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The birds of Gola Forest and Tiwai Island, Sierra Leone

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Summary

Recent surveys identified 294 species of birds in Gola Forest and the neighbouring Tiwai Island, of which 287 were recorded in Gola and 133 on Tiwai. These results bring the total number of species recorded in these areas to 327, of which 313 in Gola and 176 on Tiwai Island. Of these, 27 species were new records for these areas, and two are new to Sierra Leone. Around 80 species were restricted to forest habitats, of which nine were confined to primary forest. All species of global conservation concern that have previously been recorded from Gola were found, including significant numbers of White-breasted Guineafowl Agelastes meleagrides and Yellow-headed Picathartes Picathartes gymnocephalus, and several records of the endangered Rufous Fishing-owl Scotopelia ussheri. However, Western Wattled Cuckoo-shrike Lobotos lobatus, Nimba Flycatcher Melaenornis annamarulae and Gola Malimbe Malimbus ballmanni were very rare. The high avian diversity and healthy populations of several threatened species confirm the importance of Gola for bird conservation.

Résumé

Les oiseaux de la forêt de Gola et de l'île Tiwai, Sierra Leone. Des études récentes ont identifié 294 espèces d'oiseaux dans la forêt de Gola et l'île Tiwai située à proximité, dont 287 observées dans Gola et 133 sur Tiwai. Ces résultats portent le nombre total d'espèces enregistrées dans ces zones à 327, dont 313 dans Gola et 176 sur l'île Tiwai. Parmi elles, 27 espèces sont de nouvelles observations pour ces zones et deux sont nouvelles pour la Sierra Leone. Environ 80 espèces sont restreintes à des habitats forestiers, dont neuf confinées à la forêt primaire. Toutes les espèces considérées comme menacées au plan global qui avaient été antérieurement observées dans Gola l'ont été à nouveau, dont en nombres significatifs la Pintade à poitrine blanche Agelastes meleagrides et le Picathartes de Guinée Picathartes gymnocephalus, et plusieurs observations de la Chouette-pêcheuse rousse Scotopelia ussheri. Cependant,

l'Echenilleur caronculé *Lobotos lobatus*, le Gobemouche du Liberia *Melaenornis annamarulae* et le Malimbe de Gola *Malimbus ballmanni* ont été très rarement observés. La richesse de la diversité aviaire et des populations bien portantes de plusieurs espèces menacées confirment l'importance de Gola pour la conservation des oiseaux.

Introduction

The Upper Guinea forests of West Africa are remnants of a belt of lowland rainforest that stretched from Guinea and Sierra Leone eastwards to Ghana. These forests are one of the most important biodiversity hotspots in the world (Myers *et al.* 2000) and are a high priority for conservation. Isolation from the Lower Guinea or Congolian forest block resulted in significant levels of endemism, including around 15 forest birds.

Gola Forest is the largest area of lowland forest (c. 710 km²) left in Sierra Leone. Highlighted early on by ICBP (Collar & Stuart 1988) and subsequently listed as an Important Bird Area (Fishpool & Evans 2001) the forest holds a high proportion of the threatened and endemic species of the region and a good representation of Guinea-Congolian forest biome species. The forest is also important for other taxa, notably mammals, with populations of Chimpanzee *Pan troglodytes*, African Forest Elephant *Loxodonta (africana) cyclotis* and Pygmy Hippopotamus *Hexaprotodon liberiensis* (Davies *et al.* 1987, Lindsell *et al.* in press).

Preliminary surveys of the birds of Gola Forest were carried out by G. Field (reported in Allport *et al.* 1989), Davies (1987) and Allport *et al.* (1989). Access to Gola was limited during Sierra Leone's civil war (1991–2002) but Thompson (1997) undertook some work on Yellow-headed Picathartes in the area. After 2002, Gola became accessible again and a major conservation programme was initiated by the Royal Society for the Protection of Birds (RSPB), the Conservation Society of Sierra Leone (CSSL) and the Forest Department of Sierra Leone. A large-scale biodiversity survey was undertaken to re-assess the conservation status of Gola's wildlife after the war. In contrast to earlier work, which focused on a small number of study sites, the present survey covered all parts of the forest. In this paper we review the diversity and status of Gola's avifauna and provide an updated species list. We also include records from neighbouring Tiwai Island, since it forms part of the same landscape unit and is managed in close co-operation with the Gola Forest Programme. For each species recent information on status, distribution and habitat is given.

Study site and methods

Gola Forest is located in the Eastern Province of Sierra Leone, and consists of three forest blocks (Fig. 1): Gola West (67 km²) and Gola East (205 km²) which are

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contiguous, and Gola North (417 km²) and its Extension 2 (61 km²). Gola West and East are predominantly low-lying and swampy, whereas Gola North is more rugged with some hills reaching up to 500 m altitude. Tiwai Island (12 km²) is located in the Moa River northwest of Gola West and is low lying. Total annual rainfall in 2007 was 3117 mm with a single strong peak in July–August. The months of December to March are mostly dry. The main vegetation type is moist evergreen forest, with dominant tree species including *Heritiera utilis*, *Cynometra leonensis*, *Brachystegia leonensis* and *Parinari excelsa*. Additional habitats include swamp forest, forest regrowth and secondary forest, and farmbush which is often dominated by the invasive shrub *Chromolaena odorata*. Tiwai Island is covered in secondary forest, palm swamps and riverine forest. Dominant tree species on Tiwai include *Funtumia africana* and *Pentaclethra macrophylla* (Davies 1987).

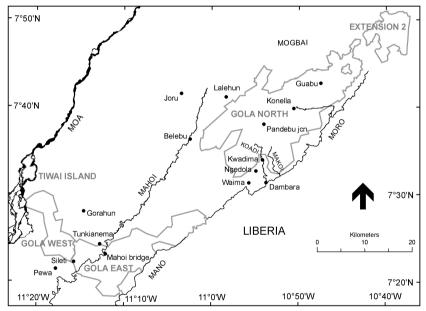


Figure 1. Gola Forest reserves and Tiwai Island showing locations mentioned in the text.

Various census methods were used during the bird survey. Point counts (Bibby *et al.* 2000) were conducted by EK over the entire forest. The points were spaced at 200 m intervals along a series of transects which followed a systematic segmented grid sampling design (Buckland *et al.* 2004) that was randomly superimposed onto the

area. Point counts were carried out in two dry seasons, starting in Dec 2005 and ending in Mar 2007. Six weeks of intensive searches, focusing on key species, were conducted in Jan–Mar 2007 (Dowsett-Lemaire & Dowsett 2008) along with nine days of mist-netting at five locations. Surveys of watercourses for riverine species were conducted in Nov–Dec 2006 by G. Anderson, G. Shorrock and F. Hunter, and a one-month survey of nest colonies of Yellow-headed Picathartes was undertaken in Oct–Nov 2006 by S. Wotton and T. Morris (summarised in Wotton *et al.* 2010). These records are on file as unpublished reports at the RSPB, and are referred to in the species list by the observers' initials, as are unpublished records by F. Dowsett-Lemaire and R. Dowsett. Additional records were made *ad hoc* by the authors and further information compiled from visiting birders and trip reports. Although no systematic survey was undertaken on Tiwai Island, several visits were made to the island by the authors and others. Sites mentioned in the text are shown in Fig. 1. Taxonomy and nomenclature follow Borrow & Demey (2001).

Results

During visits to 627 count points, of which 61 were in Gola West, 186 in Gola East, 333 in Gola North and 47 in Extension 2, 140 bird species were recorded. A further 122 species were recorded as ad hoc observations by the authors. Dowsett-Lemaire & Dowsett (2008) and Wotton et al. (2010) recorded an additional 32 species, bringing the total to 294 species in 57 families recorded during this survey in or close to Gola Forest and Tiwai Island. The presence of an additional five species needs further confirmation (Table 1). Including records from previous surveys results in a total of 313 species in Gola, of which 251 species have been recorded within the boundaries of the forest reserves. A total of 133 species were recorded on Tiwai, bringing the total for the island to 176. Species not recorded within the boundaries of the Gola reserves, including species recorded only on Tiwai Island, are enclosed in square brackets. The 14 species that were recorded only on Tiwai are indicated by a 1. A 2 indicates new records for the Gola area since the studies of the 1980s (see Introduction) and a 3 indicates the new species for Sierra Leone that were found during this survey (see Dowsett-Lemaire & Dowsett 2008, Lindsell et al. 2008). For each species, the 2009 IUCN Red List category is given, where NT = Near-Threatened, VU = Vulnerable, EN = Endangered and DD = Data Deficient. Species where no Red List category is mentioned are listed by IUCN as Least Concern (LC).

Podicipedidae

[¹Tachybaptus ruficollis Little Grebe. One record from Tiwai Island (Davies 1987).]

Phalacrocoracidae

Phalacrocorax africanus Long-tailed Cormorant. One immature bird on Mahoi River below Mahoi Bridge, Mar 2007; also recorded at Tiwai Island (Davies 1987).

Ardeidae

Ardea cinerea Grey Heron. Uncommon in open habitats around Gola and Tiwai.

[¹A. goliath Goliath Heron. Recorded on Tiwai Island (Davies 1987).]

[²Nycticorax nycticorax Black-crowned Night Heron. One bird flying over a marsh, 2 km south of Gola East reserve boundary (FDL & RD).]

[Bubulcus ibis Cattle Egret. One record from Lalehun (Allport et al. 1989). Common in rice paddies around Kenema; also Tiwai Island (Davies 1987).]

[¹Egretta gularis Western Reef Egret. Listed for Tiwai Island (Davies 1987) and frequent in rice fields around Kenema.]

[¹E. intermedia Intermediate Egret. One bird flying over Tiwai Island, Nov 2006 (SW & TM).]

[E. alba Great Egret. One bird flying over Gorahun, Jan 2006. Also recorded at Tiwai Island (Davies 1987).]

Butorides striata Green-backed Heron. Uncommon in riverine forest along small and large rivers; recorded in Gola East, North, and Tiwai Island.

Tigriornis leucolophus White-crested Tiger Heron. At least 12 records during the current survey. Generally uncommon along small, shaded forest streams throughout; locally frequent along the Makoi and Kwadi Rivers south of Gola North.

Ciconiidae

Ciconia episcopus Woolly-necked Stork. Uncommon to frequent at ecotone of forest and open habitats, usually near rivers. Recorded from Gola East, North, and Tiwai Island. A pair attending a nest near Gorahun, Jan 2008. At Tiwai Island, a pair at a nest with at least one nestling, Mar 2008 (R. Demey *in litt*.).

Threskiornithidae

Bostrychia hagedash Hadada Ibis. Common in riverine forest along Mahoi River but uncommon elsewhere. Frequent along the Moa River around Tiwai Island.

[1,2]B. olivacea Olive Ibis. Uncommon on Tiwai Island. Four seen together, Oct 2005; one seen alongside Hadada Ibis, Jun 2006.]

Anatidae

[Dendrocygna viduata White-faced Whistling Duck. Uncommon in rice paddies around Gola West; also Tiwai Island (Davies 1987).]

Pteronetta hartlaubi Hartlaub's Duck. Frequent along streams and rivers throughout, especially the Mahoi, including Tiwai Island.

[¹Plectropterus gambensis Spur-winged Goose. Recorded at Tiwai Island by Davies (1987).]

Accipitridae

²Haliaeetus vocifer African Fish Eagle. Uncommon to rare along large forest rivers. Two records, Mahoi River (Gola East) and Moa River (Tiwai Island).

[1Pandion haliaetus Osprey. Recorded at Tiwai Island by Davies (1987).]

Gypohierax angolensis Palm-nut Vulture. Common throughout Gola and Tiwai, largely confined to watercourses with Raphia palms.

Polyboroides typus African Harrier Hawk. Common in all habitats throughout, including Tiwai Island.

[Necrosyrtes monachus Hooded Vulture. Uncommon, usually around human habitation around Gola and Tiwai.]

[Milvus migrans Black Kite. Uncommon to frequent around human habitation around Gola and Tiwai. All records refer to M. m. parasitus.]

[Circaetus cinereus Brown Snake Eagle. Vagrant from the savanna zone: recorded by Field (Allport et al. 1989); one photographed between Zimmi and Kenema by N. Borrow (in litt.), Feb 2008.]

[Aviceda cuculoides African Cuckoo Hawk. One record in secondary forest on Tiwai Island; recorded in small numbers in farmbush and cocoa plantation around Gola by Allport et al. (1989).]

Macheiramphus alcinus Bat Hawk. Recorded in Gola North by Allport et al. (1989) and Tiwai Island, Feb 2008 (N. Borrow in litt.).

Dryotriorchis spectabilis Congo Serpent Eagle. Generally uncommon in open-canopy forest, riverine forest, forest edges and clearings throughout, including Tiwai, though frequently recorded near Pewa and Sileti Camp. Calling mostly Jan–Feb; mating observed at Pewa, Sep 2005.

Urotriorchis macrourus Long-tailed Hawk. Four records in primary and secondary forest in Gola East and North, including a family with fledged young. Also known from Tiwai Island (Davies 1987).

[Kaupifalco monogrammicus Lizard Buzzard. Common in farmbush around Gola and Tiwai though not inside forest.]

Accipiter erythropus Red-thighed Sparrowhawk. Uncommon at forest edges and clearings; recorded in Gola West, East and North. Recorded at Tiwai Island by Davies (1987).

A. tachiro African Goshawk. Uncommon to frequent in secondary forest, forest edges and farmbush throughout, including Tiwai Island.

A. melanoleucus Black Sparrowhawk. Uncommon to frequent in secondary forest, forest edge and farmbush; Gola East and North. Also recorded at Tiwai Island (Davies 1987).

Pernis apivorus European Honey Buzzard. Uncommon Palaearctic migrant in open forest in Gola East, North, and Tiwai Island.

[¹Butastur rufipennis Grasshopper Buzzard. Recorded at Tiwai Island by Davies (1987).]

[Buteo auguralis Red-necked Buzzard. Uncommon intra-African migrant in farmbush and forest edge, Gola North and Extension 2.]

Stephanoaetus coronatus Crowned Eagle. Uncommon but widespread, in low numbers throughout Gola and Tiwai Island. Calling birds recorded Nov–Feb at least. A nesting bird found in Dec 2006.

Hieraaetus ayresii Ayres's Hawk Eagle. One record of a single bird (white-headed morph) flying over Konella, Gola North, Dec 2006.

[H. spilogaster African Hawk Eagle. Vagrant from the savanna zone; one record in farmbush by Allport et al. (1989).]

Spizaetus africanus Cassin's Hawk Eagle. Uncommon; Gola East, North and Tiwai Island. Most records from the southwestern part of Gola North.

Phasianidae

- ²Francolinus ahantensis Ahanta Francolin. Uncommon at forest edge and clearings, recorded in Gola East and North.
- [F. bicalcaratus Double-spurred Francolin. Common in dry farmbush around Gola and Tiwai, often seen along roadsides. Not in forest.]
- *F. lathami* Latham's Forest Francolin. Common throughout Gola; also on Tiwai Island (Davies 1987). Recorded mainly in primary and secondary forest, but also in farmbush at the forest edge where there was dense cover.

Numididae

Agelastes meleagrides White-breasted Guineafowl (VU). Uncommon in primary and secondary forest in Gola East and North though locally frequent in central Gola North (Mogbai area). Also known from Tiwai Island (Davies 1987) with many recent records but not recorded there during the present survey. More than ten records were made in Gola, including a group of 24 birds on one occasion.

Guttera pucherani Crested Guineafowl. Uncommon to frequent in primary and secondary forest throughout, including Tiwai Island.

Rallidae

Sarothrura pulchra White-spotted Flufftail. Common but localised throughout, including Tiwai Island but most records from Gola West and East, in swamps inside forest or along forest edges, always in rank herbage or other dense undergrowth.

Canirallus oculeus Grey-throated Rail. Uncommon in Gola East and North along small, shaded forest streams with dense cover on riverbanks, in primary and secondary forest. Himantornis haematopus Nkulengu Rail. Uncommon to frequent throughout Gola and Tiwai. Calling throughout the dry season.

[²Amaurornis flavirostra Black Crake. Recorded from rice paddies and swamps around Gola.]

Heliornithidae

Podica senegalensis African Finfoot. Locally frequent on watercourses throughout, including Tiwai Island.

Glareolidae

[¹-²Pluvianus aegyptius Egyptian Plover. Locally frequent along Moa River. Two birds on different sand banks in Moa River at Tiwai Island, Mar 2005. Five birds recorded at Tiwai and a pair at the ferry crossing to the south of the island, Feb 2008 (N. Borrow *in litt.*).]

[¹Glareola pratincola Collared Pratincole. Listed by Davies (1987) for Tiwai Island.] G. nuchalis Rock Pratincole. Local, restricted to large rocky rivers; recorded on Mahoi River, Jan 2006, and Moa River at Tiwai Island.

Charadriidae

Vanellus albiceps White-headed Lapwing. Local in Gola, restricted to large rivers with sandbars: on Mano River, Jan 2006; Mogbai River close to the Moro River, Dec

2006; common on Moa River at Tiwai Island, Nov 2006 (R. Demey in litt.; N. Borrow in litt.).

Scolopacidae

²Tringa ochropus Green Sandpiper. Common Palaearctic migrant, recorded from the Mahoi River and Konella. Frequently flushed from small streams and marshes in farmbush around the forest.

²Actitis hypoleucos Common Sandpiper. Uncommon to frequent Palaearctic migrant on various watercourses: most records from Mahoi River, but also at Mano, Mogbai and the Moa River at Tiwai Island.

Rynchopidae

[¹Rynchops flavirostris African Skimmer. Listed for Tiwai Island by Davies (1987).]

Columbidae

Treron calva African Green Pigeon. Common in primary and secondary forest and forest edges throughout, including Tiwai Island.

Columba iriditorques Western Bronze-naped Pigeon. Common in primary forest throughout; also in secondary forest and farmbush. Recorded at Tiwai (Davies 1987).

C. unicincta Afep Pigeon. Uncommon and localised in primary and secondary forest, Gola East and North.

Aplopelia larvata Lemon Dove. Two records in primary forest: Gola East, Nov 2006; Gola North, Feb 2007 (FDL & RD).

Turtur tympanistria Tambourine Dove. Common in secondary forest throughout Gola and Tiwai; frequent in primary forest, farmbush and other habitats.

T. brehmeri Blue-headed Wood Dove. Abundant in primary and secondary forest throughout, including Tiwai Island.

[T. afer Blue-spotted Wood Dove. Frequent in farmbush and secondary growth throughout, including Tiwai Island.]

Streptopelia semitorquata Red-eyed Dove. Uncommon to frequent in secondary forest, forest edges and clearings throughout Gola and Tiwai.

Psittacidae

^{2,3}Agapornis swindernianus Black-collared Lovebird. Heard once, calling over the canopy of primary forest near Konella (Dowsett-Lemaire & Dowsett 2008). This was the first record for Sierra Leone. Sightings by Allport *et al.* (1989) of lovebirds flying over the forest most likely also refer to this species.

[²A. pullarius Red-headed lovebird. Small groups were seen in Kenema, Jan 2008. A single lovebird flying over farmbush near Gola North was probably this species (SW & TM).]

Psittacus erithacus Grey Parrot (NT). Frequent throughout Gola and Tiwai, in primary and secondary forest, forest edge and farmbush; most records from the northeastern part of Gola East.

Musophagidae

Tauraco macrorhynchus Yellow-billed Turaco. Common in primary and secondary forest throughout, including Tiwai Island.

[²T. persa Green Turaco. One bird calling, 2 km south of Gola East (FDL & RD). Not inside the forest, where it is replaced by T. macrorhynchus.]

[Crinifer piscator Western Grey Plantain-eater. A few sightings in farmbush by Allport et al. (1989), frequent along road between Joru and Gorahun.]

Corythaeola cristata Great Blue Turaco. Common at forest edges and secondary forest throughout Gola and Tiwai.

Cuculidae

Chrysococcyx klaas Klaas's Cuckoo. Frequent in secondary forest, forest edges and farmbush throughout.

- [C. caprius Didric Cuckoo. Rare in farmbush around Gola North. Not in forest. One on Tiwai Island, February 2008 (N. Borrow in litt.).]
- C. cupreus African Emerald Cuckoo. Frequent throughout Gola and Tiwai in a wide range of habitats, mostly primary and secondary forest but also farmbush and large clearings with some large trees.
- C. flavigularis Yellow-throated Cuckoo. Two records in secondary forest near Lalehun, Feb 2006 and Feb 2007, where also recorded by Allport *et al.* (1989); and one record on Tiwai Island, Sep 2005.

Oxylophus levaillantii Levaillanti's Cuckoo. Uncommon intra-African migrant, recorded from large clearings and farmbush in Gola East and North. One seen in mixed-species flock in forest, Gola North. Also recorded at Tiwai Island (Davies 1987).

Cuculus canorus Common Cuckoo. Uncommon Palaearctic migrant, recorded from Gola West, East and North; also Tiwai Island (Davies 1987).

- C. solitarius Red-chested Cuckoo. Frequent throughout Gola and Tiwai in primary and secondary forest and forest edges.
- 2C . clamosus Black Cuckoo. Uncommon in Gola East, North and Tiwai Island, in secondary habitats such as farmbush, clearings or open-canopy forest. Mostly silent, suggesting it is largely a non-breeding migrant in Gola.

Cercococcyx mechowi Dusky Long-tailed Cuckoo. Recorded once in Gola North, May 2006; a probable record in Gola West; Dec 2005.

C. olivinus Olive Long-tailed Cuckoo. Frequent in primary forest in Gola East and North.

[Pachycoccyx audeberti Thick-billed Cuckoo. One bird in very degraded forest near Lalehun (FDL & RD), where also observed by Allport et al. (1989).]

Ceuthmochares aereus Yellowbill. Uncommon to frequent throughout, including Tiwai Island, preferring dense tangles and lianes in primary and secondary forest and forest edges.

Centropus senegalensis Senegal Coucal. Frequent in dry farmbush around Gola and Tiwai; not in forest. Inside Gola only recorded from a large clearing at Gombu, Gola North.

C. leucogaster Black-throated Coucal. Frequent in dense secondary growth and forest edges throughout Gola and Tiwai.

Strigidae

Scotopelia ussheri Rufous Fishing Owl (EN). Uncommon and local along at least four and possibly six different shaded streams in primary and secondary forest in Gola East and North; possibly most common along Kwadi River where a pair was found, Mar 2007. Prefers smaller streams than *S. peli*. On Tiwai Island seen in Mar 2008 (AMS and R. Demey).

S. peli Pel's Fishing Owl. Uncommon and localised along large watercourses: the Mahoi in Gola East, the Mogbai in Gola North, the Magboi in Extension 2 and the Moa River at Tiwai Island.

Glaucidium tephronotum Red-chested Owlet. Frequent in primary and secondary forest and forest edges in Gola East, North and Extension 2; probably overlooked in Gola West.

Strix woodfordii African Wood Owl. Common throughout Gola and Tiwai, found in all wooded areas, including primary forest, forest edge and villages.

Bubo poensis Fraser's Eagle Owl. Uncommon in secondary forest, forest edge and clearings around Gola East, North and Tiwai Island.

- B. leucostictus Akun Eagle Owl. Uncommon in primary forest, forest edge and plantations in and around Gola East and Tiwai Island.
- B. shelleyi Shelley's Eagle Owl (NT). Recorded by Allport et al. (1989). Two probable records in primary forest in Gola North, Dec 2006 (GA) and Feb 2007 (FDL & RD).
- [B. africanus Spotted Eagle Owl. Uncommon in farmbush around Gola North; not in forest.]

Caprimulgidae

^{2,3}Caprimulgus binotatus Brown Nightjar. Frequent in primary and secondary forest and forest edges in Gola West, East and North (Lindsell *et al.* 2008). This was the first record for Sierra Leone. Also on Tiwai, where heard in Mar 2008 (AMS and R. Demey) and reported by N. Borrow (*in litt.*).

[²C. nigriscapularis Black-shouldered Nightjar. Two records at the same location in farmbush at Lalehun, Feb 2006 and Feb 2007. Reported near Tiwai Island, Feb 2008, and near Gola West (N. Borrow *in litt.*).]

[1,2C. europaeus European Nightjar. Photographed near Tiwai Island, Feb 2008 (N. Borrow (in litt.).]

[C. climacurus Long-tailed Nightjar. Recorded in small numbers by Allport et al. (1989); one possible record in open farmbush at Belebu.]

[C. inornatus Plain Nightjar. Recorded in small numbers in farmbush by Allport et al. (1989).]

[Macrodipteryx longipennis Standard-winged Nightjar. Allport et al. (1989) recorded two displaying males and two females near Lalehun in Jan.]

Apodidae

Rhaphidura sabini Sabine's Spinetail. Frequent throughout, often over large rivers or clearings.

Neafrapus cassini Cassin's Spinetail. Uncommon to rare, Gola North only.

Telacanthura melanopygia Black Spinetail. Uncommon and localised, singly or in small groups at forest clearings and rivers in Gola East, North, and Tiwai Island (SW, TM).

[Apus pallidus Pallid Swift. Palaearctic migrant, recorded in farmbush by Allport et al. (1989).]

[A. affinis Little Swift. Two records from farmbush near Gola North (SW & TM).]

²A. barbatus African Black Swift. Frequently recorded flying over forest and farmbush. It is uncertain whether groups of large black swifts identified as Common Swift A. apus were correctly identified or confused with A. barbatus (Dowsett-Lemaire & Dowsett 2008).

[A. caffer White-rumped Swift. One record of a single bird near Tiwai Island, Mar 2005. Allport et al. (1989) recorded two birds over farmbush.]

²A. batesi Bates's Swift. Uncommon, recorded in groups of up to ten in Gola West, East and North; probably also Tiwai Island (SW & TM).

A. aequatorialis Mottled Swift. Rare in Gola West and East.

[A. melba Alpine Swift. One record of a single bird by Allport et al. (1989).]

[Cypsiurus parvus African Palm Swift. Rare around human habitation near Gola North and Extension 2.]

Trogonidae

Apaloderma narina Narina's Trogon. Frequent in primary forest and uncommon in secondary forest in Gola North; uncommon in Gola West and East where mainly in riverine forest.

Alcedinidae

Ceyx lecontei African Dwarf Kingfisher. Uncommon but probably overlooked in understorey and edge of primary and secondary forest in Gola East and North.

C. pictus African Pygmy Kingfisher. Uncommon to frequent intra-African migrant; although normally a species of open habitats, it was mistnetted inside the forest near Sileti, Tunkia Nema and Konella (FDL & RD). Recorded at Tiwai Island and Gola North by N. Borrow (in litt.).

Alcedo leucogaster White-bellied Kingfisher. Uncommon to frequent along shaded forest streams in Gola East, North, and Extension 2. Listed for Tiwai Island by Davies (1987).

A. cristata Malachite Kingfisher. Uncommon in rice paddies around Gola; also in the forest along large open rivers such as the Mahoi River in Gola East.

A. quadribrachys Shining-blue Kingfisher. Common on all larger watercourses throughout Gola and Tiwai.

Halcyon badia Chocolate-backed Kingfisher. Common in primary and secondary forest throughout Gola and Tiwai.

H. senegalensis Woodland Kingfisher. Uncommon to frequent in farmbush in and around Gola West, East, North and Tiwai Island (SW & TM); in the reserves, restricted to large clearings such as Sileti, Konella and Gombu.

- [H. leucocephala Grey-headed Kingfisher. Rare intra-African migrant, recorded occasionally in farmbush near Belebu.]
- H. malimbica Blue-breasted Kingfisher. Frequent to common in primary and secondary forest, forest edge and farmbush throughout Gola and Tiwai Island.

Megaceryle maxima Giant Kingfisher. Uncommon and local along large, rocky rivers in Gola East and North. Recorded at Tiwai Island by Davies (1987).

Meropidae

Merops gularis Black Bee-eater. Frequent in farmbush and forest edges throughout Gola and Tiwai; inside the reserves, only in large clearings or open habitats such as Mahoi Bridge.

M. muelleri Blue-headed Bee-eater. Uncommon in open-canopy forest and small forest clearings in Gola East and North.

²M. nubicus Northern Carmine Bee-eater. Vagrant from Sahel and savanna zones; one record in Gola East, Jan 2007 (FDL & RD).

[*M. pusillus* Little Bee-eater. Uncommon in farmbush around Gola and Tiwai; not in forest.] *M. albicollis* White-throated Bee-eater. Common intra-African migrant in primary and secondary forest throughout Gola and Tiwai.

Coraciidae

Eurystomus glaucurus Broad-billed Roller. Common in farmbush and forest edge around Gola North. Recorded at Tiwai Island by Davies (1987).

E. gularis Blue-throated Roller. Uncommon to frequent in canopy of primary and secondary forest throughout, including Tiwai Island.

[Coracias abyssinicus Abyssinian Roller. Recorded at Lalehun by Allport et al. (1989).]

Bucerotidae

Tockus camurus Red-billed Dwarf Hornbill. Common in primary and secondary forest throughout Gola and Tiwai.

- T. hartlaubi Black Dwarf Hornbill. Uncommon in primary and secondary forest throughout Gola and Tiwai.
- T. fasciatus African Pied Hornbill. Common in farmbush and forest edge throughout Gola and Tiwai; not normally in primary forest, although present in large clearings such as Konella.

Bycanistes fistulator Piping Hornbill. Frequent to common in degraded forest, forest edge and clearings in Gola West and East; uncommon in Gola North. Also on Tiwai Island.

B. cylindricus Brown-cheeked Hornbill (NT). Frequent to common but rather local; mostly in primary forest and its edge, but also secondary forest and farmbush. Most records from northeastern Gola East and eastern Gola North; rare in Gola West. Also on Tiwai Island.

Ceratogymna elata Yellow-casqued Hornbill (NT). Common to abundant in primary and secondary forest throughout Gola and Tiwai.

C. atrata Black-casqued Hornbill. Locally frequent to common in primary forest; its distribution in Gola closely resembles that of B. cylindricus. Recorded on Tiwai Island by Davies (1987).

Tropicranus albocristatus White-crested Hornbill. Frequent in primary forest throughout Gola and Tiwai; also enters secondary forest and occasionally dense farmbush.

Capitonidae

Pogoniulus scolopaceus Speckled Tinkerbird. Frequent in farmbush, secondary forest and forest edge throughout Gola and Tiwai.

P. subsulphureus Yellow-throated Tinkerbird. Common in primary and secondary forest, forest edge and farmbush throughout Gola and Tiwai.

P. atroflavus Red-rumped Tinkerbird. Common in primary and secondary forest throughout Gola and Tiwai.

Buccanodon duchaillui Yellow-spotted Barbet. Common to abundant in primary and secondary forest, forest edge and clearings throughout Gola and Tiwai.

Tricholaema hirsuta Hairy-breasted Barbet. Frequent in primary and secondary forest, forest edge and clearings throughout Gola and Tiwai.

Gymnobucco calvus Naked-faced Barbet. Uncommon and local throughout Gola and Tiwai; locally common in secondary forest near Sileti compound in Gola East.

G. peli Bristle-nosed Barbet. Recorded by Allport et al. (1989) in cocoa plantation, farmbush and logged forest.

[Lybius vieilloti Vieillot's Barbet. A single record by Allport et al. (1989) in farmbush.]

Trachyphonus purpuratus Yellow-billed Barbet. Uncommon in farmbush, forest edge and secondary forest in Gola West, East, North and Tiwai Island.

Indicatoridae

[²Indicator indicator Greater Honeyguide. A pair seen in farmbush near Gola North (SW & TM).]

I. maculatus Spotted Honeyguide. Uncommon to frequent in primary and secondary forest in Gola West, East and North and Tiwai Island.

I. conirostris Thick-billed Honeyguide. Uncommon in riverine and primary forest in Gola East (Mahoi River) and North.

I. willcocksi Willcocks's Honeyguide. Uncommon in tall secondary forest and forest edge in Gola East (FDL & RD) and North (GA & GS); also Tiwai Island.

Melichneutes robustus Lyre-tailed Honeyguide. Frequent in Gola North and Extension 2; not recorded in Gola West and East. Largely restricted to primary forest, with few records from secondary forest.

Melignomon eisentrauti Yellow-footed Honeyguide (DD). Uncommon in primary and secondary forest, and riverine forest-floodplain mosaic: Gola West, Sep 2005; Gola East, Feb 2007 (FDL & RD); Gola North, Feb–Mar 2007 (FDL & RD); Tiwai Island, Oct 2005. *Prodotiscus insignis* Cassin's Honeybird. One in a large clearing at Konella. Two records by Allport *et al.* (1989), of which one in forestry plantation near Gola North. Recorded in Gola East and at Tiwai Island, Feb 2008 (N. Borrow *in litt.*).

Picidae

Campethera maculosa Little Green Woodpecker. Uncommon to frequent in primary and secondary forest throughout Gola and Tiwai.

C. caroli Brown-eared Woodpecker. Frequent in understorey of primary forest throughout, but especially Gola North; occasionally recorded in secondary forest and farmbush. C. nivosa Buff-spotted Woodpecker. Frequent in understorey of primary and secondary forest throughout Gola and Tiwai.

Dendropicos gabonensis Gabon Woodpecker. Uncommon to frequent, mostly in secondary forest, clearings and farmbush in Gola North and Tiwai Island.

[D. fuscescens Cardinal Woodpecker. One seen in Belebu. A single record by Allport et al. (1989) in farmbush.]

D. pyrrhogaster Fire-bellied Woodpecker. Frequent to locally common at forest edge and in secondary forest throughout Gola and Tiwai; occasionally in primary forest.

Eurylaimidae

Smithornis capensis African Broadbill. One in logged forest (Allport et al. 1989).

S. rufolateralis Rufous-sided Broadbill. Frequent to locally common in primary forest, especially eastern Gola North and Extension 2; rare to uncommon in secondary forest and in Gola West and East. Recorded at Tiwai Island by Davies (1987).

Pittidae

[¹*Pitta angolensis* African Pitta. Recorded at Tiwai Island by Davies (1987). Two records of probably this species by Allport *et al.* (1989) in central Gola North.]

Hirundinidae

Riparia riparia Common Sand Martin. Rare Palaearctic migrant, recorded from Gola East, North and Tiwai Island.

Hirundo nigrita White-throated Blue Swallow. Frequent on large, sunlit rivers; usually in pairs, recorded on the Mahoi, Mano, Moro and Moa Rivers (Tiwai Island). Nesting on Mahoi, Jan 2008.

H. rustica Barn Swallow. Common Palaearctic migrant, in large numbers throughout Gola and Tiwai Island.

[²*H. lucida* Red-chested Swallow. Frequent in farmbush around Gola. A few *Hirundo* sp. in a large forest clearing in Gola East were probably this species.]

[H. abyssinica Lesser Striped Swallow. Uncommon in farmbush areas near Gola North. Also recorded at Tiwai Island (Davies 1987).]

[H. semirufa Rufous-chested Swallow. One record, a group of \geq 10 flying over farmbush near Gola North (SW & TM).]

²H. preussi Preuss's Cliff Swallow. Uncommon at the Sileti compound, Belebu and Konella.

[Delichon urbica Common House Martin. Recorded in farmbush by Allport et al. (1989).] Psalidoprocne nitens Square-tailed Saw-wing. Frequent to common throughout Gola and Tiwai, usually in small groups over clearings and at forest edge.

[²P. obscura Fanti Saw-wing. One bird in a mixed species flock with *Hirundo rustica*, *Rhaphidura sabini* and *Apus apus/barbatus*, near Gola West, Jan 2006.]

Motacillidae

Anthus trivialis Tree Pipit. Recorded in farmbush, cocoa plantation and logged forest by Allport et al. (1989).

[¹Motacilla aguimp African Pied wagtail. Common on Tiwai Island and along adjacent Moa River.]

M. clara Mountain Wagtail. Frequent to common on rocky watercourses throughout Gola and Tiwai.

M. flava Yellow Wagtail. Uncommon Palaearctic migrant, Gola East and Gola North.

Campephagidae

Coracina azurea Blue Cuckoo-shrike. Frequent to locally common in Gola West, East, North and Tiwai Island; mostly in primary forest, occasionally in secondary forest and at forest edges.

Campephaga phoenicea Red-shouldered Cuckoo-shrike. Uncommon intra-African migrant: two records in clearings and forest edge in Gola North, Dec 2006 and Feb 2007; three records near Lalehun and at Tiwai Island, Feb 2008 (N. Borrow *in litt.*).

C. quiscalina Purple-throated Cuckoo-shrike. Uncommon at forest edge and in secondary forest in Gola East and Gola North.

Lobotos lobatus Western Wattled Cuckoo-shrike (VU). Two records from the southern part of Gola North in primary forest and in open-canopy forest near Belebu.

Pvcnonotidae

Andropadus virens Little Greenbul. Common at forest edges, clearings and shrubby farmbush throughout Gola and Tiwai; absent from primary or tall secondary forest.

A. gracilis Little Grey Greenbul. Common in secondary forest throughout Gola and Tiwai; not in primary forest.

A. curvirostris Cameroon Sombre Greenbul. Frequent to common in understorey of primary and secondary growth and at forest edges.

A. ansorgei Ansorge's Greenbul. Common in upper levels of primary and secondary forest throughout Gola and Tiwai.

A. gracilirostris Slender-billed Greenbul. Frequent to common in canopy of primary and secondary forest, forest edges and farmbush throughout Gola and Tiwai.

A. latirostris Yellow-whiskered Greenbul. Common to abundant in primary and secondary forest throughout Gola and Tiwai.

[Pycnonotus barbatus Common Bulbul. Common around human habitation around Gola and Tiwai Island.]

Chlorocichla simplex Simple Leaflove. Common in low secondary growth, farmbush and forest edge throughout. Inside the reserves restricted to large clearings, such as Sileti, Konella and Gombu.

Thescelocichla leucopleura Swamp Palm Bulbul. Locally common throughout Gola and Tiwai, usually in monospecific groups in swampy areas with *Raphia* palms.

Baeopogon indicator Honeyguide Greenbul. Common in primary and secondary forest throughout, also at forest edges.

Phyllastrephus icterinus Icterine Greenbul. Common to abundant in primary and secondary forest throughout Gola and Tiwai.

P. albigularis White-throated Greenbul. Frequent to locally common in secondary forest in Gola West, East and North (Dowsett-Lemaire & Dowsett 2008); also on Tiwai Island.

[*P. baumanni* Baumann's Greenbul. Two records: in low regrowth dominated by *Chromolaena odorata* south of Sileti, and in similar habitat near Tunkia Nema (Dowsett-Lemaire & Dowsett 2008).]

Calyptocichla serina Golden Greenbul. Uncommon to frequent in canopy of mostly secondary forest in Gola West and North.

Ixonotus guttatus Spotted Greenbul. Uncommon to frequent in canopy of mostly secondary but also primary forest in Gola West, East and North.

Nicator chloris Western Nicator. Common in dense tangles at low and mid-levels in primary and secondary forest; also regularly recorded at forest edge and in farmbush. Throughout Gola and Tiwai.

Criniger calurus Red-tailed Greenbul. Frequent to common in understorey of primary and secondary forest in Gola West, East and North; also Tiwai Island.

C. barbatus Western Bearded Greenbul. Common in lower strata of primary forest throughout; less common in secondary forest.

C. olivaceus Yellow-bearded Greenbul (VU). Frequent in primary forest in Gola East, North and Extension 2; uncommon in secondary forest.

Bleda eximia Green-tailed Bristlebill (VU). Uncommonly recorded in primary and secondary forest throughout Gola and Tiwai; rather silent, and mist-netting suggested that it is probably more common than the aural records indicated.

B. canicapilla Grey-headed Bristlebill. Common to abundant in understorey of primary and secondary forest throughout Gola and Tiwai.

B. syndactyla Red-tailed Bristlebill. Frequent to common in lower strata of primary and secondary forest throughout Gola and Tiwai.

Turdidae

Zoothera princei Grey Ground Thrush. One bird observed in primary forest in Gola East (Allport et al. 1989).

[Turdus pelios African Thrush. Recorded in farmbush (Allport et al. 1989).]

Stiphrornis erythrothorax Forest Robin. Common in understorey of primary and secondary forest and forest edge throughout Gola and Tiwai.

Sheppardia cyornithopsis Lowland Akalat. Two records: in swamp forest in Gola East, Nov 2005, and in primary forest in Gola North, Dec 2006 (GA & GS).

Alethe diademata Fire-crested Alethe. Common throughout Gola and Tiwai. Recorded in primary and secondary forest; less common at forest edge and in farmbush.

A. poliocephala Brown-chested Alethe. Uncommon and local in primary forest in Gola East and North.

Neocossyphus poensis White-tailed Ant Thrush. Frequent in understorey of primary and secondary forest throughout Gola and Tiwai.

Stizorhina finschi Finsch's Flycatcher Thrush. Common throughout Gola and Tiwai, especially in primary forest; also in secondary forest and at forest edge.

[Luscinia megarhynchos Common Nightingale. Palaearctic migrant, recorded once in forest regrowth near Lalehun (FDL & RD).]

Cercotrichas leucosticta Forest Scrub Robin. Rare to uncommon in primary and secondary forest in Gola East and North.

[Saxicola rubetra Whinchat. Recorded in farmbush near Gola North (Allport et al. 1989).]

Svlviidae

[Melocichla mentalis African Moustached Warbler. Rare to uncommon in rank herbage; recorded at Lalehun (SW & TM, FDL & RD) and near Pewa.]

²Acrocephalus scirpaceus European Reed Warbler. Palaearctic migrant, recorded once at Konella, Dec 2006 (GA & GS).

Hippolais polyglotta Melodious Warbler. Uncommon Palaearctic migrant, recorded at a large clearing at Gombu (EK) and in forest regrowth near Lalehun (FDL & RD), both in Feb 2007.

Sylvia borin Garden Warbler. Palaearctic migrant, recorded once in farmbush of Gombu clearing, Feb 2007.

[S. atricapilla Blackcap. One in a forestry plantation (Allport et al. 1989).]

Phylloscopus sibilatrix Wood Warbler. Uncommon Palaearctic migrant, recorded in primary forest near Konella, Dec 2006, and in clearing at Gombu, Feb 2007.

P. trochilus Willow Warbler. Uncommon Palaearctic migrant. Recorded at Konella, Dec 2006, and Gombu clearing, Feb 2007. Also Tiwai Island, Feb 2008 (N. Borrow *in litt.*).

Hylia prasina Green Hylia. Common in primary and secondary forest, forest edge and clearings throughout Gola and Tiwai; mostly where canopy opened such as by tree-falls. *Eremomela badiceps* Rufous-crowned Eremomela. Uncommon in primary and secondary forest in Gola North.

Sylvietta virens Green Crombec. Frequent in farmbush, forest edge and large clearings in and around Gola West, East and North. Rare inside the forest.

S. denti Lemon-bellied Crombec. One record in canopy of large tree at Konella clearing, Dec 2006 (GA & GS).

[Hypergerus atriceps Oriole Warbler. Listed by Field (Allport et al. 1989, p. 81).]

Hyliota violacea Violet-backed Hyliota. Uncommon. A pair near Lalehun, Nov 2006 (SW & TM) and a small group in the Konella clearing, Dec 2006 (GA, GS, EK). A group of ≥4 birds recorded in Gola East, Dec 2006 (J. Hornbuckle *in litt*.).

Camaroptera superciliaris Yellow-browed Camaroptera. Uncommon to locally frequent in dense undergrowth in farmbush, secondary scrub and floodplains throughout.

C. chloronota Olive-green Camaroptera. Uncommon to locally frequent in dense tangles in moist farmbush, forest edge and clearings; less common in primary and secondary forest. Recorded in Gola West, East, North and Tiwai Island.

C. brachyura Grey-backed Camaroptera. Common in low scrub and farmbush around Gola; inside forest in large clearings such as Konella and Gombu.

Macrosphenus kempi Kemp's Longbill. Uncommon to frequent, mainly in dense undergrowth and thickets in secondary forest and forest edge. Throughout, including Tiwai Island.

M. concolor Grey Longbill. Common in dense tangles and vines at mid-levels of primary and secondary forest throughout Gola and Tiwai.

Prinia subflava Tawny-flanked Prinia. Common in low secondary scrub and farmbush; also in large clearings such as Sileti and Gombu.

²Apalis nigriceps Black-capped Apalis. Rare; restricted to hilly terrain in Gola North (Dowsett-Lemaire & Dowsett 2008).

A. sharpii Sharpe's Apalis. Common in primary and secondary forest, forest edges and clearings throughout Gola and Tiwai.

[Cisticola lateralis Whistling Cisticola. Uncommon in farmbush around Gola North.] C. anonymus Chattering Cisticola. Frequent in moist farmbush and swamps around Gola; inside the reserves restricted to large clearings such as Konella and Gombu. This population is separated by at least 1500 km from the species' main range east of the Dahomey Gap (Lindsell 2007).

Muscicapidae

Melaenornis annamarulae Nimba Flycatcher (VU). One record of a single bird in primary forest in northern Gola North. Recorded twice in Gola North by Allport *et al.* (1989).

[Muscicapa striata Spotted Flycatcher. A few recorded in farmbush by Allport et al. (1989).] M. olivascens Olivaceous Flycatcher. Uncommon in canopy or sub-canopy of primary and secondary forest in Gola East and North.

M. cassini Cassin's Flycatcher. Common on wide sun-exposed rivers throughout Gola and Tiwai.

M. epulata Little Grey Flycatcher. A pair hawking insects from a large Ficus lutea tree near Mahoi Bridge, Jan 2007 (FDL & RD).

M. caerulescens Ashy Flycatcher. Uncommon at forest edges and in large trees in farmbush in Gola North.

M. tessmanni Tessmann's Flycatcher (DD). A single bird c. 4–5m high under open canopy in primary forest near Konella, Dec 2006.

²M. comitata Dusky-blue Flycatcher. A pair nesting in an old nest of Blue-billed Malimbe Malimbus nitens, overhanging a small stream near Tunkia Nema, Mar 2007. M. ussheri Ussher's Flycatcher. Frequent around dead trees in primary and secondary forest, forest edge and farmbush in Gola East, North and Extension 2. Recorded at

Tiwai Island by Davies (1987).

Myioparus plumbeus Lead-coloured Flycatcher. Rare to uncommon at forest edges and clearings (Konella) in Gola North (Dowsett-Lemaire & Dowsett 2008).

M. griseigularis Grey-throated Flycatcher. Uncommon to locally common in Gola East and North, inhabiting low tangles in tall secondary forest; much more local in primary forest (Dowsett-Lemaire & Dowsett 2008).

Ficedula hypoleuca Pied Flycatcher. Recorded in small numbers in all habitats by Allport *et al.* (1989).

Fraseria cinerascens White-browed Forest Flycatcher. Frequent to common along forested rivers throughout Gola and Tiwai.

F. ocreata Fraser's Forest Flycatcher. Frequent to common in primary and secondary forest and forest edge in Gola West, East and North.

Monarchidae

Terpsiphone viridis African Paradise Flycatcher. Uncommon intra-African migrant, recorded in primary and secondary forest in Gola West, East, North and Tiwai Island

T. rufiventer Red-bellied Paradise Flycatcher. Common at low or mid-levels in primary and secondary forest throughout Gola and Tiwai.

Erythrocercus mccallii Chestnut-capped Flycatcher. Uncommon and local in Gola East, common in Gola North, in primary and secondary forest, forest edge and farmbush. Recorded at Tiwai Island by Davies (1987).

Elminia nigromitrata Dusky Crested Flycatcher. One record in understorey of primary forest in Gola North, Dec 2006.

Trochocercus nitens Blue-headed Crested Flycatcher. Common throughout Gola and Tiwai, especially in dense vines and tangles at mid-level in secondary forest; more local in primary forest.

Platysteiridae

Bias musicus Black-and-white Flycatcher. Uncommon in secondary forest, forest edge and farmbush near Gola North and Tiwai Island; recorded mainly from Lalehun area.

Megabyas flammulatus Shrike Flycatcher. Uncommon to common in primary and secondary forest and forest edge in Gola West, North and Extension 2. Possibly overlooked in Gola East. Recorded at Tiwai Island, Feb 2008 (R. Demey *in litt.*).

Batis poensis Bioko Batis. Rare in secondary forest and forest edge in Gola East, North and Tiwai Island.

Dyaphorophyia castanea Chestnut Wattle-eye. Common at low or mid-levels in primary and secondary forest throughout Gola and Tiwai.

- D. blissetti Red-cheeked Wattle-eye. Rare to uncommon in secondary forest and forest edge in Gola West, East and North.
- D. concreta Yellow-bellied Wattle-eye. Uncommon to frequent, confined to the understorey of undisturbed primary forest in Gola East and North.

Timaliidae

Illadopsis fulvescens Brown Illadopsis. Frequent to common in secondary forest and forest edge throughout Gola and Tiwai; uncommon in primary forest.

- I. cleaveri Blackcap Illadopsis. Frequent to common in primary and secondary forest throughout Gola and Tiwai.
- *I. rufipennis* Pale-breasted Illadopsis. Frequent to common throughout Gola and Tiwai Island, usually in shaded undergrowth of primary and secondary forest.
- *I. rufescens* Rufous-winged Illadopsis (NT). Common in especially primary but also secondary forest throughout.
- I. puveli Puvel's Illadopsis. Records from secondary growth in Gola East, Dec 2006 (J. Hornbuckle *in litt.*) and Gola North (Allport *et al.* 1989). Frequent in farmbush around Gola East (N. Borrow *in litt.*).

Phyllanthus atripennis Capuchin Babbler. Rare and local in forest edge and riverine forest-grassland mosaic in Gola East and Gola North.

Picathartidae

Picathartes gymnocephalus Yellow-headed Picathartes (VU). Local, near rocks and boulders suitable for nesting. All but two of the *c*. 50 known colonies in the area were in or around Gola North (Wotton *et al.* 2010).

Paridae

Parus funereus Dusky Tit. One record in primary forest, Nov 2006, and one probable record in open-canopy forest, both in Gola North.

Remizidae

Pholidornis rushiae Tit-hylia. Uncommon in secondary forest, forest edge and farmbush in Gola West, East and North.

Nectariniidae

²Anthreptes gabonicus Brown Sunbird. Frequent along forested banks of large rivers such as the Mahoi, Moro and Moa at Tiwai Island.

A. rectirostris Green Sunbird. Uncommon in secondary forest, forest edge and clearings in Gola West, East and North. Also recorded at Tiwai Island, Feb 2008 (N. Borrow in litt.).

A. seimundi Little Green Sunbird. Uncommon in primary and secondary forest and forest edges in Gola East, North and Tiwai Island.

Deleornis fraseri Fraser's Sunbird. Common in understorey and at mid-levels of primary and secondary forest, throughout Gola.

Hedydipna collaris Collared Sunbird. Common in all habitats throughout Gola and Tiwai Island; often at forest edges but also in primary forest.

Cyanomitra obscura Western Olive Sunbird. Common in primary and secondary forest, forest edge and clearings throughout Gola and Tiwai Island. Most common in open-canopy forest, such as on hills and in secondary forest.

C. cyanolaema Blue-throated Brown Sunbird. Frequent to common at mid-levels or in canopy of primary and secondary forest, throughout Gola and Tiwai.

Chalcomitra adelberti Buff-throated Sunbird. Frequent at forest edges in Gola West, East and North; often seen singly or in pairs in the higher branches of trees around villages. [²C. venustus Variable Sunbird. One bird near Pewa, Sep 2005.]

C. minullus Tiny Sunbird. Uncommon to frequent in Gola West, East and North, usually in less open habitats than C. chloropygius, including forest edge, clearings inside forest and open-canopy forest.

C. chloropygius Olive-bellied Sunbird. Common in Gola West, East and North, in a variety of open habitats including gardens, farmbush, swamps and forest edge. Recorded at Tiwai Island by Davies (1987).

Cinnyris superbus Superb Sunbird. Uncommon in farmbush areas and forest edge around Gola and on Tiwai Island.

C. johannae Johanna's Sunbird. Common in primary and secondary forest, forest edge and in villages throughout.

Laniidae

[Lanius collaris Common Fiscal. Uncommon in farmbush and around human habitation, recorded around Gola West, North and Extension 2.]

Prionopidae

Prionops caniceps Red-billed Helmet-shrike. Frequent in secondary forest, forest edge and around clearings throughout Gola and Tiwai, occasionally in primary forest,.

Malaconotidae

Malaconotus multicolor Many-coloured Bush-shrike. Uncommon to frequent at higher mid-levels or in canopy of primary and secondary forest in Gola East and North. Most common in primary forest in Gola North.

M. lagdeni Lagden's Bush-shrike (NT). Uncommon, only recorded in central and eastern Gola North. Restricted to primary forest, where usually found at mid-strata. One nest-building, late Nov 2006.

M. cruentus Fiery-breasted Bush-shrike. Uncommon in secondary forest in Gola East and North.

Dryoscopus sabini Sabine's Puffback. Uncommon in secondary forest in Gola East; common in primary forest in Gola North. Also on Tiwai Island.

Laniarius leucorhynchus Sooty Boubou. Frequent in swamps, farmbush and clearings throughout; also in open swamp forest with *Raphia* palms in Gola East.

[Tchagra senegalus Black-crowned Tchagra. Recorded only from dry farmbush such as the Sileti compound.]

Oriolidae

Oriolus brachyrhynchus Western Black-headed Oriole. Abundant throughout Gola and Tiwai, in all habitats including primary and secondary forest, forest edge, clearings, farmbush and in villages.

[O. nigripennis Black-winged Oriole. Uncommon, only in secondary habitats around Gola.]

Dicruridae

Dicrurus modestus Velvet-mantled Drongo. Common in secondary habitats throughout Gola and Tiwai; also in low numbers in the interior of high forest.

D. atripennis Shining Drongo. Common in primary and tall secondary forest throughout. Recorded at Tiwai Island by Davies (1987).

Corvidae

[Corvus albus Pied Crow. Frequent near human habitation around Gola and Tiwai.]

Sturnidae

Poeoptera lugubris Narrow-tailed Starling. A few birds found nesting in a dead tree with nest holes of *Gymnobucco* barbets at Konella clearing, late Nov 2006, and a group of six birds seen in northern Gola North, Feb 2007.

Onychognathus fulgidus Forest Chestnut-winged Starling. Uncommon; usually in small groups in canopy of tall trees around clearings and at forest edge. Throughout Gola and Tiwai.

Lamprotornis cupreocauda Copper-tailed Glossy Starling (NT). Mostly frequent in small groups at forest edges, clearings and open-canopy forest. Common in secondary

forest around Sileti and Mahoi Bridge in Gola East, but uncommon in and around Gola North. Also on Tiwai Island.

L. splendidus Splendid Glossy Starling. Two records during the present survey: a pair inspecting a nest hole, in farmbush 2 km south of Sileti, Sep 2005; a pair in farmbush north of Gola North (SW & TM). Several records by Allport *et al.* (1989), including one in central Gola North.

[Cinnyricinclus leucogaster Violet-backed Starling. One flying over Waima village, Mar 2007. Recorded by G. Field (Allport et al. 1989).]

Passeridae

[²Passer griseus Northern Grey-headed Sparrow. Uncommon around human habitation.]

Ploceidae

Ploceus cucullatus Village Weaver. Abundant in villages throughout; breeding colonies found inside secondary forest on Tiwai Island and near Sileti.

P. nigricollis Black-necked Weaver. Uncommon in farmbush, forest edge and villages in and around Gola West, East and North.

P. albinucha Maxwell's Black Weaver. Frequent throughout Gola and Tiwai; usually in large groups at upper levels or in canopy of primary forest, but also in secondary forest and at forest edge.

P. nigerrimus Vieillot's Black Weaver. Uncommon in farmbush and other open habitats, Gola North and Tiwai Island.

P. tricolor Yellow-mantled Weaver. Uncommon to frequent but local throughout Gola and Tiwai; usually in large clearings in primary and secondary forest and at forest edge. Breeding recorded at Pewa.

P. preussi Preuss's Golden-backed Weaver. One in primary forest in Gola North (Allport et al. 1989).

Malimbus nitens Blue-billed Malimbe. Common in primary and secondary forest and forest edge throughout Gola and Tiwai.

M. malimbicus Crested Malimbe. Uncommon in Gola West and East, frequent in Gola North, at mid-levels in primary and secondary forest, forest edge and small clearings. Also recorded at Tiwai Island (Davies 1987).

M. scutatus Red-vented Malimbe. Frequent at forest edges, moist farmbush and swampy areas with *Raphia* palms throughout Gola and Tiwai; local in primary forest.

M. rubricollis Red-headed Malimbe. Frequent in primary and secondary forest, at the forest edge or in farmbush throughout Gola and Tiwai.

M. ballmanni Gola Malimbe (EN). Apparently restricted to primary forest in central Gola North. Three pairs located in bird parties, *c.* 1–2 km east of Pandebu junction, Feb 2007; six days later birds were heard in the same area but closer to Konella (Dowsett-Lemaire & Dowsett 2008). A nest attended by two adults was found in this area, Nov 2007. These are the first records in Gola Forest since 1976, following its original discovery in 1971 (Field 1979).

Euplectes hordeaceus Black-winged Bishop. Rare in Gola East in farmbush and in swamp inside secondary forest.

Estrildidae

Parmoptila rubrifrons Red-fronted Antpecker (NT). Uncommon in understorey of primary and secondary forest in Gola East and North, often near water.

Mandingoa nitidula Green Twinspot. Two records in dense secondary undergrowth at forest edges: a male and two females at Ngedola, May 2006; two fully-grown immatures in Gombu clearing. Feb 2007. Also recorded at Tiwai Island (Davies 1987).

Nigrita canicapilla Grey-crowned Negrofinch. Common in all wooded habitats, throughout Gola and Tiwai.

N. bicolor Chestnut-breasted Negrofinch. Frequent in primary and secondary forest and at forest edge throughout; often near streams.

N. fusconota White-breasted Negrofinch. Rare; recorded at forest edge and in clearings in Gola West, East and North.

N. luteifrons Pale-fronted Negrofinch. Two records in secondary forest in Gola North, Nov 2006 (GA & GS), Feb 2007 (Dowsett-Lemaire & Dowsett 2008).

Spermophaga haematina Western Bluebill. Frequent in dense undergrowth in moist farmbush, forest edge and secondary forest in Gola West, East and North.

Pyrenestes sanguineus Crimson Seedcracker. Uncommon in grassy swamps, Raphia forest and at forest edge in Gola West and East.

[Estrilda melpoda Orange-cheeked Waxbill. Recorded in farmbush, at Lalehun, Nov 2006 (SW, TM, EK) and Pewa, Sep 2005 (JAL).]

[Lonchura cucullata Bronze Mannikin. Uncommon in farmbush and villages throughout.]

[L. fringilloides Magpie Mannikin. Common in farmbush, rank herbage and forest edge around Gola North and Extension 2.]

[L. bicolor Black-and-white Mannikin. Uncommon in farmbush, rank herbage and forest edge in Gola East and North. Recorded at Tiwai Island by Davies (1987).]

Viduidae

[Vidua macroura Pin-tailed Whydah. Uncommon in farmbush and other open habitats around Gola North.]

Discussion

The results of this survey show that Gola Forest continues to hold significant populations of most of the species of conservation concern that have previously been recorded from Gola. We found 18 threatened or near-threatened species, some in good numbers. For example, the near-threatened West African endemics Rufous-winged Illadopsis and Yellow-casqued Hornbill were common throughout the forest. Of the Vulnerable species, Yellow-bearded Greenbul and Green-tailed Bristlebill were frequently found, and the forest appears to hold important populations of White-breasted Guineafowl and Yellow-headed Picathartes. The number of current breeding

sites recorded for the latter is the highest known to date. For all these species the conservation of Gola forest can be expected to contribute significantly to their conservation. On the other hand, the Endangered Gola Malimbe was recorded very rarely, but any site where it occurs must be regarded as a high priority for its conservation. Western Wattled Cuckoo-shrike and Nimba Flycatcher were also recorded rarely and it is unclear how significant Gola Forest is for their conservation. Neither species was found commonly by Allport *et al.* (1989), although G.D. Field (pers. comm.) found the cuckoo-shrike quite frequently in the 1970s; it is possible that this species has declined in the last 30 years. Black-headed Rufous Warbler (NT) is the only forest bird of conservation concern in the region that has not been recorded. Although it has been found elsewhere in Sierra Leone (Okoni-Williams *et al.* 2001), it probably does not occur in Gola.

Over 180 species recorded during this survey were found in primary or secondary forest, including 163 species characteristic of the Guinea-Congolian forest biome. Nearly 80 of these species appear to be restricted to forest habitat, although some may occasionally occur at the ecotone of forest and more open habitats. Another c. 100 species occur in forest but were also frequently found in other habitats such as forest edges or clearings inside the forest. Nine species were found to be restricted to primary forest: Lemon Dove, Black-collared Lovebird, Shelley's Eagle-owl, Brown-chested Alethe, Nimba Flycatcher, Dusky Crested Flycatcher, Yellow-bellied Wattle-eye, Lagden's Bush-shrike and Gola Malimbe. In addition, Lyre-tailed Honeyguide was nearly restricted to primary forest, with only a few records from tall secondary forest. Most of these species are rare or uncommon; only the honeyguide and the wattle-eye were more common. Evidently the conservation of these species depends entirely on the preservation of large tracts of undisturbed closed-canopy forest, mainly in Gola North (e.g. the Mogbai area) and, possibly, the northeastern part of Gola East.

Over 80 species recorded during this survey did not normally occur inside forest, but were restricted to forest edges and farmbush. However, some species were found in large clearings inside the forest reserves, such as the Sileti compound in Gola East and the clearings at Konella and Gombu in Gola North. A total of 34 species were restricted to riverine habitats, whereas 25 species were frequently found in all habitats. These habitat generalists include *e.g.* African Harrier Hawk, Tambourine Dove and Collared Sunbird.

The bird list for Tiwai is still far from complete, as several common species are not yet recorded. A number of species present in Gola are likely to be absent from Tiwai, such as those species restricted to primary forest or those found only in hilly terrain (e.g. Black-capped Apalis). Thirteen species known from Tiwai have so far not been recorded in Gola, excluding Northern Black Flycatcher *Melaenornis edolioides* and Senegal Batis *Batis senegalensis*, which were listed for Tiwai by Davies (1987) but are certainly erroneous. Most of these 13 species are associated with water bodies.

A number of species are known to occur in the forests of Liberia, Ivory Coast or other parts of Sierra Leone have so far not been recorded from Gola Forest. Allport et

al. (1989) listed 34 species from Taï Forest in Ivory Coast (Gartshore et al. 1995) that could occur in Gola. During the present survey, 11 of these species were found. Some of the remaining 23 are unlikely to occur in Gola because of habitat preferences, but others may have been overlooked. For example, Buff-spotted Flufftail Sarothrura elegans (Rallidae) and Sandy Scops Owl Otus icterorhynchus (Strigidae) are known to occur on the Liberian side of Gola (Gatter 1997). A puzzling absentee from Gola is Black-and-white-casqued Hornbill Bycanistes subcylindricus (Bucerotidae) which is widespread throughout West Africa (Kemp 1995). Given its conspicuous habits it is unlikely to have been missed during this survey. Blue-headed Coucal Centropus monachus (Cuculidae) was recorded in herbaceous marshes between Kenema and Gola Forest in 2007 (Dowsett-Lemaire & Dowsett 2008), and its occurrence in suitable habitat inside Gola is likely.

The results of this survey confirm the importance of Gola Forest for bird conservation. Current surveys recorded 294 species bringing the total to 327, which is amongst the highest of the Upper Guinean Forests. Of this total, 27 species are new records for the area and two of them new to Sierra Leone (Brown Nightjar and Black-collared Lovebird). Besides the high species diversity, several threatened species occur in good numbers. It appears that the war in the region has had little impact on the avifauna and this site remains a top priority for conservation.

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