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The avifauna of the proposed Kyabobo National Park in eastern Ghana

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Summary

The proposed Kyabobo National Park (218 km²) in E Ghana is immediately adjacent to the larger Fazao-Malfakassa NP in Togo. It is set in a range of steep hills in the forest–savanna transition zone, and forest (mainly semi-evergreen) is currently expanding over savanna. The first ornithological survey of the area, based on two visits, in the rains (10 Jul to 2 Aug 2004) and the late dry season (18–23 Feb 2005), identified 235 bird species. There is a large forest component with a rather impoverished savanna element. The most important biome is Guineo-Congolian, with at least 65 bird species. Practically all observations of forest birds represent extensions of known range, to the north. The Barred Owlet *Glaucidium capense* (discovered in Ghana in 2004) is widespread at forest edges. Baumann's Bulbul *Phyllastrephus baumanni* is common in rank understorey of forest clearings (its natural habitat) and secondary growth in farmbush, even where invaded by the exotic shrub *Chromolaena odorata*. Observations of Lagden's Bush Shrike *Malaconotus lagdeni* in the forested hills in the south of Kyabobo are the first in Ghana since the 19th century type collection. The Long-billed Pipit *Anthus similis* was found breeding on the thinly vegetated ridge of one of the peaks.

Résumé

L'avifaune du futur Parc National de Kyabobo dans l'est du Ghana. Le futur Parc National de Kyabobo (218 km²), dans l'est du Ghana, fait bloc avec le PN de Fazao-Malfakassa au Togo voisin. Il englobe une chaîne de hautes collines escarpées et se situe dans la zone de transition forêt/savane. La forêt (de type semi-sempervirent) est actuellement en expansion sur la savane. Les premières enquêtes ornithologiques, menées en saison des pluies (10 juillet au 2 août 2004) et en fin de saison sèche (18–23 février 2005) ont permis d'identifier 235 espèces, avec une composante forestière beaucoup plus importante que l'élément savanicole. Le biome guinéo-congolais comprend au moins 65 espèces. Presque toutes les observations d'espèces

forestières représentent des extensions de l'aire connue de distribution vers le nord. La Chevêchette du Cap *Glaucidium capense* (découverte au Ghana en 2004) est répandue sur les lisières forestières. Le Bulbul de Baumann *Phyllastrephus baumanni* est commun dans son milieu naturel (végétation dense et basse des clairières forestières) mais aussi dans les friches post-culturelles, même celles envahies par le buisson rudéralisé *Chromolaena odorata*. Les observations du Gladiateur de Lagden *Malaconotus lagdeni* dans les forêts du sud de Kyabobo sont les premières au Ghana depuis la récolte du type au 19ème siècle. Nous avons trouvé le Pipit à long bec *Anthus similis* nichant sur la crête rase d'un des sommets de Kyabobo.

Introduction

The proposed Kyabobo National Park (218 km²) in E Ghana is adjacent to the larger Fazao-Malfakassa National Park in Togo. It is bordered to the east by the Koue river, which flows northwards, following the international boundary. The park was named after Mount Kyabobo (also spelt Djebobo), which at 887 m is the second tallest hill in Ghana, but this peak as well as the surroundings of Shiare are now excluded from the proposed park, whose boundaries were redrawn in 2004 (Fig. 1). A small amount of farming has taken place in the reserve, most farmers coming from Shiare where the rugged topography makes cultivation difficult.

The park is situated in the northern sector of the forest-savanna transition zone. A few km north of Koue the landscape changes dramatically into dry savanna woodland, whereas to the south (as around Shiare) the hills appear more extensively forested. The topography is extremely broken, with a succession of steep hills throughout, several just exceeding 800 m. Apart from a few ridge tops which may be almost bare of trees, the park is generally densely wooded or forested. Woodland and dry forest (mainly semi-evergreen) intermingle extensively. A striking feature of the area is the current rapid expansion of forest over woodland, presumably the result of increasing rainfall.

The avifauna of the proposed park had never been studied. Moyer (1996) mentions a few species he encountered in an area of forested hills just to the south (2.5–4 km south of Shiare), in Oct 1994. We carried out two surveys in the park totalling 4 weeks: in the middle of the rains (10 Jul to 2 Aug 2004, henceforth termed the "July" study), and in the late dry season (18–23 Feb 2005). In July, our time was spent mainly in the lower Laboum basin in the south, and in the Koue-Nazeni area in the north, with a few days around Breast Mountain in the southwest. Our February visit was centred in the upper Laboum basin, rendered more accessible in dry weather, including one day's climb to one of the highest peaks ("South Repeater": Fig. 1). One day (and night) was also spent in riverine forest at Pawa camp, an exceptionally luxuriant strip of forest benefiting from much shade provided by the

surrounding hills. July–August were extremely wet, with heavy showers on most days; our February visit coincided with the first (early) storms of the year, but showers do not normally become regular before about April (P. Hartley pers. comm.).

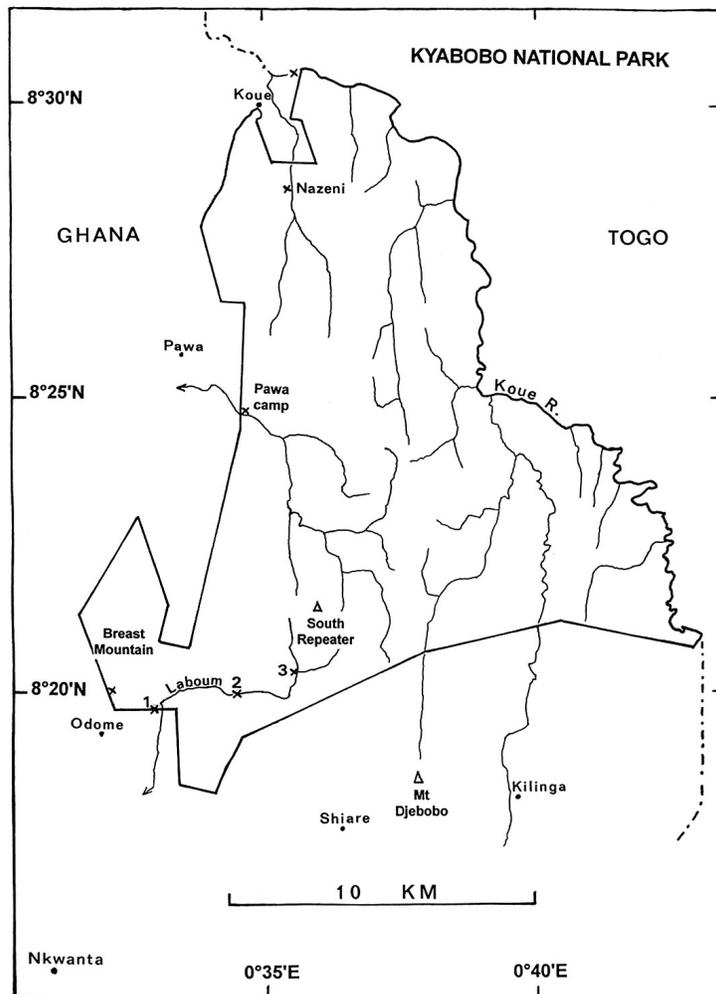


Figure 1. Map of Kyabobo NP showing main localities and all camp sites (crosses); of the latter, 1 = Laboum main camp (outpost), 2 = Laboum forest camp, 3 = upper Laboum valley.

A limited amount of mist-netting was carried out in July: two days in forest on the Laboum stream, and a few hours in farmbush to catch Baumann's Bulbul *Phyllastrephus baumanni*. Nomenclature follows Dowsett & Forbes-Watson (1993) except for African Green Pigeon *Treron calvus* (Urban *et al.* 1986) and *Spermestes* in place of *Lonchura* (Payne & Sorenson 2003). The suffixes of some species names have changed following David & Gosselin (2002a, b).

Habitats

Arbonnier (2000) and Hawthorne (1990) were used for plant identification. Five habitat types (following White 1983) can be recognized in Kyabobo, from the least to the most forested:

Wooded Grassland (tree cover 10–40%) occurs on some of the ridge tops, with thin, gravely soil or scattered rocks. *Syzygium guineense* is very common on top of “South Repeater”, as is the small *Protea madiensis*.

Woodland (tree cover \geq 40%) in the sections visited is most extensive near Koue and Nazeni, with limited areas in the Laboum basin. *Daniellia oliveri* is usually the tallest tree (20–25 m), and other characteristic tree species include *Crossopteryx febrifuga*, *Cussonia arborea*, *Detarium microcarpum*, *Hannoa undulata*, *Isoberlinia doka*, *Khaya senegalensis*, *Lonchocarpus sericeus*, *Lophira lanceolata*, *Nauclea latifolia*, *Parinari curatellifolia*, *Parkia biglobosa*, *Piliostigma thonningii*, *Prosopis africana*, *Pseudocedrela kotschyi*, *Terminalia laxiflora*, *Uapaca togoensis*, *Vitellaria paradoxa*, *Vitex doniana*. Some figs occur locally (*Ficus ingens*, *F. platyphylla*, *F. sur*). The herbaceous layer is mostly grasses; in some areas (disturbed by agriculture and fires) the exotic shrub *Chromolaena odorata* may be present.

Transition Woodland has a mixture of woodland and forest elements: the open canopy is dominated by woodland species (with a few forest trees) but the understorey is invaded by evergreen vines, as well as *Chromolaena* 2–3 m tall. Transition woodland is very extensive on the slopes of large hills, above the level of forest. Forest trees include *Anthocleista djalonenis*, *Bridelia scleroneura*, *Cola gigantea*, *C. millenii*, *Milicia excelsa*, *Spondias mombin*. On the slopes of Breast Mountain, some woodland species (*e.g.* Baobab *Adansonia digitata* and smaller trees of *Hymenocardia acida*) are being smothered by vines and forest trees growing over and around them.

Dry *Anogeissus* forest is the most characteristic forest type in the region of Koue, occupying valley flats on water-logged soil. *Anogeissus leiocarpus* is deciduous for only a few weeks and forms a closed canopy at a height of 30 m or so. There are numerous herbaceous vines. A few other tree species occur, among them (along streams) *Cola gigantea*, *Ceiba pentandra*, *Erythrophleum suaveolens*, *Ficus ingens*, *Khaya grandifoliola*, *K. senegalensis*.

Semi-evergreen Rain Forest (= dry semi-deciduous rain forest of Hall & Swaine 1976) is extensive in the valleys and lower hill slopes of the south. The canopy

reaches 25–40 m. The boundary between Transition Woodland and this forest type is not always clear-cut. Forest clearings are almost invariably invaded by the exotic *Chromolaena*, apparently largely the result of fires (*Chromolaena* growing faster than natural vegetation). Widespread tree species include: *Azelia africana*, *Albizia adianthifolia*, *Canarium schweinfurthii*, *Ceiba pentandra*, *Cleistopholis patens*, *Cola gigantea*, *C. millenii*, *Cordia millenii*, *Detarium senegalense*, *Dialium guineense*, *Diospyros mespiliformis*, *Elaeis guineensis*, *Ficus mucoso*, *F. polita*, *F. sur*, *F. vogelii*, *Hildegardia barteri*, *Homalium letestui*, *Malacantha alnifolia*, *Maranthes kerstingii*, *Pachystela brevipes*, *Parkia filicoidea* (reaching 40 m), *Pentadesma butyracea*, *Piptadeniastrum africanum*, *Pycnanthus angolensis*, *Ricinodendron heudelotii*, *Sorindeia zenkeri*, *Spondias mombin*, *Sterculia tragacantha*, *Symphonia globulifera*. Large woody lianes are present (e.g. *Entada*, *Strychnos*, *Tetracera* sp.) and reach the canopy. Important permanent streams such as the Laboum and the stream at Pawa camp are lined by denser forest, with *Antiaris toxicaria*, *Ceiba*, *Cola gigantea*, *Elaeis*, *Eriocoelum kerstingii*, *Erythrophleum suaveolens*, *Lecaniodiscus cupanioides*, *Myrianthus arboreus*, *Napoleonaea vogelii*, *Pandanus* sp., *Pentadesma butyracea*, stilt-rooted *Uapaca togoensis*, etc.

Only a small percentage of the reserve is cultivated, on flat terrain (valley bottoms, tops of low plateaux). Secondary growth (farmbush) follows cultivation (maize or cassava), the first stage being herbaceous growth 2–3 m tall, with some shrubs; *Elaeis* palms are usually left in fields. The invasive *Chromolaena* is dominant in this landscape. Secondary thickets are another stage of forest regeneration. The exotic bamboo *Bambusa vulgaris* occurs locally in clumps on the lower Laboum; teak *Tectona grandis*, another exotic, regenerates spontaneously in farmbush near Koue (its flowers are highly attractive to sunbirds).

The largest stream, or river, the Koue in the east, was a torrent of brown water in July; it was not revisited in February.

The avifauna

In all, 235 species were recorded, all but three by ourselves, as detailed below. Our July visit produced 182 species, and the shorter February visit 171, 50 being additions. Many of the additions were Palearctic or intra-African migrants; others were forest birds that had been overlooked previously, some (in the Laboum area visited at both seasons) apparently silent at the peak of the rains, while others were found only in the luxuriant riparian forest at Pawa camp during our second survey. Biomes are indicated where relevant: GC = Guineo-Congolian element (following Dowsett-Lemaire & Dowsett 2001); SUD = Sudanian element (belonging to the Sudanian region of White 1983, synonymous with the “Sudan-Guinea” savanna biome of Fishpool & Evans 2001). The status of migrants is given immediately after the species name: AM = intra-African migrant; PM = Palearctic migrant.

Ardeidae

Tigriornis leucolopha White-crested Tiger Heron (GC). One seen in forest by the Laboum stream, 27 Jul.

Butorides striata Green-backed Heron. Present on the Koue river, Jul.

Scopidae

Scopus umbretta Hamerkop. One or two by the Koue river, Jul.

Accipitridae

Pernis apivorus Honey Buzzard. PM. Singles, 20 and 23 Feb.

Necrosyrtes monachus Hooded Vulture. Mainly commensal, outside the park. One pair hunting from Odome to Breast Mountain, Jul.

Circaetus cinereus Brown Snake Eagle. One over Laboum basin, Jul, Feb.

Dryotriorchis spectabilis Congo Serpent Eagle (GC). One calling in upper Laboum forest, 20 Feb; seen in same area 22 Feb.

Polyboroides typus Gymnogone. One in upper Laboum basin and another displaying over forest near Pawa, Feb.

Accipiter melanoleucus Black Goshawk. One flying into Laboum forest, Jul.

A. erythropus Red-thighed Sparrowhawk (GC). A species mainly of forest edges, with a few observed near Koue (canopy of *Anogeissus*) and Laboum area, Jul, Feb, including one catching and eating a *Charaxes* butterfly.

A. tachiro African Goshawk. Singles recorded in forest at all sites; display song heard throughout in Jul, also Feb.

Kaupifalco monogrammicus Lizard Buzzard. Throughout the park, in farmbush and savanna. Strongly territorial. Jul, Feb.

Buteo auguralis Red-necked Buzzard. Not seen Jul, but fairly conspicuous (and calling) in Feb in the hills around Laboum and Pawa camps.

Hieraetus ayresii Ayres's Hawk Eagle. One over Breast Mountain, Jul.

Spizaetus africanus Cassin's Hawk Eagle (GC). Forest species more widespread than last, Jul, Feb: singles or pairs seen near Nazeni camp, Laboum and Breast Mountain, including display song.

Polemaetus bellicosus Martial Eagle. One over hills east of Nazeni camp, 24 Jul.

Falconidae

Falco biarmicus Lanner Falcon. One over hill near Pawa camp, 23 Feb.

Phasianidae

Francolinus bicalcaratus Double-spurred Francolin. Common in savanna grassland, Jul, Feb.

F. ahantensis Ahanta Francolin (GC). Very common in transition woodland, forest and farmbush, Jul, Feb.

Ptilopachus petrosus Stone Partridge. Very common throughout savanna and forest, in pairs or small groups, Jul, Feb.

Numididae

Guttera pucherani Crested Guineafowl. Heard in two places, Jul: near Koue river and one group roosting one night near our Laboum forest camp.

Numida meleagris Helmeted Guineafowl. Uncommon: heard once near Laboum camp (in savanna) and five seen in woodland near Nazeni camp, Jul.

Rallidae

Himantornis haematopus Nkulengu Rail (GC). Tape-recorded at night in riparian forest at Pawa camp, Jun 2005 (S. Bearder *in litt.*, with tape provided).

Sarothrura pulchra White-spotted Flufftail (GC). In tall rank grass, *Chromolaena* and forest near streams: Laboum, Breast Mountain and Pawa camp, Jul, Feb.

Heliornithidae

Podica senegalensis African Finfoot. Heard once on the Laboum stream, Jul, and reported by some scouts on the Koue. Also seen on the stream at Pawa camp, Feb.

Columbidae

Columba delegorguei Bronze-naped Pigeon. One heard in forest near our Laboum forest camp, Jul; evidently more vocal in Feb, with several singing in Laboum forests and one seen.

Streptopelia vinacea Vinaceous Dove. AM. Almost absent in Jul: one immature in savanna at Laboum camp, 12 Jul, but several singing in that area in Feb. Thus mainly a local dry-season breeding visitor.

S. semitorquata Red-eyed Dove. Very common throughout savanna, farmbush with large trees and open forest, Jul, Feb.

Turtur afer Blue-spotted Wood Dove. Common throughout savanna, open forest and secondary thickets, Jul, Feb.

T. tympanistria Tambourine Dove. Common in semi-evergreen rain forest (Laboum to Pawa). Apparently singing less in Feb than Jul.

T. brehmeri Blue-headed Wood Dove (GC). Rare: two singles flushed from understorey in semi-evergreen forest at Breast Mountain, 12 Jul.

Treron calvus African Green Pigeon. Common throughout. Pairs and small groups feeding on fruit of *Ficus* spp., *Bridelia scleroneura*, *Manilkara multinervis*, *Vitex doniana*, Jul, Feb.

Musophagidae

Tauraco persa Guinea Turaco (GC). Very common throughout in forest and woodland, feeding on a variety of fruit (as for *Treron*), Jul, Feb.

Musophaga violacea Violet Turaco (SUD). Small numbers in open situations (farmbush, riparian forest), throughout, Jul.

Corythaeola cristata Great Blue Turaco. Several scouts know this distinctive, noisy bird from wetter forest near Kilinga and Shiare, and assured us that, at times, wanderers visit the forests in the Laboum basin.

Crinifer piscator Western Grey Plantain-eater. A few in savanna and farmbush near Koue; a wanderer near Laboum camp, 15–16 Jul.

Cuculidae

Clamator levaillantii Striped Cuckoo. AM. One calling briefly on ridge near South Repeater, 21 Feb. Normally parasitizes *Turdoides* babblers (absent from Kyabobo), and its status at Kyabobo is unclear.

Pachycoccyx audeberti Thick-billed Cuckoo. One singing in farmbush near Koue river, 18 Jul. Its loud whistled song was imitated frequently by *Turdus pelios* in the Laboum area. Much more conspicuous in Feb, with three different individuals located in the Laboum area, calling persistently.

Cuculus solitarius Red-chested Cuckoo. AM. Very few in the north, near Koue river and Nazeni camp, in forest, singing little (few robins to parasitize and breeding probably over), Jul. None heard in five days in Feb, but one seen near Laboum outpost, 18 Feb.

C. clamosus Black Cuckoo. AM. Several rather noisy birds near Laboum outpost 10–17 Jul (in open forest and transition woodland), silent by late Jul; one calling briefly near Nazeni camp, 23 Jul. One calling (Laboum), 18 Feb. Reported in the Shiare area, Oct (Moyer 1996).

C. gularis African Grey Cuckoo. AM. One seen in woodland near Koue, 20 Jul. One seen and heard in woodland near Laboum outpost, 19 Feb.

Chrysococcyx cupreus Emerald Cuckoo. AM. One singing in forest in the upper Laboum valley, 28 Jul. Apparently absent from the same area in Feb (none in three days).

C. klaas Klaas's Cuckoo. Widespread in woodland, transition woodland and semi-evergreen forest on hills, Jul, Feb.

C. caprius Didric Cuckoo. AM. Nest parasite of weavers, only just in the park near Koue (in farmbush), Jul.

Ceuthmochares aereus Green Coucal. Widespread in small thickets throughout (transition woodland, *Anogeissus* forest, farmbush, hill forest), Jul, Feb.

Centropus leucogaster Black-throated Coucal (GC). Heard once in open forest near Laboum forest camp, Jul. Noisier in Feb, when heard in several places in the Laboum area, also in riparian forest at Pawa camp.

C. monachus Blue-headed Coucal. Several pairs seen in rank growth in farmbush and forest edges in the Laboum valley and one seen near Koue river, Jul, Feb.

C. senegalensis Senegal Coucal. The main coucal species in woodland and farmbush, especially in the north (Koue, Nazeni, near Pawa), but also near Laboum camp and top of Breast Mountain, Jul, Feb.

Tytonidae

Tyto alba Barn Owl. Heard at Laboum, Koue and Nazeni camps, Jul.

Strigidae

Otus senegalensis African Scops Owl. Calling throughout (Jul, Feb), in woodland, transition woodland and open semi-evergreen forest.

Bubo africanus Spotted Eagle Owl. Heard and seen in savanna throughout, Jul, Feb.

B. poensis Fraser's Eagle Owl. Pair duetting with usual guttural trills ("roulades") in riparian forest at Pawa camp, 22 Feb, and high whistle heard several times at the same spot, probably given by immature (cf. Dowsett-Lemaire 2006).

Glaucidium capense Barred Owlet. Several heard from transition woodland and forest edges in the Laboum and Nazeni regions, Jul, as well as on the edge of riparian forest

at Pawa, Feb. In Jul, sometimes called only a little in the early morning. Songs consist of series of 6–8 slightly purred notes and also the longer series of rolled notes (cf. race *ethecopari* recorded in Ivory Coast by Chappuis 2000; sonogram in Dowsett & Dowsett-Lemaire 1993).

Strix woodfordii Wood Owl. Throughout, heard at all camp sites (transition woodland and forest), Jul, Feb.

Caprimulgidae

Caprimulgus pectoralis (nigriscapularis) Fiery-necked Nightjar. Heard from Laboum camp and bottom of Breast Mountain (transition woodland, farmbush, forest clearings), also near Nazeni camp, Jul. Sang on clear nights, at first mainly in the early morning, but vocal activity clearly increasing during Jul. Tape-recorded (at Breast Mountain). More vocal in Feb, when several heard in the Laboum area and around Pawa camp.

C. tristigma Freckled Rock Nightjar. At least one singing on pebbly hill above Pawa camp, 22 Feb. Likely present in any ridge-top woodland with rocks.

C. climacurus Long-tailed Nightjar. AM? Seen and heard in savanna near Laboum camp in Feb (none there Jul), and one seen and heard in small abandoned field at Pawa camp, 22 Feb.

Apodidae

Cypsiurus parvus Palm Swift. Occasional bird seen, Jul.

Apus melba Alpine Swift. PM. Large numbers (> 100) calling over the upper Laboum valley and ridges, 21–22 Feb, sometimes mixed with the next species. Hundreds over a hill above Pawa camp, 23 Feb.

A. aequatorialis Mottled Swift. AM. Several dozens seen at close range and calling with *A. melba* over the Laboum valley, 21–22 Feb.

A. apus European Swift. PM. Several groups associated with swallows in the upper Laboum area, 20–22 Feb.

A. affinis Little Swift. Group over Breast Mountain, 31 Jul (breeds in some villages under eaves and on bridges).

Trogonidae

Apaloderma narina Narina's Trogon. Two located by song in the Laboum forest, Jul.

Alcedinidae

Ceyx pictus Pygmy Kingfisher. AM in part. A few in woodland, farmbush with scattered trees, Jul, Feb.

Halcyon leucocephala Chestnut-bellied Kingfisher. AM. Very common and noisy in Feb (absent Jul) in open woodland or farmbush, especially conspicuous on ridge tops.

H. malimbica Blue-breasted Kingfisher. Widespread and common in all forest types (although less common in *Anogeissus*) and transition woodland, Jul, Feb.

H. chelicuti Striped Kingfisher. Widespread in woodland, Jul, Feb.

Meropidae

Merops pusillus Little Bee-eater. One in farmbush and a group of three in woodland in the south, did not stay, Jul.

M. hirundineus Swallow-tailed Bee-eater. AM. A pair in woodland near Laboum camp, 19 Feb.

M. albicollis White-throated Bee-eater. AM. A group of migrants flying north on 13 Jul is very late for this Sahel-breeding bird. Probably not uncommon in winter: groups feeding in farmbush on upper Laboum, 21–22 Feb.

M. apiaster European Bee-eater. PM. A group near Pawa 23 Feb, probably wintering in the area (as this is a little early for the start of northward passage).

Coraciidae

Coracias cyanogaster Blue-bellied Roller (SUD). Pairs or family units (of four) in several open areas of woodland, often on the edge of fields, Jul, Feb.

Eurystomus glaucurus Broad-billed Roller. AM in part. Near the Laboum stream in farmbush, calling very little in Jul but more conspicuous and noisy in Feb (several pairs from Laboum camp to South Repeater) when often associating with next species.

E. gularis Blue-throated Roller (GC). Blue throat of an adult very well seen when feeding a fledgling in forest above our Laboum forest camp, 25–29 Jul. The young bird had a pale blue, rather mottled belly, and was calling almost constantly (a distinctive high piping note). Much more conspicuous in Feb, when adults frequently gave the typical screams (forest and farmbush in upper Laboum, Pawa camp).

Phoeniculidae

Phoeniculus purpureus Red-billed Wood Hoopoe. Uncommon, with a group of five encountered in woodland near the Laboum stream, 13 Jul.

P. aterrimus Black Wood Hoopoe. Widespread in woodland, transition woodland, and *Anogeissus* forest (canopy), Jul, Feb.

Upupidae

Upupa epops Hoopoe. AM. Reported in the dry season of 2004 (one in woodland near Laboum camp: P. Hartley, pers. comm.) but must be rare.

Bucerotidae

Tropicranus albocristatus White-crested Hornbill (GC). One accompanying a group of Mona Monkeys *Cercopithecus mona* in closed forest near the Laboum waterfalls, 28 Jul.

Tockus fasciatus Pied Hornbill (GC). Very common in all vegetation types, Jul, Feb.

T. nasutus African Grey Hornbill. AM. Very common in Feb, in any woodland; absent Jul–Aug.

Bycanistes fistulator White-tailed Hornbill (GC). Locally common in Koue area, Jul, with local movements, as much commoner in the Laboum area in Feb than Jul.

Lybiidae

Pogoniulus scolopaceus Speckled Tinkerbird (GC). Fairly common in the south, especially the Laboum basin (forest and farmbush), more local on Breast Mountain; wanders short distances away from forest to take figs in woodland, Jul, Feb.

P. chrysoconus Yellow-fronted Tinkerbird. The commonest tinkerbird in woodland in the north (Nazeni-Koue), but outnumbered by *P. bilineatus* in the south. Also in dry *Anogeissus* forest, Jul, Feb.

P. bilineatus Golden-rumped Tinkerbird. Common in all vegetation types in the south, including woodland, Jul, Feb. More local in the north, in riparian forest.

Tricholaema hirsuta Hairy-breasted Barbet (GC). Encountered in secondary forest on the upper Laboum, as well as in riparian forest at Pawa camp, Jul, Feb.

Lybius vieilloti Vieillot's Barbet. Common in woodland, north and south, occasional in farmbush, Jul, Feb.

L. bidentatus Double-toothed Barbet. One pair in farmbush/woodland near Koue, feeding on fruit of *Cussonia* and *Vitex*, 19–20 Jul.

L. dubius Bearded Barbet (SUD). One pair in farmbush near the Koue river, on the park's northern boundary, 21 Jul, very close to *L. bidentatus*.

Trachyphonus purpuratus Yellow-billed Barbet (GC). One responded to tape in secondary forest in the upper Laboum valley, 28 Jul. Calling spontaneously in the same area in Feb.

Indicatoridae

Indicator maculatus Spotted Honeyguide (GC). One in song in secondary forest in the upper Laboum valley, 20–21 Feb.

I. indicator Greater Honeyguide. One seen in canopy of *Anogeissus* forest in the north, Jul.

I. minor Lesser Honeyguide. Several song posts in forest, Laboum to Pawa, Jul, Feb.

I. exilis Western Least Honeyguide. One flycatching in a large tree in riparian forest on the Laboum, 11 Jul.

I. willcocksii Willcocks's Honeyguide (GC). Two exploring bark together in farmbush on the edge of forest near Breast Mountain, 31 Jul. Lack of moustachial stripe noted. One on the edge of riparian forest on the upper Laboum, 22 Feb.

Picidae

Campethera punctuligera Fine-spotted Woodpecker. Rare: one seen in a mixed woodpecker party in transition woodland near Nazeni camp, Jul.

C. cailliautii Little Spotted Woodpecker. Seen once in Jul in a mixed woodpecker party in transition woodland near Nazeni camp. Responded to tape of both *C. cailliautii* and Golden-backed Woodpecker *C. maculosa*. Called repeatedly in tree-top (series of "whee" calls, similar in both species). Tail colour, the main difference in male plumage, was not well seen, but assumed to be this species (reported in the Shiare area by Moyer 1996) rather than *C. maculosa*, which occurs further west in Ghana (Short in Fry *et al.* 1988). Also heard on the upper Laboum (forest edge), 22 Feb.

C. nivosa Buff-spotted Woodpecker (GC). Located in riparian forest at Pawa camp, Feb.

Dendropicops gabonensis Gabon Woodpecker (GC). A pair in forest and farmbush in the upper Laboum valley, seen and heard, Jul, Feb.

D. fuscescens Cardinal Woodpecker. Widespread in farmbush (with thickets), in riparian forest and at edges of woodland, Jul, Feb.

Thripias pyrrhogaster Fire-bellied Woodpecker (GC). Locally common in the Laboum forest, based on the early morning drumming on dead trees: four territories within a few hundred m in forest and adjacent farmbush. Drumming heard Jul, Feb.

Mesopicos goertae Grey Woodpecker. Seen once in a mixed woodpecker party in transition woodland near Nazeni camp, Jul.

Picoides obsoletus Brown-backed Woodpecker. Seen twice in the Laboum area, in thin riparian forest and woodland near camp, Jul.

Hirundinidae

Psalidoprocne obscura Fanti Saw-wing. AM? Several in clearings along the Laboum and Koue rivers in Jul. More numerous locally in Feb: up to 25 birds (Laboum); > 20 birds flying north, 21 Feb. Also reported in the Shiare area, Oct (Moyer 1996).

Hirundo abyssinica Lesser Striped Swallow. Groups up to 20 on several occasions, Jul. Seen once in Feb (Laboum).

H. preussi Preuss's Cliff Swallow. AM. A few well seen, with migratory *Delichon urbicum*, on the upper Laboum, 22 Feb.

H. rustica European Swallow. PM. Some flying north, 21–22 Feb.

H. lucida Red-chested Swallow. AM? A few visiting farmbush over the Laboum stream on occasion, Jul; flocks of 10 or more flying south over hills, apparently on migration, 22 Jul, 1 Aug.

Delichon urbicum House Martin. PM. Common on passage, 20–22 Feb.

Motacillidae

Anthus similis Long-billed Pipit. One pair observed on top of the hill near South Repeater, in short open woodland, 21 Feb. One bird was singing a song typical of the species elsewhere in Africa (two different notes repeated with a short interval “plui, tchlup, plui, tchlup...”) and the other was nest-building. There are several other hills with pebbly, short woodland in Kyabobo.

A. trivialis Tree Pipit. PM. Common migrant in woodland in the dry season, with several in the Laboum valley and on ridge top, 19–22 Feb.

Campephagidae

Campephaga phoenicea Red-shouldered Cuckoo-shrike. AM. Two males chasing each other in farmbush near Koue, 20 Jul.

Coracina pectoralis White-breasted Cuckoo-shrike. Few in tall woodland in the north, Jul.

Pycnonotidae

Andropadus virens Little Greenbul. Widespread, in dense forest understorey, farmbush (including *Chromolaena*) and forest edges. low down, except when feeding on canopy fruit, Jul, Feb.

A. gracilis Little Grey Greenbul (GC). Fairly common in the south, in mid-stratum (usually) of forest, including secondary formations, Jul, Feb.

A. curvirostris Cameroon Sombre Greenbul (GC). Forest understorey (Laboum, Pawa), also in thick growth in farmbush, Jul, Feb. Song, heard in several places, a slow series of three modulated whistles; one bird came to tape playback of a similar motif recorded in Cameroon (nominate race) by Chappuis (2000). The race at Kyabobo is not known; the nominate is said to have been collected at several places in Togo (Cheke & Walsh 1996), while *leoninus* is reported from forest to the west of the Volta (Lowe 1937).

A. gracilirostris Slender-billed Greenbul. A common canopy species of all forest formations (including *Anogeissus*) and even woodland, wandering there frequently in search of fruit, Jul, Feb.

A. latirostris Yellow-whiskered Greenbul. Very common understorey species of all forest types (including *Anogeissus*), throughout, Jul, Feb.

Baeopogon indicator Honeyguide Greenbul (GC). Widespread (usually in the canopy) in all forest types and even transition woodland, Jul, Feb. Often sang in mid-afternoon and other times when other species were quiet. Seen eating fruit of *Antiaris*, Feb.

Chlorocichla simplex Simple Greenbul (GC). Locally in secondary thickets in farmbush between the Koue river and Koue (several in song in Jul), and in *Chromolaena* on edge of riparian forest near Pawa camp, Feb.

Thescelocichla leucopleura Swamp Palm Bulbul (GC). A noisy pair discovered in riparian forest at Pawa camp, 22–23 Feb. At its northern limit of distribution.

Pyrrhurus scandens Leaflove (GC). Common in canopy of all forest types (including *Anogeissus*) and in transition woodland, Jul, Feb. Often one of the first species to sing at dawn.

Phyllastrephus baumanni Baumann's Greenbul (GC). Thanks to a tape of its song made available by R. Demey (obtained in Ivory Coast), this species was located in many places in Jul, usually in dense herbaceous cover close to the ground, in forest clearings and transition woodland but also in farmbush (particularly old cassava fields invaded by tall grass and *Chromolaena odorata*), and even a field of 2-m tall maize on the edge of the Koue river in the north. Occasionally perched in a shrub or small tree when alarmed, but fed close to the ground, hopping from stem to stem. In transition woodland or forest clearings usually found with *Ptilopachus petrosus*, *Tchagra australis*, *Cisticola lateralis*, *Camaroptera brachyura* and *Andropadus virens*. Near streams it also associated with *Sarothrura pulchra*, *Sylvietta virens*, *Hylia prasina*, *Melocichla mentalis* and *Cisticola erythrops*. In dry farmbush usual associates were *P. petrosus*, *C. lateralis*, *C. brachyura* and *A. virens*. The male of a pair was netted and ringed in farmbush on the Laboum stream and retrapped in another net the same afternoon: a territory of several hectares. Not very vocal in Jul, but more so in Feb after the first storms: the song motifs consist usually of 3–4 notes, at the rate of *c.* 2 notes per s, either of the *Pycnonotus* type (“tchic, tchup”) or rolled (“prrrur”): thus “tchic-tchup-prrrur-prrui...”; these and variations were given for spells of a few minutes, with short intervals; tape-recorded. Most singing took place at dawn, and occasionally during the day, especially when feeding in a bird party. Alarm call a prolonged churr. The ringed bird was even singing in the net the second time it got caught.

P. icterinus Icterine Greenbul (GC). One bird in a small party in forest with *Tropicranus albocristatus* and *Cercopithecus mona*, 28 Jul. Not relocated in Feb, when the forest looked less suitable (very dry and some trees were leafless), despite the fact we spent more time in the forested Laboum basin.

P. albigularis White-throated Greenbul (GC). Overlooked in Jul, but quite noisy in Feb when fairly common in the dense understorey of secondary forest in the upper Laboum valley, and in riparian forest at Pawa camp.

Bleda canicapillus Grey-headed Bristlebill (GC). Thinly distributed in farmbush and riparian forest (Laboum, Pawa), Jul, Feb; one seen roosting in a clump of exotic *Bambusa vulgaris* (Laboum).

Criniger calurus Red-tailed Greenbul (GC). Widespread in forest (Laboum and Pawa), including secondary formations, Jul, Feb.

Pycnonotus barbatus Common Bulbul. Widespread and common in all habitat types, except shaded understorey of closed-canopy forest, Jul, Feb.

Nicator chloris Western Nicator (GC). Common in all forest types (including *Anogeissus*) and transition woodland with thickets and vine tangles, Jul, Feb. Usually at mid-levels.

Turdidae

Stizorhina fraseri (finschi) Rufous Ant Thrush (GC). Very local in forest (Laboum, Pawa), Jul, Feb; singing in Feb.

Turdus pelios West African Thrush. Common and widespread, all habitats except closed forest, Jul, Feb.

Alethe diademata Fire-crested Alethe (GC). Overlooked in Jul. Several singing or calling in forest along the upper Laboum stream, Feb.

Stiphornis erythrothorax Forest Robin (GC). Several holding territory in Marantaceae understorey along the Laboum in forest, Jul. Surprisingly they sang like Forest Scrub Robin *Erythropygia leucosticta* and reacted only to tapes of that bird, not to the shorter motif of their own species recorded in Ivory Coast (Chappuis 2000). Two were netted, using the tape of *E. leucosticta* as a lure. They appeared absent from this spot, which was too dry, in Feb, but were calling in more sheltered forest next to the upper Laboum stream, and one was singing in riparian forest at Pawa camp. The possible confusion between this robin and *E. leucosticta* was encountered elsewhere in south-west Ghana, especially in Kakum, where tape playback of *Erythropygia* song provoked *Stiphornis* to react strongly. In Equatorial Guinea, *Stiphornis* sings like the Zambian dialect of Bocage's Robin *Sheppardia bocagei* (Dowsett-Lemaire & Dowsett 1999). Further east, the yellow-bellied race *xanthogaster* produces a semi-continuous light, hurried song very similar to that of White-bellied Robin *Cossyphicula roberti* (Dowsett-Lemaire 1990), and reacts strongly to tapes of the latter. Why *Stiphornis* shows such wide vocal variation, including almost perfect imitations of or vocal convergence with other robins of different genera, remains mysterious.

Luscinia megarhynchos Nightingale. PM. Some calling and singing in thick *Chromolaena* near the Laboum stream, 18–22 Feb.

Cossypha cyanocampter Blue-shouldered Robin (GC). One calling and singing in sheltered riparian forest at Pawa camp on 22 Feb.

C. niveicapilla Snowy-crowned Robin-Chat. AM in part. In Jul, restricted to secondary thickets in farmbush near the Koue river (some with Teak *Tectona grandis*) with *Chlorocichla simplex* and *Laniarius aethiopicus*. In Feb appeared more widespread, with some also in the Laboum basin (riparian forest, *Chromolaena* on

slopes) and in riparian forest at Pawa camp. The population is probably augmented in the dry season by migrants from the northern savannas.

Cercomela familiaris Familiar Chat. Normally confined to rocky woodland but seen twice in fields in Jul (one very close to a rocky hill). In Feb one pair in burnt woodland on ridge top.

Sylviidae

Melocichla mentalis African Moustached Warbler. Common in tall grass, farmbush or edge of woodland, especially near streams (e.g. Laboum), Jul, Feb. In the dry season tends to restrict itself to unburnt patches.

Hippolais polyglotta Melodious Warbler. PM. Common wintering species in farmbush and woodland in Feb, with much singing activity.

Eremomela pusilla Green-backed Eremomela (SUD). Widespread in small numbers in woodland, locally also in transition woodland (Breast Mountain), Jul, Feb.

Sylvietta virens Green Crombec (GC). Locally common in moist secondary growth (including farmbush) near streams, understorey of transition woodland and open semi-evergreen forest, even small valley-bottom thickets in *Anogeissus* forest, Jul, Feb.

S. brachyura Northern Crombec. Jul, Feb; a pair in farmbush between Nazeni camp and Koue; in woodland near Pawa camp.

Macrosphenus concolor Grey Longbill (GC). Only in sheltered riparian forest at Pawa camp, one singing, 23 Feb.

Phylloscopus trochilus Willow Warbler. PM. Common in woodland, farmbush and secondary forest, with several in song, Feb.

P. collybita Common Chiffchaff. PM. More local than last: some in woodland near Laboum camp, 18 Feb.

Hyliota flavigaster Yellow-bellied Hyliota. Fairly conspicuous in woodland and open riparian forest in the Laboum and Nazeni areas, Jul.

Hylia prasina Green Hylia (GC). In thick understorey of riparian forest, thickets in farmbush (especially near the Laboum stream), forest clearings on slopes; more local near Koue (Nazeni stream, thickets) and Pawa, Jul, Feb.

Sylvia borin Garden Warbler. PM. Several singing in farmbush and at forest edges, Feb.

Cisticolidae

Cisticola brachypterus Short-winged Cisticola. Regularly encountered in short, open woodland, especially where grass cover is not (or little) invaded by *Chromolaena*, Jul, Feb.

C. aberrans Rock-loving Cisticola. Several in rocky grassland with few trees on the ridge of a hill near Koue, Jul.

C. lateralis Whistling Cisticola. The most numerous and widespread cisticola, in woodland, transition woodland, farmbush and clearings in forest. Sings high in trees but feeds much in grass (in the rains) and *Chromolaena*, Jul, Feb.

C. erythrops Red-faced Cisticola. In tall grass (e.g. *Pennisetum*) near streams (Laboum and Koue), also in grass mixed with *Chromolaena*, Jul, Feb.

C. cantans Singing Cisticola. More local than *C. lateralis*, in grass and shrubs in woodland, edge of farmbush, Jul, Feb.

Prinia subflava Tawny-flanked Prinia. Very common in grass/shrubs in woodland and transition woodland, small thickets in farmbush, Jul, Feb.

Heliolais erythropterus Red-winged Warbler. Several pairs in tall grass in open woodland, edge of transition woodland (in the foothills) and farmbush, Jul, Feb.

Apalis sharpii Sharpe's Apalis (GC). In rain forest near the Laboum waterfalls and along the upper Laboum, even in degraded riparian forest next to farms there. In canopy and mid-stratum. Also in riparian forest at Pawa camp. Vocal in Jul and Feb.

Camaroptera brachyura Bleating Bush Warbler. Very common in rank growth and thickets, understorey of *Anogeissus* forest. Well adapted to *Chromolaena* in woodland, farmbush and open forest, Jul, Feb.

C. supercilialis Yellow-browed Camaroptera (GC). Missed in Jul; in Feb at least two singing in secondary forest on the upper Laboum, as well as in riparian forest at Pawa camp.

C. chloronota Olive-Green Camaroptera (GC). Not singing or reacting to tape in Jul and would have been overlooked but for one netted in Marantaceae cover at our Laboum forest camp. In Feb was singing in secondary forest on the upper Laboum as well as in riparian forest at Pawa camp.

Hypergerus atriceps Oriole-Warbler (SUD). Heard in only two places in thin riparian forest on the Laboum, 11–13 Jul.

Muscicapidae

Bradornis pallidus Pallid Flycatcher. A few records in open, short woodland, and farmbush with large trees, Jul, Feb.

Fraseria ocreata Forest Flycatcher (GC). One pair on the edge of riparian forest at Pawa camp, 22 Feb.

F. cinerascens White-browed Forest Flycatcher (GC). One pair (no brood patch) netted in deep shade next to the stream at our Laboum forest camp, 27 Jul. Unusual habitat (normally in seasonally flooded or swamp forest), thus possibly post-breeding wanderers.

Ficedula hypoleuca Pied Flycatcher. PM. Common in any woodland and farmbush, Feb.

Muscicapa striata Spotted Flycatcher. PM. A few in woodland near ridge tops, on 20–21 Feb. These birds were almost unstreaked on the underparts (*balearica*?) and had a rather dark bill. However, calls and behaviour typical of this species, ruling out Gambaga Flycatcher *M. gambagae*.

M. caerulescens Ashy Flycatcher. Scattered records of pairs on edge of riparian forest, woodland with farmbush, Jul.

Myioparus plumbeus Lead-coloured Flycatcher. The most common flycatcher, in woodland, transition woodland, edge of riparian forest, and farmbush with trees, Jul, Feb.

Platysteiridae

Megabyas flammulatus Shrike-Flycatcher (GC). Normally local and rare, but rather conspicuous in Kyabobo, in canopy of large and medium-sized trees in forest

(Laboum to Pawa) and rich transition woodland (Breast Mountain), Jul, Feb. In pairs or small family units of four birds.

Batis senegalensis Senegal Batis. Widespread in woodland in small numbers; also in farmbush with scattered trees, Jul, Feb.

Dyaphorophya blissetti Red-cheeked Wattle-eye (GC). Several pairs in thickets in secondary forest on the edge of farmbush in the upper Laboum valley. Very vocal Jul and Feb, feeding low in dense bush. Also in riparian forest at Pawa camp.

D. castanea Chestnut Wattle-eye (GC). Completely silent in Jul, with one pair seen in forest understorey (Laboum). A few calling in Feb (Laboum and Pawa).

Monarchidae

Terpsiphone viridis African Paradise Flycatcher. Fairly common in all habitat types (woodland, thickets, farmbush and forest), Jul, Feb.

Timaliidae

Illadopsis fulvescens Brown Illadopsis (GC). Common in Laboum forest (understorey tangles), dense secondary forest and forest regrowth a few metres high, and riparian forest at Pawa camp, Jul, Feb.

I. puveli Puvel's Illadopsis (GC). Similarly widespread (Laboum to Pawa), but somewhat more frequent near streams, in forest and tall secondary growth. Singing Jul and Feb.

Phyllanthus atripennis Capuchin Babbler (GC). Missed in Jul, but two or three noisy groups found in Feb in dense understorey of secondary and riparian forest on the upper Laboum, and in riparian forest at Pawa camp.

Paridae

Parus leucomelas (guineensis) White-winged Black Tit. A few pairs in woodland, Jul.

Certhiidae

Salpornis spilonotus Spotted Creeper. Seen twice in woodland (Laboum and Nazeni), Jul.

Nectariniidae

Anthreptes fraseri Fraser's Sunbird (GC). A pair in a mixed party in forest on the upper Laboum, 28 Jul. Not found in Feb, perhaps a rains visitor.

A. longuemarei Violet-backed Sunbird. A pair in woodland near Koue, Jul.

A. rectirostris Yellow-chinned Sunbird (GC). One male seen well in tall riparian forest on the Laboum, 11 Jul.

A. collaris Collared Sunbird. Common in all forest types, transition woodland and farmbush, feeding at all levels, Jul, Feb.

Nectarinia seimundi Little Green Sunbird (GC). Laboum forest: three in a party, and a family with fledgling, Jul.

N. olivacea Olive Sunbird. Common in all forest types (including *Anogeissus*), locally in transition woodland, Jul, Feb. Some defending patches of *Symphonia* flowers.

N. verticalis Green-headed Sunbird. A few in riparian forest and mango trees on the Koue river. Also in riparian forest at Pawa camp, Jul, Feb.

N. senegalensis Scarlet-chested Sunbird. One in non-breeding dress, in woodland near Laboum outpost, 12 Jul.

N. adelberti Buff-throated Sunbird (GC). Locally common in farmbush with big trees, and secondary forest. Defending patches of *Symphonia* and mistletoe flowers, Jul, and often on flowers of *Parkia filicoidea*, Feb.

N. venusta Yellow-bellied Sunbird. Two in farmbush near Nazeni camp, 23 Jul (one coming into breeding dress). More widespread in Feb, often feeding on flowers of *Parkia filicoidea*.

N. chloropygia Olive-bellied Sunbird. A few in farmbush and secondary growth in the south, Jul.

N. cuprea Coppery Sunbird. Fairly common in woodland in the north, also in farmbush (feeding on Teak flowers). Fewer in the south (woodland), Jul, Feb.

N. coccinigastra Splendid Sunbird (SUD). The most common sunbird, in woodland, farmbush, transition woodland and open stands of forest, Jul, Feb. Defended patches of mistletoes.

N. superba Superb Sunbird (GC). Three sightings, edge of riparian forest/farbush (Laboum), Jul, Feb.

Zosteropidae

Zosterops senegalensis Yellow White-eye. Uncommon in the south (woodland, farmbush), more common in the north, including *Anogeissus* forest, Jul, Feb.

Oriolidae

Oriolus auratus African Golden Oriole. Widespread in canopy of woodland, transition woodland, riparian and open semi-evergreen forest, as well as *Anogeissus* forest, Jul, Feb.

O. nigripennis Black-winged Oriole (GC). Widespread in forest canopy (Laboum, Pawa), singing far more in Feb than Jul.

Malaconotidae

Nilaus afer Brubru. Occasional in woodland, Jul.

Dryoscopus gambensis Northern Puffback. Common in woodland, transition woodland, farmbush with trees or thicket clumps, Jul, Feb.

Tchagra minutus Marsh Tchagra. Local in tall rank grass with shrubs, in farmbush near the Laboum and Nazeni streams, Jul.

T. australis Brown-headed Tchagra. Widespread in dense grass and *Chromolaena*, and in shrubs of forest clearings and transition woodland, more local in similar habitat in farmbush, Jul, Feb.

T. senegalus Black-crowned Tchagra. Very common in woodland, also in farmbush, Jul, Feb.

Laniarius aethiopicus Tropical Boubou. Several pairs in secondary thickets in farmbush between Koue and the river; also once near the Laboum stream, Jul.

Malaconotus multicolor Many-coloured Bush Shrike. One heard in a forest gully beyond South Repeater, 19 Feb (with *M. lagdeni*).

M. lagdeni Lagden's Bush Shrike. One heard and seen in forest on the Laboum stream, 19 and 22 Feb; another heard in an inaccessible forest gully beyond South Repeater, 19 Feb. Our attention was drawn by the song, a series of 4–5 identical soft whistles at

the rate of 1 per s. Each whistle was slightly rising in pitch. Ivory Coast and Rwanda populations (all in Chappuis 2000) produce a somewhat different dialect. Whistling the local dialect stimulated much searching behaviour and some aggressive dry rattles, while the bird stopped singing each time for 10–15 minutes, 19 and 22 Feb. Playback of the Ivory Coast tape, particularly the series of monotonous whistles, also produced a dry rattle, despite the differences in motif. The bird was silent there in Jul. *M. blanchoti* Grey-headed Bush Shrike. Few in canopy of woodland (Nazeni, Pawa) and in thin riparian forest on the Laboum, Jul, Feb.

Prionopidae

Prionops plumatus White Helmet Shrike. Particularly common in the canopy of *Anogeissus* forest in the north, Jul. Local in woodland, farmbush and semi-evergreen forest (near Breast Mountain); groups often of 8–12.

P. caniceps N. Red-billed Helmet Shrike (GC). One seen in a mixed party in semi-evergreen forest above the Laboum waterfalls, 15 Jul. Not relocated in Feb.

Dicruridae

Dicrurus ludwigii Square-tailed Drongo. Several in forest in the upper Laboum basin. More vocal in Feb than Jul.

D. adsimilis Fork-tailed Drongo. Widespread in small numbers in woodland, transition woodland, *Anogeissus* forest (canopy) and farmbush with some tall trees, Jul, Feb.

Corvidae

Corvus albus Pied Crow. Once visited our camp at Laboum, Jul.

Sturnidae

Lamprotornis chloropterus Lesser Blue-eared Starling. AM. Several in woodland in the Laboum area, Feb. Singing and alarm-calling.

L. splendidus Splendid Starling. AM. Quite common and noisy in forest and farmbush in the Laboum basin, also at Pawa camp, Feb. Absent Jul.

Cinnyricinclus leucogaster Violet-backed Starling. AM. A few in farmbush between Koue and the river, all independent immatures and females, 20–21 Jul.

Passeridae

Petronia dentata Bush Petronia (SUD). AM. Common in woodland in Feb (e.g. Laboum, Pawa), absent Jul.

Ploceidae

Ploceus nigricollis Black-necked Weaver. A few pairs in secondary thickets and riparian vegetation on the Koue river, Jul.

P. cucullatus Village Weaver. Small numbers in farmbush near the Koue river, Jul.

P. nigerrimus Vieillot's Black Weaver (GC). Small numbers in farmbush in the upper Laboum valley, Feb, and near the Koue river, Jul, with some nests in *Pennisetum*.

P. superciliosus Compact Weaver. Two groups, of three and five birds, in tall grass and *Chromolaena* in farmbush south of Laboum camp and near Odome, Jul.

Malimbus nitens Blue-billed Malimbe (GC). Conspicuous in mixed bird parties in thick riparian growth/secondary forest on the upper Laboum stream, Jul, Feb.

Anaplectes rubriceps Red-headed Weaver. Several (including immatures) in canopy of *Anogeissus* forest in the north, accompanying *Prionops plumatus* and *Dicrurus adsimilis*, Jul.

Quelea erythrops Red-headed Quelea. AM? Flocks in woodland near Pawa camp, 22 Feb.

Euplectes macroura Yellow-mantled Whydah. Males holding territories of extensive grassland in woodland clearings in two places in the north (on the park's boundary), Jul.

Estrildidae

Nigrita canicapillus Grey-crowned Negrofinch. Common in farmbush, thickets, secondary forest, riparian and semi-evergreen forest, at all levels and throughout, Jul, Feb.

N. luteifrons Pale-fronted Negrofinch (GC). One or two in farmbush on the upper Laboum, as well as on the edge of riparian forest at Pawa camp, 20–23 Feb, in association with *N. canicapillus*. Located by characteristic contact calls, of four descending whistles “fue-fee-fee-fee”; this call, more simple than the song, appears not to have been tape-recorded even though it is the most frequent vocalization (pers. obs. in Congo and elsewhere).

N. bicolor Chestnut-breasted Negrofinch (GC). One in riparian forest at Pawa camp, 22 Feb.

N. fusconotus White-breasted Negrofinch (GC). Two in a mixed party in forest canopy (Laboum), 15 Jul.

Pytilia hypogrammica Yellow-winged Pytilia (SUD). A male in Marantaceae understorey of riparian forest on the upper Laboum, 19 Feb.

Spermophaga haematina Western Bluebill (GC). Occasional pair in rank growth in farmbush and riparian forest on the Laboum stream, Jul, Feb.

Lagonosticta rufopicta Bar-breasted Firefinch (SUD, when split from Brown Firefinch *L. nitidula*). Several pairs in secondary thickets and farmbush near the Koue river and Laboum stream, Jul, Feb.

L. rara Black-bellied Firefinch (SUD). Several pairs in rank growth (farmbush, edge of riparian vegetation), Koue to Laboum, Jul, Feb.

L. rubricata Blue-billed Firefinch. Isolated pairs in Jul (woodland, farmbush), with local concentrations of several dozens in rank grass (partly burnt) on the Laboum stream in Feb.

Estrilda melpoda Orange-cheeked Waxbill. A few small groups in tall grass and rank growth in woodland and farmbush, road edges, Jul, Feb.

Spermestes cucullata Bronze Mannikin. Widespread in small numbers in grass in open woodland and farmbush, Jul, Feb.

S. bicolor Black-and-White Mannikin. Widespread in small numbers in grass in open woodland and farmbush, Jul, Feb.

Viduidae

Vidua macroura Pin-tailed Widow. Some in breeding dress, holding territory in woodland clearings and farmbush on the park's northern boundary, Jul.

V. togoensis Togo Paradise Widow (SUD). One male in breeding dress and two females nearby, in transition woodland near Laboum camp, 18 Feb. This is very late for a bird that breeds mainly at the end of the rains. Parasitizes *Pytilia hypogrammica* (Payne in Fry & Keith 2004).

Fringillidae

Serinus mozambicus Yellow-fronted Canary. Three observations of a pair in woodland, Jul, Feb.

Emberizidae

Emberiza cabanisi Cabanis's Bunting. One singing in ridge-top woodland near South Repeater, 22 Feb.

Breeding records and calling seasonality

Back-dating to egg-laying, where possible, suggests a concentration of breeding activity in the late dry season and early rains.

Eurystomus gularis. Fledgling fed by adults 25–29 Jul (= laying c. Apr–May).

Tockus fasciatus. Some family groups, with noisy juvenile (seemed recently independent), Jul.

Anthus similis. One nest-building, mate singing nearby, 21 Feb.

Turdus pelios. Adult carrying food, 19 Jul.

Sylvietta virens. Pair feeding two fledglings, 14 Jul (= laying May–Jun).

Hyliota flavigaster. Pair with full-grown dependent fledgling, 14 Jul; another with almost independent fledgling, 23 Jul (= laying May).

Cisticola brachypterus. Full-grown juvenile with adult, 14 Jul (= laying probably May).

Cisticola lateralis. Full-grown juvenile with adult, 19 Jul (= laying probably May).

Heliolais erythropterus. Nest-building, 24 Jul.

Myioparus plumbeus. Male singing and carrying food to nest (in a *Vitellaria*), 12 Jul (= laying Jun).

Batis senegalensis. Two females begging from male (*i.e.* incubating), 12 Jul, 1 Aug (= laying late Jun to Jul).

Anthreptes collaris. Several females feeding fledglings, Jul (= laying May to early Jun). Four adults netted Jul were in fresh plumage, one just finishing moult.

Nectarinia seimundi. One feeding fledgling, 28 Jul (= laying Jun).

Nectarinia olivacea. Fledgling begging but nearly independent, 20 Jul; another fledgling fed, 25 Jul (= laying May and Jun). Seven netted adults were in fresh plumage.

Nectarinia coccinigastra. Female feeding nestlings (nest on a hanging branch of *Daniellia oliveri*), 20 Jul (= laying Jun or early Jul).

Tchagra minutus. Female carrying food, 14 Jul (= laying June).

Ploceus nigricollis. Juvenile begging from female, 18 Jul (= laying May); male nest-building same day.

Many resident species were calling at both seasons, but many called more in Feb than Jul. Forest species that appeared to be silent in Jul include *Phyllastrephus*

albigularis, *Stizorhina fraseri*, *Alethe diademata*, *Camaroptera superciliaris*, *C. chloronota*, *Dyaphorophya castanea*, *Phyllanthus atripennis*, *Malaconotus lagdeni*. Others were not entirely silent in Jul, but much more vocal in Feb: *Columba delegorguei*, *Pachycoccyx audeberti*, *Centropus leucogaster*, *Eurystomus gularis*, *Oriolus nigripennis*, *Dicrurus ludwigii*. On the other hand, *Apaloderma narina* was heard only in Jul, as also *Chrysococcyx cupreus*, the latter being probably a rains visitor this far north in Ghana.

Discussion

Biome-restricted species

The Sudanian biome is represented by only 11 species. The transitional nature of the area is well illustrated by the occurrence of both the northern (Sudanian) *Lybius dubius* and the southern *L. bidentatus* (a species of forest edges) (Fig. 2).

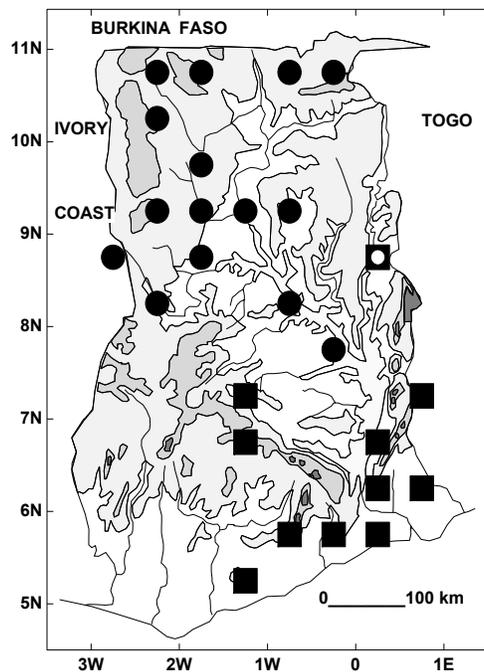


Figure 2. Records of Bearded Barbet *Lybius dubius* (circles) and Double-toothed Barbet *L. bidentatus* (squares) in Ghana: both occur at Kyabobo.

By far the most important biome is Guineo-Congolian, with at least 65 species. Following Fishpool & Evans (2001), another four would be included: *Columba iriditorques* split from *C. delegorguei*, nominate *Bubo poensis* separated from the Tanzanian taxon *vosseleri*, *Caprimulgus (pectoralis) nigriscapularis* and *Psalidoprocne obscura*. The last two should, however, be best considered as linking elements between the Guineo-Congolian and Sudanian regions, as they are widely distributed in savanna regions as well. Five GC species are Upper Guinea endemics or near-endemics (Dowsett-Lemaire & Dowsett 2001): *Francoelinus achantensis*, *Thripias pyrrhogaster*, *Phyllastrephus baumanni*, *Bleda canicapillus*, *Apalis sharpii*. Although most GC forest species are found in the predominant semi-evergreen rain forest, several occur in drier forest types (including *Anogeissus* forest), transition woodland and farmbush, and some frugivores (e.g. *Tauraco persa*, *Tockus fasciatus*, *Pogoniulus scolopaceus*) readily visit fig trees in woodland.

Biogeographical importance of Kyabobo

As the area was virtually unexplored, all observations of forest birds (including all GC species) represent extensions of known range in Ghana. The more striking examples of northern extensions for forest species concern *Dryotriorchis spectabilis*, *Accipiter erythropus*, *Spizaetus africanus*, *Turtur brehmeri*, *Bubo poensis*, *Eurystomus gularis*, *Indicator maculatus*, *I. willcocksii*, *Campethera nivosus*, *Dendropicops gabonensis*, *Thripias pyrrhogaster*, most of the forest bulbuls (e.g. all three *Phyllastrephus*), various Turdidae (e.g. *Alethe diademata*) and Sylviidae (e.g. *Apalis sharpii*, *Macrosphenus concolor*), *Fraseria* (both species), *Megabyas*, *Dyaphorophya*, spp., *Phyllanthus atripennis*, *Illadopsis* spp., various sunbirds, both *Malaconotus* (see below), and all four *Nigrita* spp. Only a few of these forest birds were known from the poorly prospected adjacent Fazao-Malfakassa NP in Togo (Cheke & Walsh 1996), e.g. *Spizaetus africanus*, *Indicator maculatus* and *Thescelocichla leucopleura* (the only forest bulbul mentioned for Fazao by Cheke & Walsh 1996).

In the case of *Glaucidium capense*, new to Ghana, the nearest record hitherto of this bird was from Lamto (6°13'N, 5°2'W) in Ivory Coast (Collar & Stuart 1985), some 700 km to the west. But in further surveys throughout Ghana in 2005 we found it in another six localities, from Bui NP to Wli Falls and Shai Hills, including Kogyae Reserve where it was tape-recorded. Some of the birds (initially silent) were provoked into song by play-back. This owl is characteristic of the forest-savanna transition zone, occurring in *Daniellia* transition woodland and at forest edges. Other forest species whose ranges are extended include *Fraseria cinerascens*, known previously no nearer than Akropong in Akwapim (Grimes 1987, 250 km to the south-west), and also found by us in Kogyae on the Afram river (7°10'N, 1°7'W) in Jan 2005. *Illadopsis puvelli* was confused by Grimes (1987) with the much rarer *I. rufescens*: a tape-recording of "*I. rufescens*" from coastal thickets was re-identified as *I. puvelli* (Chappuis 1975, pers. obs.), and other records are similarly in error. *I. puvelli* is in fact

the most widespread illadopsis in Ghana, from coastal thickets north to Kyabobo and Bui NP (Dowsett-Lemaire & Dowsett 2005). Even for savanna or forest-edge species like the nightjar *Caprimulgus (pectoralis) nigriscapularis* the range extension is considerable, as it was known only from Cape Coast (Grimes 1987, A. Riley unpubl.), 370 km to the southwest, but we have recently found it in another nine localities. In the case of *Ploceus superciliosus* the previous nearest record seems to be from the Keta Plains (c. 6°15'N, 0°45'E) (Grimes 1987). The Thick-billed Cuckoo *Pachycoccyx audeberti* (rarely reported in Upper Guinea) was previously known from just three places in the Volta region (Grimes 1987), but as well as at Kyabobo, we found it also at many other localities in Ghana in 2004–5 (Dowsett-Lemaire & Dowsett 2005) and it is especially frequent in the forest–savanna transition zone.

Our observations of *Malaconotus lagdeni* are the first in Ghana since the type specimen was collected in “Ashanti”, supposed to be in forest near Kumasi where G. Lagden was operating in the 1880s (Hall *et al.* 1966). This bird is extremely rare or localized in W Africa: in recent years it has been discovered at a few forest localities in Liberia (Gatter 1997), Sierra Leone (Allport *et al.* 1989, pers. obs.) and Ivory Coast (Thiollay 1985). It is also known from a small isolated population in the Albertine Rift of E Democratic Republic of Congo (Congo-Kinshasa: Chapin 1954) and Rwanda (Dowsett-Lemaire 1990). From Togo there is an undocumented sight record from the “Pagala-Ghana” road near the Ghana border at 8°11'N (cited by Cheke & Walsh 1996 but disregarded by Borrow & Demey 2001, 2004), just opposite Nkwanta and very close to the Kyabobo forests. No doubt this and our own observations refer to the same population on the Togo Plateau.

The GC forest species and some other forest birds found in Kyabobo can go no further north in E Ghana, as the landscape changes dramatically into dry savanna within a few km of the park's northern boundary. Even in the south of the reserve, in the relatively wet Laboum basin, several forest birds appeared to be at their range limits: in particular *Phyllastrephus icterinus* and *Prionops caniceps*, observed as single (silent) members of mixed bird parties in Jul, and not relocated in Feb, when the forest was very dry and several tree species temporarily leafless. These and a few other birds may be local wanderers from denser, wetter forest to the south, as in the Shiare or Kilinga region. The hills to the south of the park are more densely forested than within it. From forest a few km south of Shiare, Moyer (1996) reported three species as yet unknown in Kyabobo: Olive Long-tailed Cuckoo *Cercococcyx olivinus*, Rufous-sided Broadbill *Smithornis rufolateralis* and Black-and-White Flycatcher *Bias musicus*; he also recorded Red-collared Whydah *Euplectes ardens*, a species of tall rank grass that seems likely to occur somewhere in Kyabobo. A few more forest species have been found in the poorly-explored Fazao-Malfakassa NP in adjacent Togo (Cheke & Walsh 1996), noteworthy being the rare Black-and-White Casqued Hornbill *Bycanistes subcylindricus* and Yellow-casqued Hornbill *Ceratogymna elata* (the former was omitted from the biome table in the Koue valley Important Bird Area account: Cheke 2001), and White-tailed Ant Thrush *Neocossyphus poensis* (seen near

the Koue river). The Forest Francolin *Francolinus lathamii* has been reported (H. Lege in Cheke & Walsh 1996), but how it was identified is not stated. It is still unreported from anywhere in E Ghana. Another three species mentioned by Cheke & Walsh (1996) for Fazaou come from an unpublished report ("Minster Agriculture Limited 1984") and ought to be queried: one (Blue-headed Crested Flycatcher *Trochocercus nitens*) does not even appear in the report's list, while the main author of the report (J.M. Lock *in litt.*) considers another two (Sooty Boubou *Laniarius leucorhynchus*, Dusky Blue Flycatcher *Muscicapa comitata*, which have never been reported from E Ghana or elsewhere in Togo) very doubtful.

Of the non-forest species, of special interest is *Anthus similis*, of which a pair was found nesting in short, open pebbly woodland at an altitude of >800 m. There are very few records of this bird in Ghana, where it is confined to the highlands in the Amedzofe area north to 7°49'N on the Togo border (Taylor & Macdonald 1989, Cheke & Walsh 1996). Kyabobo represents a small extension to the north; no specimens of this population exist, and the birds appear to be paler than the race *bannermani* known from other highland areas in W Africa (Guinea highlands to the west, Jos Plateau and Cameroon highlands to the east).

Red-listed species

Malaconotus lagdeni is Near-Threatened (BirdLife International 2004). *Phyllastrephus baumanni* may soon come out of the Data Deficient category, as it seems locally common and adaptable; in addition to natural forest clearings, it seems at home in secondary rank growth, even where seriously invaded by the exotic *Chromolaena odorata*. Prior to 2004, its known localities in Ghana were Cape Coast (5°7'N, 1°15'W) and Ejura (7°23'N, 1°15'W), and the Shiare area (Moyer 1996, Fishpool 2000). We found it in secondary growth in *Chromolaena* farmbrush south of Atewa Range (c. 6°14'N, 0°34'W), in forest clearings with *Chromolaena* in Bia National Park (6°36'N, 3°3'W), and in thick *Chromolaena* at forest edges in the south of Digya NP (7°8'N, 0°28'W). Thus it is likely to be more widespread in Ghana and W Africa than hitherto supposed (Fishpool 2000). *Tigriornis leucolopha* (Data Deficient) is probably under-recorded and is now known from as many as 11 localities in Ghana (pers. obs.).

Kyabobo as an Important Bird Area

From the significant number of GC species, the presence of several rare species like *Malaconotus lagdeni* and its unique position in the forest-savanna transition zone, the proposed Kyabobo NP deserves to be an Important Bird Area. It is part of an area of E Ghana where the forest is expanding over woodland, as in S Gabon and central Congo, where enclosed savannas are similarly receding (de Foresta 1990, Schwartz *et al.* 1990, Dowsett-Lemaire 1996, White 2001). With time, more forest species could expand into Kyabobo. Forest spread is of concern for the management of large grazing mammals, and the park's advisers have pointed out that late fires may be

necessary to limit it (P. Hartley pers. comm.). Farmers in Kyabobo have deforested part of the Laboum basin, but their impact in the core of the park seems very low. The relocation of the small farming communities was completed in 2006, and the infrastructure for the park is also in place (L. Kanton *in litt.* 2007).

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