Notes on the distribution of the avifauna of Bioko Island, Equatorial Guinea, including one new country record

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Summary

In early 2016, we conducted bird surveys on the island of Bioko, Equatorial Guinea. We found numerous taxa at different elevations and abundance from those previously reported. We recorded five species new for Bioko (African Jacana *Actophilornis africanus*, Bat Hawk *Macheiramphus alcinus*, Western Marsh Harrier *Circus aeruginosus*, Ethiopian Swallow *Hirundo aethiopica* and Preuss's Cliff Swallow *Petrochelidon preussi*) and one species new for Equatorial Guinea (Great Reed Warbler *Acrocephalus arundinaceus*).

Resumen

A principios de 2016 realizamos muestreos de aves en la isla de Bioko, Guinea Ecuatorial. Encontramos numerosos taxa en diferentes elevaciones y abundancia de las previamente reportadas. Además, registramos cinco especies nuevas para Bioko (Jacana Africana *Actophilornis africanus*, Milano Murcielaguero *Macheiramphus alcinus*, Aguilucho Lagunero Occidental *Circus aeruginosus*, Golondrina Etiópica *Hirundo aethiopica*, y Golondrina de Preuss *Petrochelidon preussi*) y una especie nueva para Guinea Ecuatorial (Carricero Tordal *Acrocephalus arundinaceus*).

Introduction

Bioko, a volcanic island of *c.* 2000 km^2, 36 km from adjacent mainland Cameroon, is unique among the Gulf of Guinea islands in that it is a continental island. This has resulted in its possessing a diverse fauna isolated by vicariance, rather than a depauperate fauna derived from overseas colonists (Amadon 1953, Jones 1994, Pérez del Val *et al*. 1994, Pérez del Val 1996). The species richness on Bioko is thus higher than on other Gulf of Guinea islands, and many of the species found there range widely throughout the equatorial Afromontane forests (Borrow & Demey 2014). The birds of Bioko were first documented during several expeditions in the mid- to late 1800s and early 1900s, expeditions that also led to the initial descriptions of many African taxa (Fraser 1843a, 1843b, 1843c, Strickland 1844, Jardine 1851, Alexander 1903, Salvadori 1903, Ogilvie-Grant 1904, Amadon 1953). The island's bird list was formalized almost a century later by Pérez del Val, who performed mist-netting surveys throughout Bioko (Pérez del Val *et al*. 1994, Pérez del Val 1996, 2001).

Cooper *et al*. (2016) found many species on Bioko, particularly Palaearctic migrants, at different densities from those reported in Pérez del Val's and earlier surveys. Similarly, several species have been found at higher elevations than during the 1990s surveys and potentially represent elevational shifts (Pérez del Val 1996, Cooper *et al*. 2016). Density and elevation shifts may be associated with increased anthropogenic disturbance in Equatorial Guinea (<https://www.cia.gov/library/publications/the-world-factbook/geos/ek.html>, consulted 15 Jun 2016), but more study is needed. Here, we present new accounts of the birds of Bioko and highlight differences in densities and distributions from previous reports.

Methods

The results presented here stem from two parallel biological inventories on Bioko in January 2016. One focused on audiovisual and mist-netting surveys and was performed by the Biodiversity Initiative (<www.biodiversityinitiative.org>) consisting of JCC, JDW, KEB, AME and LLP. The second was performed by OJ, TJD and RST, and involved audiovisual and mist-netting surveys as part of a Louisiana State University Museum of Natural Science (LSUMNS) and University of Kansas Biodiversity Institute (KU) scientific expedition to obtain modern specimens and genetic material from the island's taxa. Specimens were selected to represent the breadth of avian diversity present on Bioko, but no more than about six individuals of any given taxon were collected from any given locality to avoid adversely affecting populations. Both survey groups used varying numbers of 12-m mist-nets to capture birds and complemented netting with audiovisual surveys in the vicinity of Malabo, Pico Basilé, Luba, Moka and Ureca (Table 1, Fig. 1). Informal daily surveys were performed at survey sites to determine species presence and abundance, with all

survey and incidental audiovisual data entered into the publicly accessible eBird database (Sullivan *et al*. 2009). Birds were photographed and audio-recorded opportunistically, and all photographs and recordings were archived at the Macaulay Library (ML) in relevant eBird checklists. The teams were separated for about a week, when the Biodiversity Initiative surveyed the Gran Caldera de Luba and the LSUMNS/KU group stayed at the Moka Research Station.

Table 1. Field survey effort on Bioko in 2016.

No.	Locality	Coordinates °N	Coordinates °E	Elevation (m)	Dates surveyed	Audiovisual hours	Net hours
1	Malabo	3.751	8.778	1–300	4, 31 Jan	18.2	0
2	Pico Basilé foothills	3.675	8.862	900	17 Jan	1.5	0
3	Pico Basilé summit	3.587	8.761	2650–3010	17 Jan, 1 Feb	59.5	*c.* 10
4	Luba (town)	3.467	8.579	1	26, 29, 31 Jan	4.5	0.5
5	Moka Research Station	3.357	8.661	1375–1550	19–30 Jan	133	*c.* 645
6	Caldera de Luba	3.355	8.500	500–1100	23–28 Jan	203.2	560
7	Pico Biao	3.351	8.641	1400–2000	30 Jan	5	0
8	Moraka	3.258	8.486	1–300	28–29 Jan	60	0
9	Ureca	3.255	8.584	1–300	26–27, 29 Jan	18.5	*c.* 50
10	Moaba	3.234	8.624	1	29–30 Jan	13	*c.* 30

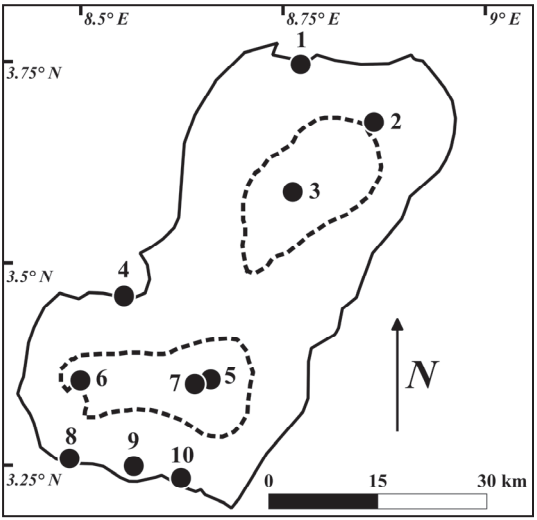

Figure 1. A map of study sites on Bioko, with an approximation of the 1000 m contour (dotted line). Localities numbered as in Table 1.

Species Accounts

The following accounts present significant records requiring discussion; a full checklist of the species detected at each locality can be found in Appendix 1.

***Pernis apivorus* European Honey-Buzzard.** OJ observed one at the Moka Research Station on 27 Jan, followed by two birds photographed by OJ and RST at the same locality on 29 Jan. It is unclear if this species is an occasional or regular winter visitor to Bioko. Previously reported only twice (Pérez del Val 1996).

***Macheiramphus alcinus* Bat Hawk.** One observed and photographed by JCC, OJ, RST, JDW, KEB and LLP at the Plantación de Sampaka on the north side of Malabo (*c.* 200 m) on 31 Jan. It was hunting at dusk as fruit bats headed out to feed and was last seen heading north after catching a Straw-coloured Fruit Bat *Eidolon helvum*. This represents the first record for Bioko. The species is known from adjacent mainland Cameroon and Equatorial Guinea (Borrow & Demey 2014).

***Circus aeruginosus* Eurasian Marsh Harrier.** One seen by JCC, OJ, RST, JDW and LLP on 17 Jan, photographed by OJ as it flew over the grasslands on the upper slopes of Pico Basilé (*c.* 2500 m). First record for Bioko; known from adjacent mainland Cameroon and mainland Equatorial Guinea (Borrow & Demey 2014).

***Actophilornis africanus* African Jacana.** On 27 Jan, RST and Melanie Croce (Bioko Biodiversity Protection Program: BBPP) flushed an African Jacana at the lagoon at the confluence of the rivers Bacá, Olabaita, Socamieba and Töloá, just east of Ureca (Fig. 2). This represents the first record for Bioko. The species is common on the adjacent mainland in Cameroon and Equatorial Guinea (Borrow & Demey 2014).

***Caprimulgus* sp.** One primary flight feather from an unknown nightjar species was found along a trail just north of Ureca (*c.* 300 m altitude) on 26 Jan by OJ and RST. A comparison of the feather with specimens at LSUMZ found that it was a close, but not perfect, match to *C. europaeus*. However, any species of nightjar would be rare on Bioko, and thorough night surveys are needed to determine the status of this genus on the island.

***Schoutedenapus* sp.** After a few swifts with long slender wings, long forked tails and ashy brown bodies had been seen in the vicinity of the Moka Research Station, OJ and RST photographed two on 23 Jan and one on 25 Jan (Fig. 2). These photographs were compared to specimens of *Apus* and *Schoutedenapus* swifts at LSUMNS; they match *Schoutedenapus*. Since *S. myoptilus poensis* is the only *Schoutedenapus* known from the Gulf of Guinea region, these photographs likely refer to this taxon, although more photographs, recordings and particularly specimens from Bioko are imperative to understand fully which species are present and determine their status. Although *S. myoptilus* has been reported from adjacent Cameroon (Dowsett & Dowsett-Lemaire 2001) and from Mount Moco, Angola (Brooke 1971), records which might refer to the subspecies *poensis*, this subspecies has not been confirmed anywhere in > 50 years (Wells 1968, Pérez del Val 1996). It has only been collected by two ornithologists on

Bioko: first by B. Alexander in 1902 at Sipopo (Alexander 1903) and then by E. Seimund in 1903–4 at Fishtown (Bannerman 1933). Our photographs currently represent the only records of any *Schoutedenapus* above 100 m elevation on Bioko (Pérez del Val 1996).

Figure 2. Left: African Jacana *Actophilornis africanus* near Ureca, Bioko, 27 Jan 2016. Right: *Schoutedenapus* sp., possibly *S. myoptilus poensis* near Moka, Bioko, 23 Jan 2016. Photos: RST.

***Apus* spp.** Flocks containing several species of swift were frequently observed near the Moka Research Station. One species was the Common Swift *Apus apus*, but with it were swifts with longer forked tails and entirely dark throats, which we believe were Fernando Po Swifts *Apus sladeniae*. Flocks of similar, large dark *Apus* swifts were seen within the Caldera de Luba at *c.* 1000 m, on 25 Jan 2016 by JCC and near the summit of Pico Biao (*c.* 2000 m) on 23 Dec 2014 by JCC, LLP and JDW. This species is extremely difficult to separate from the African Black Swift *A. barbatus*, which could occur in adjacent continental regions (Borrow & Demey 2014), and identification is further complicated by uncertainty surrounding the status and distribution of *Apus* species in West and central Africa. At present, specimens identified as *A. sladeniae* exist from Fishtown, Bioko (the six type specimens: Ogilvie-Grant 1904), Obudu Plateau in Nigeria (Parker 1971), Bakossi Mountains in Cameroon (Bannerman 1933, Parker 1971; specimens originally described as *A. melanonotus* by Reichenow 1907) and Mount Moco in Angola (Traylor 1963; two specimens originally assigned to *A. barbatus roehli* but reassigned to *A. sladeniae* by Brooke 1970). Given the extreme difficulty in the identification of *Apus* swifts in central Africa, sight records of swifts from mainland Equatorial Guinea (Dowsett-Lemaire & Dowsett 1999, Cooper *et al*. 2016), Liberia and Príncipe Island (<http://www.hbw.com/node/467191>, consulted 22 Dec 2016), as well as a breeding

population at Mount Soque and Njelo Mountain in Angola (Mills & Dean 2007), should all be considered unidentified pending a morphological and genetic analysis to determine whether the name *A. sladeniae* is applicable to populations on the African mainland or if the taxon is restricted to Bioko. This uncertainty further underscores the need for modern specimens with associated sound recordings.

***Halcyon badia* Chocolate-backed Kingfisher.** Hitherto recorded on Bioko only below 300 m. We repeatedly heard these shy kingfishers within the Caldera de Luba at Hormigas Camp (*c.* 530 m) and North Camp (*c.* 1070 m). This region has been surveyed frequently (Pérez del Val *et al*. 1994, Pérez del Val 1996), but it is unknown whether they simply went undetected previously or if they are recent immigrants to the highlands. In addition, OJ and RST noted high densities of this species in the limestone forest at Moaba (<100 m) on 30 Jan 2016, which may indicate that this habitat is important for this taxon on Bioko.

***Hirundo preussi* Preuss's Cliff Swallow.** First detected near the town of Luba on 21 Jan, when a small group of *c.* 10 individuals flew in to drink from a puddle inside a private oil and gas facility (JCC, JDW, KEB, AME, LLP). On 31 Jan, JCC, OJ, TJD, RST, JDW, KEB and LLP found and photographed a colony of about five pairs with nests on a bridge over the mouth of the Río Tiburones just north of Luba. These represent the first records for Bioko. Known from adjacent Cameroon (Borrow & Demey 2014) and recently documented breeding as far south as Mbini in continental Equatorial Guinea (Cooper *et al*. 2016).

***Hirundo aethiopica* Ethiopian Swallow.** Four birds in Malabo, one of which was photographed by JCC, on 3 Jan. Further work revealed that this species was common in the lowlands (<150 m) near Luba and Ureca, Bioko Sur. First records for Bioko. Because most recent work on the island has focused on the highlands and interior forests, it is likely that this species has been overlooked. It is expanding within central Africa and was recently recorded for the first time in mainland Equatorial Guinea, where it now appears to be established (Turner 2004, Cooper *et al*. 2016).

***Anthus trivialis* Tree Pipit.** Regularly detected in the agricultural fields near the Moka Research Station throughout Jan 2016. Previously, reported only occasionally from the Moka Highlands (Pérez del Val 1996). More data are required to determine if it is an irruptive or regular island visitor.

***Acrocephalus arundinaceus* Great Reed Warbler.** One individual audio-recorded by JCC near the summit of Pico Biao (*c.* 2000 m) on 30 Jan (ML24199741). A brief sighting of the bird revealed that it was a large warbler with a dark eyeline below the pale supercilium, white throat and rufous back with browner wings and tail. First record for Equatorial Guinea. The species regularly winters in tropical Africa, including adjacent mainland Cameroon (Borrow & Demey 2014).

***Phylloscopus trochilus* Willow Warbler.** We found this species to be common in the highland scrub on the island. Our maximum daily count was four birds on the upper slopes of Pico Biao (*c.* 1800 m and higher; Fig. 3) on 30 Jan, but we also observed it with most mixed-species flocks of small insectivores on Pico Basilé on

17 Jan. Only five previous records, of which four were in the highlands (Pérez del Val 1996, Cooper *et al*. 2016). This species appears to have increased on the island since 1996.

***Anthreptes seimundi* Little Green Sunbird.** This species is listed as occurring on Bioko only below 400 m (Pérez del Val 1996), but it was recently reported at *c.* 800 m at an unspecified location within the Caldera de Luba (<http://ebird.org/ebird/view/checklist/S25225266>, consulted 25 May 2016). Despite seeing small, dull-coloured sunbirds from our first day in the Caldera de Luba, we were unable to confirm their identification as Little Green Sunbirds until we netted two males at *c.* 1100 m within the caldera at American Camp on 26 Jan (specimens KU132366, KU132367). After becoming aware of their presence in the highlands, we began to encounter the birds regularly and subsequently recorded them at Hormigas Camp (530 m). OJ, TJD and RST also mist-netted one at the Moka Research Station at *c.* 1400 m, on 23 Jan (LSUMZ189920), and soon became aware that they were common in the area. This species is likely a common resident or altitudinal migrant throughout the Bioko highlands and was possibly overlooked by previous expeditions because of its inconspicuous plumage and habits.

***Cinnyris chloropygius* Olive-bellied Sunbird.** OJ, TJD and RST mist-netted one male at the Moka Research Station (*c.* 1400 m) on 27 Jan 2016 (KU132261). Previously known on Bioko only below 500 m (Pérez del Val 1996).

Figure 3. Willow Warbler *Phylloscopus trochilus* on the upper slopes of Pico Biao, 30 Jan 2016. Photo: JCC.

***Cinnyris minullus* Tiny Sunbird.** OJ and RST photographed one of two territorial males seen near the Moka Research Station (*c*. 1400 m) between 20 and 29 Jan. Previously known on Bioko only below 800 m (Pérez del Val 1996).

Discussion

We think that the changes in the status and distribution of species outlined in this paper result from a combination of anthropogenic and environmental factors, as well as improvements in detection methods. Although many of these areas have previously been surveyed intensively, these surveys were completed before recordings of African bird vocalizations were widely available (*e.g.* Chappuis 2000). As recording equipment and identification resources have improved, detection and identification rates have increased. Some vocal species detected at high elevations (*e.g.* Chocolate-backed Kingfisher) might have been missed by previous surveys if they visited during the non-breeding season for highland populations (Serle 1981) or focused on mist-netting or collecting and less on detecting species vocally. Other species, especially the two swallows new to the island, probably represent recent invasions by expanding populations (Turner 2004, Cooper *et al*. 2016). Many of these expansions appear to be due to anthropogenic activity (*e.g*. forest clearing associated with road building, agriculture, settlement and other developments), and these species would have little difficulty reaching Bioko.

In addition to the two swallows, two other first records for the island (African Jacana and Bat Hawk) were found in the Bioko lowlands. Given that the majority of recent ornithological work has focused on the island's highlands, more work in the lowlands is warranted to assess the status and distribution of species here. New lowland surveys would also provide a comparison to earlier surveys, and reveal whether inconspicuous and seldom caught taxa are more common than previously noted, as we found during our montane work.

Future efforts should be devoted to the swifts, with an emphasis on locating nesting areas and obtaining topotypes associated with tissue samples, sound recordings and photographs. These could then be used to clarify the identity of the swifts we saw and of nearby mainland populations.

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Appendix 1

Species detected during fieldwork on Bioko in 2016, at localities numbered as in Table 1 and Fig. 1. B = ringed by Biodiversity Initiative, K = specimen at University of Kansas Biodiversity Institute, L = specimen at Louisiana State University Museum of Natural Science, P = photographed, R = audio recording, and S = sight or auditory record only (not detected by other means).

	1	2	3	4	5	6	7	8	9	10
Podicipedidae										
Tachybaptus ruficollis Little Grebe							S			
Phalacrocoracidae										
Phalacrocorax africanus Long-tailed Cormorant								S	S	
Ardeidae										
Bubulcus ibis Cattle Egret	S			S						
Butorides striata Green-backed Heron								S	S	
Egretta garzetta Little Egret								S		
E. gularis Western Reef Heron	S			S				S	P	S
Ardea cinerea Grey Heron								S		
Threskiornithidae										
Bostrychia hagedash Hadada Ibis						S				S
Pandionidae										
Pandion haliaetus Osprey										S
Accipitridae										
Pernis apivorus European Honey Buzzard					P					
Macheiramphus alcinus Bat Hawk	P									
Milvus migrans aegyptius Yellow-billed Kite	S			S	S			S		
Haliaeetus vocifer River Eagle									P	
Gypohierax angolensis Palm-nut Vulture	S				P	S			S	
Circus aeruginosus Eurasian Marsh Harrier			P			S				
Accipiter tachiro African Goshawk					LPR					
Jacanidae										
Actophilornis africana African Jacana									P	
Scolopacidae										
Actitis hypoleucos Common Sandpiper	S							S	S	S
Tringa nebularia Greenshank								S		
Laridae										
Sterna maximus Royal Tern	S									
Anous stolidus Brown Noddy								P		
Columbidae										
Treron calva African Green Pigeon		S	S		P	S			S	
Turtur tympanistria Tambourine Dove	S	S			L	S			S	
Columba sjostedti Cameroon Olive Pigeon			S		S					

	1	2	3	4	5	6	7	8	9	10
C. livia Feral Pigeon	S									
Aplopelia larvata Lemon Dove			S							
Streptopelia semitorquata Red-eyed Dove	S				P		S			
Psittacidae										
Psittacus erithacus Grey Parrot				S	P	S	S		S	S
Musophagidae										
Corythaeola cristata Great Blue Turaco			S		S	S				
Tauraco macrorhynchus Yellow-billed Turaco		S	S		P	S	S			
Cuculidae										
Cuculus solitarius Red-chested Cuckoo						S		S	S	S
Chrysococcyx cupreus Emerald Cuckoo	S				S	R			S	S
C. klaas Klaas's Cuckoo	S		S						S	
C. caprius Didric Cuckoo	S				S					
Ceuthmochares aereus Yellowbill					S					S
Strigidae										
Bubo poensis Fraser's Eagle-Owl					PR	S				
Caprimulgidae										
Caprimulgus sp.									L	
Apodidae										
Rhaphidura sabini Sabine's Spinetail									S	
Schoutedenapus sp.					P					
Cypsiurus parvus Palm Swift	S			S						
Apus sp.					P	S			S	
A. apus Common Swift					S					
A. affinis Little Swift	S			KP	P					
Trogonidae										
Apaloderma vittatum Bar-tailed Trogon						P				
Alcedinidae										
Halcyon badia Chocolate-backed Kingfisher						P		S		S
H. senegalensis Woodland Kingfisher	S									S
Alcedo leucogaster White-bellied Kingfisher										KL
Coraciidae										
Eurystomus gularis Blue-throated Roller						P				
Lybiidae										
Pogoniulus scolopaceus Speckled Tinkerbird					P					
P. subsulphureus Yellow-throated Tinkerbird	P							S	S	S
P. bilineatus Yellow-rumped Tinkerbird		S	S		KLPR	S				S
Indicatoridae										
Indicator exilis Least Honeyguide						S				
Picidae										
Campethera nivosa Buff-spotted Woodpecker						S			KL	

	1	2	3	4	5	6	7	8	9	10
Dendropicos elliotii Elliot's Woodpecker							S			
Hirundinidae										
Psalidoprocne fuliginosa Mountain Saw-wing			S		LPR	K				
Hirundo abyssinica Lesser Striped Swallow	S			P						
H. preussi Preuss's Cliff Swallow				P						
H. aethiopica Ethiopian Swallow	P			P					S	
H. rustica Barn Swallow				S					S	
Motacillidae										
Motacilla clara Mountain Wagtail						S				S
Anthus trivialis Tree Pipit					P					
Pycnonotidae										
Andropadus tephrolaema Western Mountain Greenbul		S	S		KLP	S	S			
A. virens Little Greenbul	S				BKL	B	S	S	L	
A. curvirostris Plain Greenbul	S					S			S	S
A. gracilirostris Slender-billed Greenbul	S									
A. latirostris Yellow-whiskered Greenbul		S	S		BKLR	BR	S		S	
Phyllastrephus poensis Cameroon Olive Greenbul			S		KLR		S			
P. icterinus Icterine Greenbul								S	S	S
Bleda notatus Lesser Bristlebill					KL	B		S	L	S
Criniger calurus Red-tailed Greenbul					S	R		S		
Turdidae										
Stiphrornis erythrothorax Forest Robin					LK	BK		S	L	LK
Sheppardia bocagei Bocage's Akalat					BKLR	BR	S			
Cossyphicula roberti White-bellied Robin Chat					KLPR	BR				
Alethe diademata Fire-crested Alethe					KL	B		S	L	S
A. poliocephala Brown-chested Alethe					BKL	BS				
Neocossyphus poensis White-tailed Ant Thrush					L	B		S	L	
Stizorhina fraseri Rufous Flycatcher Thrush						R				
Turdus pelios African Thrush			S		KLR					
Sylviidae										
Bradypterus lopezi Evergreen-forest Warbler			R		S		S			
Acrocephalus arundinaceus Great Reed Warbler							R			
Urolais epichlorus Green Longtail			PR				R			
Schistolais leucopogon White-chinned Prinia							S			
Apalis nigriceps Black-capped Apalis					S					
A. rufogularis Buff-throated Apalis	S	S	S		R		S			
A. cinerea Grey Apalis					P	S	S			
Poliolais lopezi White-tailed Warbler					KLR	R	R			
Camaroptera superciliaris Yellow-browed Camaroptera	S									

	1	2	3	4	5	6	7	8	9	10
C. chloronota Olive-green Camaroptera		S	S		BKL	B	S			
Macrosphenus flavicans Yellow Longbill						R				
M. concolor Grey Longbill					S	S			S	S
Eremomela badiceps Rufous-crowned Eremomela	S									
Phylloscopus trochilus Willow Warbler			P		S		P			
P. herberti Black-capped Woodland Warbler					LPR	S	S			
Sylvia borin Garden Warbler					S					
Hylia prasina Green Hylia	S	S	S		KLPR	BR			S	S
Muscicapidae										
Muscicapa adusta African Dusky Flycatcher			S		S					
Monarchidae										
Elminia albiventris White-bellied Crested Flycatcher					KLR	PR				
Terpsiphone rufiventer Red-bellied Paradise Flycatcher		S	S		BKLP	BR	S	S	S	
Platysteiridae										
Dyaphorophyia castanea Chestnut Wattle-eye					KLPR	R			S	S
D. chalybea Black-necked Wattle-eye			S		KL	S				
Batis poensis Bioko Batis	S				PR					
Picathartidae										
Picathartes oreas Grey-necked Rockfowl						P				
Timaliidae										
Illadopsis rufipennis Pale-breasted Illadopsis					K				S	
I. cleaveri Black-capped Illadopsis					K	BKP				
Pseudoalcippe abyssinica African Hill Babbler			LPR		L		PR			
Nectariniidae										
Anthreptes rectirostris Green Sunbird					S					
A. seimundi Little Green Sunbird					L	BK				
Deleornis fraseri Fraser's Sunbird									S	S
Cyanomitra cyanolaema Blue-throated Brown Sunbird									S	
C. oritis Cameroon Sunbird			S		KLPR		S			
C. obscura Western Olive Sunbird	S	S			BKL	B	S	S	L	
Chalcomitra rubescens Green-throated Sunbird	S								S	
Hedydipna collaris Collared Sunbird	S				P	S		S		S
Cinnyris chloropygius Olive-bellied Sunbird	S	S	S		K				S	
C. minullus Tiny Sunbird	S				PR			S		
C. reichenowi Northern Double-collared Sunbird		S	LPR		BKLPR	B	S			
C. ursulae Ursula's Sunbird						S	S			
Zosteropidae										
Zosterops senegalensis Yellow White-eye					KLPR	S	S			
Speirops brunneus Fernando Po Speirops			LPR							

	1	2	3	4	5	6	7	8	9	10
Malaconotidae										
Laniarius poensis Mountain Sooty Boubou		S	S		LPR		S			
Oriolidae										
Oriolus nigripennis Black-winged Oriole						S				
Dicruridae										
Dicrurus modestus Velvet-mantled Drongo						S		S	S	
Corvidae										
Corvus albus Pied Crow	P			S	S		S	S	S	
Sturnidae										
Onychognathus walleri Waller's Starling					K	S	S			
Lamprotornis splendidus Splendid Glossy Starling	P									
Passeridae										
Passer griseus Northern Grey-headed Sparrow	S			S						
Ploceidae										
Ploceus nigricollis Black-necked Weaver					KL					
P. cucullatus Village Weaver	S			S	S				S	
P. albinucha Maxwell's Weaver					S		S		L	
P. bicolor Dark-backed Weaver					PR	S	S			
Euplectes capensis Yellow Bishop			P		S		P			
Estrildidae										
Nigrita canicapilla Grey-headed Nigrita	S				LP	K	S		S	
N. luteifrons Pale-fronted Nigrita	S				S	S				
N. fusconotus White-breasted Nigrita	S				P	S			S	
Nesocharis shelleyi Little Oliveback					S					
Cryptospiza reichenovii Red-faced Crimsonwing					KLR					
Mandingoa nitidula Green Twinspot					BKL					
Estrilda astrild Common Waxbill					BKLPR		P			
E. nonnula Black-crowned Waxbill			S		S					
Lonchura cucullata Bronze Mannikin	S			S	S					
L. bicolor Black-and-white Mannikin	S				S				S	
Viduidae										
Vidua macroura Pin-tailed Whydah					K					
Fringillidae										
Linurgus olivaceus Oriole Finch			LP		L		S			