager						CP (kf), TH (ir)
<i>Tachyphonus surinamus</i>	Fulvous-crested Tanager	-	F4	-	-	-	CP (t), DF
<i>Piranga flava</i>	Hepatic Tanager				F5	-	TH (ir)
<i>Ramphocelus carbo</i>	Silver-beaked Tanager	S3	U2	U3	F3	F3	CP (t), DF, TH (ir, kf)
<i>Thraupis episcopus</i>	Blue-grey Tanager	S3	U3	U4	F3	F3	CP (t), DF, WE
<i>Thraupis palmarum</i>	Palm Tanager	-	U3	U4	F4	F4	AW, CP (c, t), DF



<i>Euphonia cayennensis</i>	Golden-sided Euphonia					DF
<i>Euphonia chlorotica</i>	Purple-throated Euphonia					DF
<i>Euphonia finschi</i>	Finsch's Euphonia					DS (pk), TH (ir)
<i>Euphonia minuta</i>	White-vented Euphonia					DS (pk)
<i>Euphonia plumbea</i>	Plumbeous Euphonia					CP (kf), DF
<i>Euphonia violacea</i>	Violaceous Euphonia					CP (t)
<i>Euphonia xanthogaster</i>	Orange-bellied Euphonia	-	U5	-	-	-
<i>Tangara cayana</i>	Burnished-buff Tanager	-	U3	-	-	F4 AT, DF, W
<i>Tangara chilensis</i>	Paradise Tanager					AT, AW CP (c), TH (ir)
<i>Tangara gyrola</i>	Bay-headed Tanager	-	U3	U4		F3 AT, DS (pk), TH (ir)
<i>Tangara punctata</i>	Spotted Tanager					DS (ay) * acc., TH (ir)
<i>Tangara vella</i>	Opal-rumped Tanager					CP (kf)
<i>Dacnis cayana</i>	Blue Dacnis	-	U5	-	-	F5 AT, CP (kf), DF
<i>Chlorophanes spiza</i>	Green Honeycreeper	-	U5	-	-	- AT, CP (t)
<i>Cyanerpes caeruleus</i>	Purple Honeycreeper					AT, DF, W
<i>Cyanerpes cyaneus</i>	Red-legged Honeycreeper					AT, DF, TH (ir)
<i>Diglossa major</i>	Greater Flowerpiercer	-	-	-	F5	-
<i>Tersina viridis</i>	Swallow Tanager	F5	-	-	-	-
<i>Dendroica striata</i>	Blackpoll Warbler					DS (pk)
<i>Myioborus castaneocapillus</i>	Tepui Redstart	-	-	-	F5	F3
<i>Myioborus miniatus</i>	Slate-throated Redstart	-	U3	-	F5	-
<i>Coereba flaveola</i>	Bananaquit					CP (c, kf), DF
<i>Phaeothlypis rivularis</i>	River Warbler	-	Fw5	-	-	Fw4, P5 TH (ir)
<i>Cyclarhis gujanensis</i>	Rufous-browed Peppershrike					DF
<i>Hylophilus muscicapinus</i>	Buff-cheeked Greenlet	-	F4	-	F4	-
<i>Hylophilus ochraceiceps</i>	Tawny-crowned Greenlet	-	-	-	F5	-
<i>Hylophilus sclateri</i>	Tepui Greenlet	-	-	-	-	F4
<i>Hylophilus thoracicus</i>	Lemon-chested Greenlet	-	F4	-	-	-
<i>Icterus chrysoccephalus</i>	Moriche Oriole	-	U5	-	-	-
<i>Icterus nigrogularis</i>	Yellow Oriole	-	F4	-	-	-
<i>Psarocolius decumanus</i>	Crested Oropendola	-	F5	-	-	-
<i>Psarocolius viridis</i>	Green Oropendola	-	F4	-	-	-
<i>Cacicus cela</i>	Yellow-rumped Cacique	-	F4	-	-	F4 TH (ir)
<i>Cacicus haemorrhous</i>	Red-rumped Cacique	-	F4	-	-	F4 B, DF, CP
<i>Gymnomystax mexicanus</i>	Oriole Blackbird	-	F4	-	-	-
<i>Macroagelaius imthurni</i>	Tepui Mountain Grackle	-	-	-	-	F3
<i>Quiscalus lugubris</i>	Carib Grackle	-	F5	-	-	-
<i>Carduelis megallanica</i>	Hooded Siskin					TH (ir)
<i>Cyanocorax cayanus</i>	Cayenne Jay	-	F4	-	-	F4 AT, B, CP (a, kf), DF

### Tepui Swift *Cypseloides phelpsi*

Pantepui endemic<sup>11,14,39</sup> observed at Kaieteur Falls, where it was a rare but regular member of large mixed flocks of swifts present at dawn and dusk. The only similar species is Chestnut-collared Swift *C. rutilus*, which does not occur in the Pantepui<sup>14</sup>, making the orange-red nuchal collar and foreneck of adult *C. phelpsi* a characteristic field mark in the Potaro area. In Guyana, previously recorded only in the Merume Mountains to the north<sup>13,14</sup>. Considered quite scarce by Chantler & Driessens<sup>14</sup>, who note that it always nests close to water.

### White-chinned Swift *Cypseloides cryptus*

Also recorded at Kaieteur Falls, where it presumably roosts. Chantler & Driessens<sup>14</sup> consider *C. cryptus* one of the rarest Neotropical swifts and note its 'preference for mountainous areas with gorges and waterfalls behind or beside which it nests'. Distinguished from *C. phelpsi* by its much squarer (unforked) tail, darker head and pale chin<sup>14</sup>. Close observations at the lip of the falls permitted good views of these characters. Known from only two published localities in Guyana: a single specimen collected at Kaieteur Falls<sup>58</sup> and sightings from

Nappi Mountain in the western Kanukus<sup>38</sup>. R. S. Ridgely and D. Agro also observed it at Mabura Hill in August 1994 (R. S. Ridgely pers. comm. 2001).

### White-tipped Swift *Aeronautes montivagus*

Numerous at Kaieteur Falls, roosting with *Streptoprocne zonaris* and *Cypseloides* swifts behind the falls. Identified by the unique white tail tips in males and large white flank tufts of both sexes<sup>14</sup>. Patchily distributed, Kaieteur Falls does not appear on the distribution map in Chantler & Driessens<sup>14</sup>, nor is Guyana included within its range there. Not listed by Snyder<sup>58</sup>, but recorded in the Kanuku Mountains, 220 km to the south, in February 1993<sup>38</sup>, and included on the Guyana list compiled by Wilderness Explorers<sup>66</sup> for Kaieteur Falls and the lowland plains at Karanambo. Braun *et al.*<sup>11</sup> note sight records and that it is locally fairly common.

### Sparkling Violetear *Colibri coruscans*

Individuals were observed on narrow branches of overhanging vegetation at Muri-muri and Anamuri Creeks (31 July–1 August). Clear views were obtained in good light at distances of less than 5 m. Virtually unmistakable due to its size, other large

green hummingbirds of the region (e.g. Straight-billed Hermit *Phaethornis bourcierii*, Long-tailed Hermit *P. superciliosus*, Fork-tailed Woodnymph *Thalurania furcata*, White-necked Jacobin *Florisuga mellivora* or Velvet-browed Brilliant *Heliodoxa xanthogonys*) were eliminated by the violet chin and malar to ear-covert area and deep blue-violet patch on the upper belly, the shape and pattern of the blue-greenish tail and slightly decurved dark bill. Parker *et al.*<sup>39</sup> consider *C. coruscans* a highland form that generally occurs at 1,300–3,600 m, only occasionally as low as 600 m. Not previously recorded in Guyana<sup>39,58</sup>, with the exception of a mention for east Guyana in Schuchmann<sup>51</sup> (which R. S. Ridgely pers. comm. 2001 considers may be in error, as west Guyana, at least, appears more likely), but known from several Venezuelan tepuis, including Cerro Guaiquinima in neighbouring Bolívar<sup>37</sup> and from Venezuelan Mt. Roraima<sup>58</sup>. Previously excluded from the Guianan list by Phelps<sup>40,41</sup>.

#### **Tepui Goldenthrout** *Polytmus milleri*

Observed on 9 and 14 July foraging in sparse, shrubby vegetation on the side of a moist, steep gorge on the south side of Mt. Kowa, one of only two areas on the mountain with the more open scrubby savanna considered typical of the species<sup>51,53</sup>. Identification confirmed as the tail was fanned when one hovered at some red-flowered gesneriads (*Nautilocalyx cf. cordatus*) on the gorge wall. The tail had white tips, which were far more extensive than the grey in White-tailed Goldenthrout *P. gainumbi* observed at Chenapou. The pale patches at the bases of the outer rectrices were also more extensive. The bill appeared dark rather than red as in *P. gainumbi*. *P. milleri* is endemic to the tepuis, where considered fairly common<sup>56</sup>. The record on Mt. Kowa is at the lower limit of the species' altitudinal range, given by Meyer de Schauensee & Phelps<sup>33</sup> as 1,300 m. Not previously recorded in Guyana<sup>11,39,58</sup>.

#### **Velvet-browed Brilliant** *Heliodoxa xanthogonys*

Tepui endemic<sup>11,39</sup> frequently observed on Mt. Kowa, most commonly in more open forests near small streams, and especially around groves of the bromeliad *Vriessia splendens*, the yellow tubular flowers of which it frequently visited. Known from several other mountains in Guyana, including Ayanganna, Merume and Wupaima<sup>56</sup>, but not in the Kanukus<sup>38</sup>.

#### **sabrewings** *Campylopterus* spp.

Grey-breasted Sabrewing *C. largipennis* was observed in clearings and riverside vegetation at 800 m at the base of Mt. Kowa (9 July) and at Chenapou (26 June). Uncertainty exists concerning the species' altitudinal range: Meyer de Schauensee &

Phelps<sup>37</sup> report it as 100–150 m, while Parker *et al.*<sup>39</sup> restrict it to below 900 m, although Gilliard<sup>21</sup> collected *C. largipennis* at 1,100 m on Auyán-tepui, Venezuela. Three observations of Rufous-breasted Sabrewing *C. hyperythrus* atop Mt. Kowa (12, 14 and 20 July). All had buffy breasts, rather than the rich warm chestnut typical of the species, and were presumably either worn, moulting or juvenile. Buff-breasted Sabrewing *C. duidae* occurs on tepuis much further west and is unlikely on Mt. Kowa<sup>37</sup>. A tepui endemic, *C. hyperythrus* is characteristic of high montane forests<sup>37,39</sup> as well as stunted woodland and borders, especially on sandy soils (R. S. Ridgely pers. comm. 2001). Neither Snyder<sup>58</sup> nor Parker *et al.*<sup>39</sup> list it for Guyana, but Braun *et al.*<sup>11</sup> included it, based on a recent record by W. Prince, who photographed *C. hyperythrus* on Mt. Ayanganna (D. Finch pers. comm. 2001). Mt. Kowa becomes the second locality in the country.

#### **Spotted Puffbird** *Bucco tamatia*

Parker *et al.*<sup>39</sup> note the range as up to 500 m and its habitat as lowland forest. For Guyana, Braun *et al.*<sup>11</sup> consider *B. tamatia* frequent in lowland forests. However, in Venezuela, it is known to reach 1,400 m<sup>37</sup>. We found it in montane forest atop Mt. Kowa (1,300 m). Distinguished from potential confusion species (e.g. Collared *Bucco capensis* and White-chested Puffbirds *Malacoptila fusca*) by the rusty forehead, crown, chin and throat, black ear-coverts, black bill and a white chest heavily, but irregularly, barred black.

#### **Tepui Spinetail** *Cranioleuca demissa*

Observed within a mixed flock containing Golden-olive Woodpecker *Piculus rubiginosus*, Buff-checked Greenlet *Hylophilus muscipinus*, Plain-brown Woodcreeper *Dendrocincla fuliginosa*, Fulvous Shrike-tanager *Lanio fulvus*, Blue-grey Tanager *Thraupis episcopus*, Blue Dacnis *Dacnis cayana* and Bay-headed Tanager *Tangara gyrola*, feeding in the crowns of low (7–10 m) moss- and epiphyte-covered trees at 900 m, around the base of Kowa Top (the final summit of Mt. Kowa) on 9 July. Distinguished by its pale brown supercilium, cinnamon crown, wings and rectrices, olive back and dove-grey belly, a pattern unlike other spinetails in the region. Rusty-backed *C. vulpina* has the crown, nape and back cinnamon; Pale-breasted *Synallaxis albescens* the tail grey-brown and belly white; Azara's *S. azarae* the throat finely marked black and white, with a cinnamon cap and nape, tail as long as the head and body (two-thirds head and body length in *C. demissa*); and Dusky *S. moesta* the breast and belly much darker grey and cinnamon cap, supercilium and nape. Ridgely & Tudor<sup>45</sup> considered *C. demissa*, within its restricted range, to be fairly common in canopy and borders of montane forest. Braun *et al.*<sup>11</sup> regard it as a tepui endemic. In Guyana, only

known from Mt. Ayanganna<sup>37</sup>, where a specimen was taken by the Thompson-Williams expedition of 1960<sup>58</sup>. Thus Mt. Kowa represents the second locality for Guyana, and a southern range extension of 48 km.

**White-throated Foliage-gleaner** *Automolus roraimae*

Two records: one was observed on a narrow vine 1.5 m above ground in dense tangled vegetation at the edge of a natural tree fall on 12 July, and two days later two (a pair?) were in approximately the same place. Ridgely & Tudor<sup>45</sup> note that it commonly associates with mixed flocks, but these were alone. *A. roraimae* has a very prominent white supercilium and dark ear-coverts. This pattern, its cream throat and warm brown belly distinguishes it from Olive-backed Foliage-gleaner *A. infuscatus*, which has a very faint eyestripe, brown ear-coverts, a dirty white throat and grey-brown belly and chest. This pattern also separates *A. roraimae* from Chestnut-crowned Foliage-gleaner *A. rufipileatus*, which has no eyestripe, a dirty white throat and the belly warm greyish buff, and from Buff-throated Foliage-gleaner *A. ochrolaemus*, which has brown ear-coverts and a buffy throat. Not previously recorded in Guyana, though Ridgely & Tudor<sup>45</sup> noted its occurrence in adjacent eastern Bolívar, Venezuela, and given its overall distribution, considered that it 'likely occurs in adjacent Guyana as well'.

**Sharp-tailed Streamcreeper** *Lochmias nematura*

Observed almost daily on moss-vegetated stretches of the bank of a deep-gullied, shallow stream on Mt. Kowa, although all records probably involved the same individual. It often approached to within 2 m as AB set live traps for fishing mice (*Ichthyomyini*) in the area. Good views were obtained of the species' characteristic, slightly decurved, dark bill, spotted throat, spotted underparts and undertail-coverts, and bold white eyestripe. It probed mossy clumps and tossed dead leaves aside with its bill, and was only seen along steeper sided parts of the stream. Not previously recorded in Guyana, but Ridgely & Tudor<sup>45</sup> map it to the Guyana border and note that it 'seems likely in western Guyana'.

**Tepui Antpitta** *Myrmothera simplex*

This tepui endemic replaces the widespread Thrush-like Antpitta *M. campanisona* at higher altitudes<sup>45</sup>. Four records on 12–18 July in dense forest atop Mt. Kowa (1,300 m). We noted the breast and flanks as dark grey (not streaked as in *M. campanisona*). In three instances pairs were observed, always on the ground in dense vegetation. On the fourth occasion, a single was seen, in deep shade, crossing an old, large, fallen tree trunk. One pair pecked at fallen flowers of *Alloplectus savannarum* (Gesneriaceae),

possibly feeding on insects. Not previously recorded in Guyana. Ridgely & Tudor<sup>45</sup> noted its occurrence in eastern Bolívar, Venezuela, and considered that it 'probably occurs in adjacent Guyana'.

**Warbling Antbird** *Hypocnemis cantator*

Known in this region to 1,100 m<sup>39,45</sup>, but recorded atop Mt. Kowa (1,300 m). It was noted on three occasions between 14 and 17 July; a pair was twice seen gleaning the undersides of leaves in dense vine and shrub tangles c.1.5 m above ground and once feeding near ground level within a very dense tangle at a natural tree fall.

**Short-tailed Antthrush** *Chamaeza campanisona*

One was well observed on rising ground 20 m distant on the opposite side of a vegetated gully (16 July). In Guyana, the only published records are from the Merume Mountains (112 km north-north-west) and from Mt. Ayanganna (48 km to the north)<sup>58</sup>. Wilderness Explorers<sup>67</sup> and Ridgely & Agro<sup>43</sup> also list it for the Iwokrama Mountains, making our observations at Mt. Kowa the fourth locality in the country. Braun *et al.*<sup>11</sup> considered this montane-forest specialist 'scarce'.

**antwren** *Herpsilochmus* sp.

Two records on Mt. Kowa: on 14 July a pair of *Herpsilochmus* was observed intermittently for 15 minutes, foraging in the canopy of a recently fallen tree at a distance of c.8 m; and three days later a pair was observed foraging in the canopy within a mixed flock containing Golden-olive Woodpecker *Piculus rubiginosus*, Tepui Greenlet *Hylophilus sclateri*, White-throated Foliage-gleaner *Automolus roraimae*, Plain Xenops *Xenops minutus*, Blue Dacnis *Dacnis cayana* and Bay-headed Tanager *Tangara gyrola*. Several very similar species are likely in the region (e.g. Spot-backed *H. dorsimaculatus*, Roraiman *H. roraimae*, Todd's *H. stictocephalus* and Spot-tailed Antwrens *H. sticturus*<sup>37,45</sup>. Only *H. roraimae* reaches altitudes similar to those of Mt. Kowa<sup>37,45</sup>. We noted four rows of white spots on the uppertail of those observed on Mt. Kowa. Examination of specimens at ANSP shows only *H. roraimae* has this; *H. stictocephalus* has three sets of spots and *H. sticturus* has two, but neither occurs as high as *H. roraimae*, which is known from Mt. Twek-quay<sup>45,58</sup>. However, M. Robbins (pers. comm. 1999) reports that this character is very difficult to discern except in the hand. Without further evidence, caution dictates that our records be considered unconfirmed but they would represent a south-easterly range extension within Guyana. Further data on *Herpsilochmus* in Guyana are to be presented in a report on the birds of Iwokrama (Acad. Nat. Sci., Philadelphia, in prep.).

**Chestnut-belted Gnateater** *Conopophaga aurita*

One observed very clearly, within c.60 cm, in the lower 30 cm of underbrush and stems bordering the camp clearing on Mt. Kowa, on 12 July; it resembled a tiny antpitta in its movements and behaviour. Obviously a female by its white, rather than black, throat, species identification was determined by the exceedingly short tail, broad rufous breast-band and very prominent white eyestripe. Ridgely & Tudor<sup>45</sup> reported *C. aurita* in east Guyana and M. Robbins (pers. comm. 1999) found it in the Acari Mountains of south Guyana. Not previously recorded this far west in Guyana, and then only to 700 m, making our record from Mt. Kowa an altitudinal and intra-country extension. Braun *et al.*<sup>11</sup> considered *C. aurita* to be 'scarce'.

**Scarlet-horned Manakin** *Pipra cornuta*

Lekking males were observed almost daily on Mt. Kowa on 13–19 July. Females were in attendance on several occasions. Behaviour and calls resembled those reported by Snow<sup>56</sup>. Density of leks appeared greater than found by him, but numbers of males were similar (2–3 at each lek), suggesting that such numbers may not be a function of low population density<sup>56</sup>. Vocal and mechanical sounds were similar to those noted by Snow at his study site near Ptari-tepui, Venezuela. Males displayed throughout the day, though (*contra* Snow<sup>56</sup>) they were observed to break off to feed on berries of Melastomataceae understorey trees. Snow<sup>56</sup> observed two displays, the 'backward slide' and the 'side-to-side slide'. Despite extensive observations, we did not see the former on Mt. Kowa, but did note a 'slide-hop' display, which is probably a lower intensity side-to-side slide display. During this, the male would intermittently slide and side-hop along its display stem; the distance moved was as in the 'side-to-side slide'. Characteristic mechanical 'clicks' were given during this display. A tepui endemic known from south Venezuela and adjacent Guyana, it has been recorded by the Adaroo River, at the headwaters of the Mazaruni<sup>158,59</sup>. Mt. Kowa is south-east of this and of the distribution mapped in Ridgely & Tudor<sup>45</sup>, making this an intra-country range extension.

**Red-banded Fruiteater** *Pipreola whitelyi*

Considered one the most distinct tepui endemics<sup>35,45</sup>, a male, presumably the same individual, was observed twice on Mt. Kowa, both times in the same place, c.2 m up in the lower branches of a small fruiting Melastomataceae, surrounded by dense undergrowth in a natural creek-side clearing. Not observed feeding, but other members of the genus feed extensively on Melastomataceae fruits<sup>57</sup>. The natural history of *P. whitelyi* is little known, but most *Pipreola* occur singly and forage in low or middle forest layers<sup>45,57</sup>, making our observations typical. In Guyana, it was previously known only

from Mt. Twek-quay<sup>45,58</sup>, making Mt. Kowa the second Guianan locality.

**Rose-collared Piha** *Lipaugus streptophorus*

Only rarely seen but its distinctive voice was frequent in forests near Kaieteur, around Chenapou and on Mt. Kowa. Snow<sup>57</sup> suggested that Rose-collared Piha forms nesting pairs; there are no other published observations on breeding in *L. streptophorus*<sup>45</sup>. On 20 July, between Mt. Kowa and Tappa, we encountered a possible lek of *L. streptophorus*. Three were observed well, each having the characteristic pink collar and possibly 4–6 others were active in nearby vegetation, but could not be seen clearly. Several repeatedly flew between the exposed, sunlit lower boughs (15–20 m above ground) of large yellow-flowered *Tabebuia* sp. trees beside the Muribang River (30 minutes north-east of a mining camp at 04°51'N 59°42'W). Vocalisations were intense and repetitive, and consisted of explosive *pow*, *pow* calls and screeching trills. Not known to flock and no other activity in the area indicated any cause for unusual excitement. This display closely resembles that of Dusky Piha *L. fuscocinereus* reported by S. Hilty in northern Colombia<sup>57</sup> and more recently by López-Lanús<sup>33</sup>, who recorded a lekking display by four *L. fuscocinereus* involving a dipping flight display between exposed boughs of tall trees and high-pitched whistling calls. While thus engaged the bird unfolded its wings to produce a loud low-frequency mechanical sound of short duration. This may also have been the source of the explosive noise we heard from *L. streptophorus*. *L. streptophorus* is a tepui endemic with a very limited range<sup>45</sup>. In Guyana it has only been previously recorded from Mt. Twek-quay<sup>45,58</sup>. Our records represent a south-easterly range extension of 112 km.

**Spangled Cotinga** *Cotinga cayana*

Seen twice on Mt. Kowa: a lone male in the same tree as, though evidently not associated with, a mixed feeding flock (15 July), and a loose group of three in the upper branches of an unidentified Lauraceae tree growing beside a natural clearing (18 July). Widespread, but seldom recorded as high as 1,300 m, usually being found below 600 m<sup>39,45,57</sup>. As the purple was restricted to the throat, Purple-breasted Cotinga *C. cotinga* can be eliminated and the very similar Plum-throated Cotinga *C. maynana* is out of range<sup>45</sup>. Possibly a seasonal (altitudinal?) migrant<sup>57</sup>, its occurrence on Mt. Kowa was perhaps a consequence of the widespread drought and forest fires in Guyana during the El Niño of 1998<sup>3,4,23</sup>. *C. cayana* is an obligate frugivore<sup>57</sup> and these events may have forced it to higher altitudes than usual (see Waide<sup>63,64</sup> and Wunderle *et al.*<sup>68</sup> for similar effects following hurricane damage).

**bellbirds** *Procnias* spp.

A male White Bellbird *P. alba* called throughout our stay in Chenapou and was clearly observed at its perch, a branch atop a very tall dead tree at the edge of the forest, overlooking the village football pitch. Known throughout forested Guyana<sup>58</sup>, locally, *P. alba* was collected at nearby Mt. Ayanganna by A. Thompson<sup>46</sup>, and recently observed at Kaieteur Falls (S. Lehman pers. comm. 1999). Two male Bearded Bellbird *P. averano* were present throughout our stay atop Mt. Kowa. Between Kowa and Chenapou, the species' characteristic explosive *bock* calls were audible in forest at the base on the mountain and around Tappa (listed as 'en route' in Table 1). One male on Kowa called from debarked limbs of an old dead emergent at the edge of a large tree-fall clearing, its characteristic brown head and black wattles clearly visible. It appeared to be young, its song being punctuated by many discordant shrieks, rasps and false starts<sup>54,55</sup>. *P. averano* has been recorded twice in Guyana: Snyder<sup>56</sup> lists a specimen from 1939 collected by the Adarou River. Snow<sup>57</sup> mentions another (unspecified) locality, which may be that of Blake's 1948 record<sup>9</sup> from Mt. Tweek-quay. Though both species may undertake altitudinal migrations outside the breeding season<sup>57</sup>, they most commonly breed in montane forests above 1,000 m and appear to overlap only in a small part of Venezuela/Brazil/Guyana<sup>39,57</sup>. Altitudinal and habitat separation are little studied, though Snow<sup>57</sup> noted *P. alba* on the lower slopes of Ptari-tepui, Venezuela, at 1,100–1,250 m; higher on the same mountain, at 1,700–1,900 m, he found *P. averano*. He noted that *P. alba* and *P. averano* occur at lower altitudes in Guyana and proposed that 'there is a gradual replacement, with some interdigitation, of the White Bellbird by the Bearded as one moves from the lower mountains of the Guianas to the more lofty highlands...of Venezuela'. This may account for *P. alba*'s apparent altitudinal replacement on and around Mt. Kowa.

**Flutist Wren** *Microcerculus ustulatus*

*M. ustulatus* was first located by its song, which consists of drawn-out upward-tending pure whistles of 3–5 seconds duration, interspersed by descending phrases of 5–10 mournful notes, in contrast to the bubbling, tuneful call of the Musician Wren *Cyphorhinus aradus*, which is a combination of whistles and 'chucks'<sup>25</sup>. *M. ustulatus* was observed on four occasions on Mt. Kowa at up to 1 m above ground within dense vegetation. Judging from the frequency with which song was heard, it is common on Mt. Kowa. A tepui endemic<sup>11</sup>, the only previous record for Guyana appears to be on Mt. Tweek-quay<sup>45,58</sup>. Mt. Kowa is 112 km south-east of that mountain, and becomes the second locality in Guyana. *M. ustulatus* is easily separated from Wing-banded Wren *M. bamba* by its lack of an

obvious white wingbar, and by voice<sup>25</sup> (in *M. bamba* each phrase is a series of short whistles that progressively decrease in time separation like a small ball dropping on a hard surface, culminating in a long whistle).

**Tepui Wren** *Troglodytes rufulus*

Seven sightings, probably involving three individuals and all on Mt. Kowa, in dense tangled second growth at the edge of a tree-fall clearing, on the ground or less than 1 m above it. Unlike the illustration in Meyer de Schauensee & Phelps<sup>37</sup>, but similar to a specimen (50454) at ANSP from adjacent Bolivar, Venezuela, *T. rufulus* at Mt. Kowa has a contrasting warm gingery supercilium that extends only behind the eye, not onto the lores. Ridgely & Tudor<sup>44</sup> consider the species little known. Altitude and habitat on Mt. Kowa are consistent with published preferences, and this represents the first Guianan locality.

**Black-hooded Thrush** *Turdus olivator*

Infrequently observed at forest edge and in scrub around Chenapou (600 m). Though generally regarded as an inhabitant of montane forest<sup>11,58</sup>, and previously recorded only at 800–2,600 m<sup>39</sup>, we did not record it at higher altitudes. The only previous record in Guyana appears to be from Mt. Tweek-quay<sup>44,58</sup>, 112 km to the north-west.

**Olive-backed Tanager** *Mitrospingus oleagineus*

Frequently observed in groups of 5–7, in both montane forest on Mt. Kowa and in fruiting trees and clearings (a highly aberrant habitat: R. S. Ridgely pers. comm. 2001) around Chenapou and Menzie's Landing (near Kaieteur Falls). Previously known in Guyana only from a mountainous locality 177 km north-west of Mt. Kowa<sup>45,59</sup>. Our records represent a south-easterly range extension and the second locality in Guyana. The species is a tepui endemic<sup>11</sup>.

**Blue Dacnis** *Dacnis cayana*

Not previously noted above c.1,000 m<sup>44</sup>, this unmistakable bird was recorded atop Mt. Kowa (1,300 m) where it was seen occasionally between 12 and 17 July at the edge of clearings and tree-falls. It was also seen in mixed feeding flocks in the crowns of low (7–10 m) moss- and epiphyte-covered trees at 900 m, at the base of Kowa Top.

**Great Flowerpiercer** *Diglossa major*

This unmistakable species was observed at the foot of Mt. Kowa (9 July at 800 m) and its summit (12, 15 and 17 July at 1,300 m). The former observation lowers the known altitudinal range by c.500 m<sup>44</sup>. According to Ridgely & Tudor<sup>44</sup>, the species has not actually been observed to pierce flowers. Though we did not observe this action directly, the species was

seen visiting trees with flowering epiphytic *Psamisia* (Ericaceae) bushes. Fallen flowers directly below had the characteristic pierce/slash marks of flowerpiercer foraging<sup>19,30</sup>, which were distinguished from those of Blue-tailed Emerald *Chlorostilbon mellisugus* in being smaller, more circular and frequently in the calyx rather than the corolla. Not previously recorded in Guyana, though Ridgely & Tudor<sup>44</sup> predicted that its range would be extended from neighbouring Venezuela.

**Tepui Redstart** *Myioborus castaneocapillus*

Tepui endemic common in both canopy and bushes of natural tree-fall clearings on Mt. Kowa. With Golden-olive Woodpecker *Piculus rubiginosus*, Tepui Greenlet *Hylophilus sclateri*, White-throated Foliage-gleaner *Automolus roraimae*, Plain Xenops *Xenops minutus*, Blue Dacnis *Dacnis cayana* and Bay-headed Tanager *Tangara gyrola*, it was a frequent member of mixed-species flocks in montane forest atop Mt. Kowa. Consistent with its known altitudinal range (1,200–2,200 m<sup>44</sup>), *M. castaneocapillus* was not observed below 800 m on Mt. Kowa, but Slate-throated Redstart *M. miniatus* was frequent at lower altitudes (see Table 1), supporting Ridgely & Tudor's<sup>44</sup> suggestion that they altitudinally replace each other.

**Oriole Blackbird** *Gymnomystax mexicanus*

Four of this highly distinctive icterid were seen repeatedly in fruiting trees near a marshy pond at Chenapou (26–28 June). Though *G. mexicanus* is common within its range in open grassy areas with scattered trees, there are no recent records in Guyana<sup>44</sup> or nearby areas<sup>26,35,61</sup>. Snyder<sup>58</sup> listed the species based on a Tring specimen labelled 'Demerera' from c.1840, but Braun *et al.*<sup>11</sup> removed it from the Guyana list 'for lack of concrete documentation'. The Chenapou sighting therefore represents a new country record. Unknown from adjacent Venezuela, *G. mexicanus* has been reported recently from Ilha de Maracá Ecological Station, on the rio Uraricoera, Roraima, Brazil<sup>12</sup>, c.300 km south-west of the Potaro Plateau.

**Tepui Mountain Grackle** *Macroagelaius imthurni*

Common on Mt. Kowa, where noted in flocks of up to 30, usually in flight at treetop level (c.20 m). Observed only in montane forest atop the mountain, although the type-series was collected in October 1878 in forest at Kaieteur Falls<sup>29,52</sup>. Though almost 800 m lower than the top of Mt. Kowa, the forest around the falls (as opposed to the area's white-sand scrub) appears to have many floristic and faunal similarities to Kowa. They are, for example, the only two localities where we recorded the bromeliad *Vriessia splendens*, the gesneriads *Nautilocalyx cf. cordatus* and *Alloplectus*

*savannarum* and, among birds, Guianan Cock-of-the-Rock *Rupicola rupicola*.

**Carib Grackle** *Quiscalus lugubris*

Distinguished from other icterids in the region by its all-black plumage and contrasting pale yellow iris, *Q. lugubris* was occasionally observed in forest edge, agricultural and open habitats around Chenapou. Though *Q. lugubris* is common in coastal and disturbed habitats<sup>11,58</sup>, it has not previously been recorded inland in Guyana, though it is known from such areas in Venezuela and north-east Colombia (R. S. Ridgely pers. comm. 2001, see also Snyder<sup>58</sup> and Parker *et al.*<sup>38</sup>). This unusual record was perhaps a consequence of the widespread drought and forest fires in Guyana during the El Niño of 1998<sup>3,4,23</sup>.

## Discussion

### New records for Guyana

We recorded eight species new to Guyana: *Colibri coruscans*, *Polytmus milleri*, *Automolus roraimae*, *Lochmias nematura*, *Myrmothera simplex*, *Troglodytes rufulus*, *Diglossa major* and *Gymnomystax mexicanus*. With the exception of *C. coruscans* and *G. mexicanus*, all the new records were from Mt. Kowa (1,300 m). The vegetation type there, classified as Medium, evergreen montane forest<sup>25</sup>, and characterised by *Vochysia* (Vochysiaceae), *Chrysophyllum* (Sapotaceae) and *Euterpe* (Arecaceae), strongly resembles those reported by Tate<sup>60</sup> for Arabupu (1,219 m) and Philip Camp (1,585 m) on Mt. Roraima (see also Maguire<sup>34</sup>), where many of the same bird species have been collected<sup>15–17</sup>.

Phelps<sup>40,41</sup> excluded 33 species from the Guyana list on the grounds that each was known only from the area formerly known as 'British Mount Roraima' and that refinements, made in 1932, to the international frontier in the Mt. Roraima region made it highly unlikely that specimens of these species had been collected on the Guianan side. This list was followed by Snyder<sup>58</sup>, Gilliard<sup>21</sup> and Meyer de Schauensee & Phelps<sup>37</sup>. Among those species are all eight recorded by us as new to Guyana. (It should be emphasised that all are based solely on sight records and, ideally, further work should confirm their presence with tape-recordings, photographs or specimens.) This is unsurprising, as Mt. Roraima is just 70 km west of Mt. Kowa, there are similar habitats (see above) and several other high tepui-like peaks occur within intervening areas (including Mts. Ayanganna at 2,042 m, Kopinang 1,594 m and Wokamung 1,470 m). It would be unsurprising if further studies in the Potaro region were to document other species from the Phelps list in Guyana. In the Mt. Tweek-quay area field work by E. Blake

documented the presence of Sharpbill *Oxyruncus cristatus*, Procnias *averano* and Pipra *cornuta*<sup>9,18</sup>, and additions continue to be made to the known avifauna of Guyana. For example, Agro & Ridgely<sup>1</sup> recently recorded Striped Manakin *Machaeropterus regulus* in Guyana, while field work by Braun *et al.*<sup>11</sup> added a further 17 species to the country list.

#### Other records of interest

Table 1 lists 334 species for the Potaro Plateau, based on the combined records of a number of workers (see Previous ornithological work, above). Among these the record of Rufous-tailed Tyrant *Knipolegus poecilurus* is of interest. The species was excluded from the Guianan list by Phelps<sup>40,41</sup> on the grounds that a previous record was in Venezuelan territory (see above). Ridgely & Tudor<sup>45</sup> considered it likely to occur in Guyana and subsequently Braun *et al.*<sup>11</sup> confirmed its presence in the country based on specimens collected on a recent Smithsonian Institution expedition to the Acari Mountains (D. Finch pers. comm. 2001). Widespread in the Pantepui, this flycatcher has also recently been discovered on Auyán-tepui<sup>17</sup>, demonstrating that it can escape detection even at comparatively well-studied localities. The observation referred to in Table 1 was made by C. Perrins in 1959, and would be the first record for the country.

#### Comparisons with other areas

In both species composition and species richness, the bird fauna of the Potaro Plateau is a rich and interesting one. The absence of owls and low number of caprimulgids is probably due to the lack of appropriate field work in an area where overnight stays require a special permit. Avifaunal richness compares favourably with similar areas in Guyana (e.g., in order of geographical proximity, Kanuku Mountains; 349 species/172 shared<sup>38</sup>, 49.2%; Mt. Iwokrama; 377 species/214 shared<sup>43</sup>, 56.8%). For the Kanuku Mountains, avifaunal differences primarily reflect the lack of montane specialists ('upper tropical' or 'F4' as defined by Parker *et al.*<sup>39</sup>) and Pantepui endemics compared with Potaro. Montane specialists comprise 0.53% (two species) of those known from Iwokrama. No montane specialists occur in the Kanuku<sup>38</sup>, but these account for the majority of species that occur on the Potaro Plateau that do not occur on Iwokrama and the Kanuku. Jaccard Similarity Coefficients<sup>62</sup> between the Potaro Mountains, Mt. Iwokrama and the Kanuku Mountains are, respectively, .75 and .504, indicating that Potaro's avifauna is most similar to that of Iwokrama and not the geographically most proximate Kanuku (though the effects of greater sampling at Iwokrama should not be discounted).

The Potaro Plateau's 334 species represents 43% of the Guyana avifauna<sup>11</sup>. If, following Parker *et al.*<sup>38</sup>,

the 40 species confined to the coast and offshore waters are excluded, then the Potaro Plateau possesses 45% of Guyana's rainforest bird species. Based on Parker *et al.*<sup>39</sup> it is apparent that Potaro has two-thirds of the country's 21 species that are restricted to montane forest (excluding our new country records). Including these new additions, the plateau holds 21 of Guyana's 22 Pantepui endemics (as defined by Parker *et al.*<sup>39</sup>: only Peacock Coquette *Lophornis pavoninus* is missing), or 6.25% of the total species known from the Plateau. These data demonstrate that the Potaro Plateau is an important centre of avian diversity within Guyana and should be considered important for bird conservation at both national and regional levels.

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