

# Birds of the Lobéké Faunal Reserve, Cameroon, and its regional importance for conservation

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## Summary

The Faunal Reserve of the Lobéké area of south-eastern Cameroon is an important area for forest conservation. One day, it is hoped, it will be part of an international unit, in association with two protected areas in neighbouring countries (Dzanga-Ndoki National Park, Central African Republic and Nouabalé-Ndoki National Park, Congo). With a view to assessing the status of its avifauna in particular, 24 days were spent in three short surveys from 1997 to 1999. The main forest type is semi-evergreen, with an open canopy; the only natural savannas are small saline swamps. The total of 305 species of bird recorded includes a forest nightjar not yet identified (but more likely to be the rare Itombwe Nightjar *Caprimulgus prigoginei* than a new species) and the Dja River Warbler *Bradypterus grandis*. The latter is a species confined to *Rhynchospora* swamps and had not been re-located in Cameroon since it was first collected in 1914 west of the Dja river; the extent of suitable habitat in Lobéké makes this site the most important to date for its conservation. Other rare or little-known forest species recorded include Olive Ibis *Bostrychia olivacea*, Sandy Scops Owl *Otus icterorhynchus*, Zenker's Honeyguide *Meligomon zenkeri*, Tessmann's Flycatcher *Muscicapa tessmanni* and Yellow-capped Weaver *Ploceus dorsomaculatus*. Barred Owlet *Glaucidium capense* is locally common in open-canopy forest: this population was only recently discovered in central Africa and its taxonomic relationships have yet to be determined. We include a brief comparison with the avifauna of adjacent Dzangha-Ndoki National Park and Nouabalé-Ndoki National Park. A feature of the Lobéké avifauna is the presence of a few species normally associated with forest at higher altitudes (such as White-headed Wood Hoopoe *Phoeniculus bollei*, Uganda Woodland Warbler *Phylloscopus budongoensis*, Black-throated Apalis *Apalis jacksoni*), and perhaps absent from lower-lying Nouabalé-Ndoki.

## Introduction

The Lobéké Faunal Reserve (Réserve de Faune de la Lobéké) covers some 2,000 km<sup>2</sup> in the extreme south-east of Cameroon. The area originally protected legally was 413 km<sup>2</sup>, centred on "Lac Lobéké", but it is intended to extend this area, although the precise limits are not yet finalized. It is probable that these will run southwards from the Lobéké river and east to the Sangha river, which forms the frontier with Central African Republic (or RCA) and Congo. The southern and western limits remain to be decided, but they will not reach the inhabited zones along the Ngoko river and the road between Yokadouma and Moloundou, contrary to the map presented by Smith *et al.* (1996). The Reserve as presently under-

stood (Figure 1) covers a forest devoid of permanent habitation; however, it was crossed from west to east by an important forestry road, which reached Djembé on the Sangha (the port handling logs transported from Congo), with two axes to the south, to Kika on the Ngoko river and Socambo-Mawa on the Sangha. The Djembé road was closed in late 1997 and is now disused. Timber exploitation has never affected more than a small part of the Lobéké Reserve, because it was limited to areas along forestry tracks, and operations were recently halted. Similarly, safari hunting (including elephant hunting), which was carried out in several small, swampy savannas in the Reserve until 1996, has also been transferred now to regions outside the Reserve. Nevertheless, poaching of large mammals and of certain birds (especially parrots) is widespread and difficult to control.

We first visited Lobéké from 13 to 25 April 1997, to undertake an avifaunal survey for WWF-Cameroon. The Lobéké area's avifauna was very incompletely known and, in order for its importance to be assessed nationally (e.g. for BirdLife International's Important Bird Areas project) and regionally (for the planned association with neighbouring parks in RCA and Congo), a more thorough survey was necessary. Indeed, more practically, the limits of the planned extension to the Lobéké Reserve will be determined by the surveys (of wildlife and vegetation) that are underway. Further brief ornithological surveys were continued in December 1997 and April 1999.

### Study area

According to map sheet Abong Mbang NA-33-N.O. (1:500,000), the altitude of the Reserve varies from 336 m (on the Sangha) to about 750 m (a fairly prominent ridge between the Lobéké and Boulou rivers is above the 700 m contour). Operational Navigation Chart ONC L-3 indicates also two small hills in the Reserve which reach 824 m.

The main forest type is semi-evergreen Sterculiaceae forest with an open canopy (cf. Letouzey 1968). Dominant species of large tree (40 m and more) are *Triplochiton scleroxylon*, *Pterygota macrocarpa* (two Sterculiaceae), followed by *Ceiba pentandra* (Bombacaceae) and *Terminalia superba* (Combretaceae). The understorey, some 4–5 m high, is very dense and dominated by Marantaceae (notably *Haumania danckelmaniana*, a creeping species with spines) and Zingiberaceae. Near certain streams and in areas slightly marshy or liable to flooding the herbaceous understorey is replaced by a more closed woody understorey, some 6–8 m high; Ebenaceae (*Diospyros*) and Annonaceae (*Meiocarpum*) are dominant. The second important type of forest is evergreen, dominated by *Gilbertiodendron dewevrei* (with closed canopy), which exists in small pockets here and there, notably near certain streams such as on the Boulou river.

The only natural savannas are swamps, and the reserve has more than a dozen important marshy areas, of up to 2–3 km<sup>2</sup> in extent. The one at Boulou is essentially a dambo, with seasonally flooded grassland (*Echinochloa pyramidalis*) around a wetter central section with sedges (*Eleocharis*). Most of the others are rather saline, and important sections are occupied by the tall, leafy sedge *Rhynchospora corymbosa*. The largest marsh we visited ("Lac Lobéké" or Djangé) is c. 1.5 km long, although it is not the most extensive in the area. This marsh has

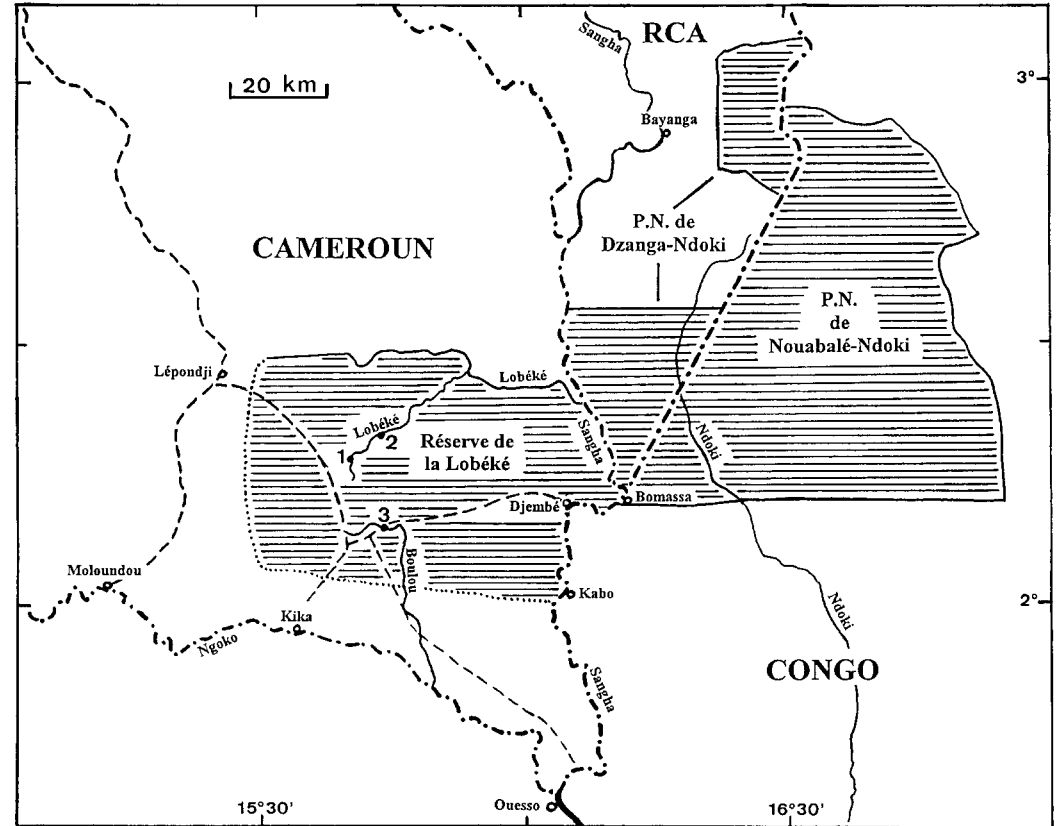


Figure 1. Map of Lobéké Faunal Reserve and adjacent national parks in Congo and Central African Republic (RCA). South-western limits of the reserve are approximate; dirt roads are shown as interrupted lines; 1, Lobéké camp; 2, Djangé ("Lac Lobéké") marsh; 3, Boulou camp.

been called a “vast swamp . . .” by Lamarque *et al.* (1990), which seems inappropriate. The vegetation around the edges is dominated by thickets of the palm *Phoenix reclinata*, mixed with species such as *Alstonia congensis*, *Berlinia* sp., *Lophira alata*, *Rauvolfia caffra*. In the flooded areas there are raphia thickets (*Raphia* sp., perhaps *mombuttorum*) and copses of *Pandanus*. The wide Sangha river and its sandbars constitute an important habitat for a variety of waders and pratincoles, especially in the dry season.

We give below the coordinates of the different localities mentioned in this paper (see also Figure 1). These are in Cameroon, unless otherwise stated, and most were verified with a G.P.S.:

|   |                 |
|---|-----------------|
| Bityé:                                    | 3°01'N, 12°22'E |
| Bomassa (Sangha, Congo side):             | 2°12'N, 16°11'E |
| Boulou, camp:                             | 2°09'N, 15°44'E |
| Boulou, Marsh:                            | 2°10'N, 15°43'E |
| Djembé (Sangha):                          | 2°11'N, 16°04'E |
| Ibembo (Zaire):                           | 2°38'N, 23°37'E |
| Kupandaka swamp (Nki buffer zone):        | 2°12'N, 14°51'E |
| Lobéké, camp:                             | 2°17'N, 15°40'E |
| Lobéké, first marsh (“Petite savane”):    | 2°17'N, 15°42'E |
| Lobéké, “Lac” or second marsh (“Djangé”): | 2°19'N, 15°45'E |
| Mala swamp (Nki Faunal Reserve):          | 2°12'N, 14°39'E |
| Mbéli bai (Congo):                        | 2°12'N, 16°24'E |
| Moloundou (Ngoko river):                  | 2°02'N, 15°13'E |
| Ndoki Camp (Congo):                       | 2°12'N, 16°23'E |
| Ngotto (RCA):                             | 3°50'N, 17°20'E |

March–April marks the start of the rainy season, the driest months in this region being December to February. Rainfall was relatively heavy at Lobéké in April 1997 (much less so on the Congo side of the Sangha), with a substantial storm on average every other day; in 1999 the rains had been delayed and were just starting in April.

## Methods

During our first visit (13–25 April 1997) we explored a wide range of habitats from two camp sites: semi-evergreen forest near the headwaters of the Lobéké stream (from 13–21 April), *Gilbertiodendron* forest near the Boulou (Bolo) stream (21–24 April). Only short visits were paid to *Rhynchospora* and other swamps, as bird trappers and other poachers made access difficult. A brief (two-day) visit in December 1997 led to the surprising discovery of the Dja River Warbler *Bradypterus grandis* at one of the *Rhynchospora* swamps; so a further survey (10–19 April 1999) was organized to investigate the status of this bird further.

Limited bird ringing was undertaken in 1997 (180 m of mist-nets erected during three days in semi-evergreen forest) and 1999 (140 m of mist-nets in *Gilbertiodendron* forest for three days). Some observations on the Sangha river were made during our visits to Nouabalé-Ndoki N.P. (31 March–20 April 1996 by F.D.L., 25 April–20 May 1997 by both of us).

## Results

The number of bird species known from Lobéké is 305 (Table 1). We have recorded personally 293 species; other records come mainly from Tim Davenport (who was working in Lobéké in 1997–1998). A full annotated list is given in Dowsett-Lemaire and Dowsett (1999, report deposited at BirdLife International, Cambridge, U.K.); details are given below for only a selection of species of conservation concern. Nomenclature is that of Dowsett and Forbes-Watson (1993).

### ?Itombwe Nightjar *Caprimulgus* sp. ?*prigoginei*

One in song located *c.* 1.2 km east of Boulou camp, singing in the moonlight for more than 20 min on 21 April 1997, in dense vegetation, some 20 m high. The song, a dry staccato, was spectrographed and proved identical to that of an unidentified small nightjar taped by F.D.L. near Ndoki camp in 1996 and 1997; the bird also responded to playback of a similar tape of an unidentified nightjar from Itombwe Mt (eastern Zaire, recorded by T. Butynski in 1996). Eventually it flew across the road, sang on the other side, and then much further away (when barely audible). The bird was not re-located in April 1999, and may not have held a territory locally. Now that the song of Brown Nightjar *Caprimulgus binotatus* is known for certain and is very different (Dowsett-Lemaire and Dowsett 1998a), it is clear this is a third species of forest nightjar, whereas only two are known from central Africa (*C. binotatus* and the much larger Bates's Nightjar *C. batesi*). Whilst it may be a new species, the existence of the tape from Itombwe, the locality whence came the single known specimen of Itombwe Nightjar (Louette 1990), suggests that it will probably prove to be that species. It appears much rarer than *C. binotatus* and *C. batesi*, both widespread and locally common in forest in south-east Cameroon and adjacent Congo (pers. obs., see also Dowsett-Lemaire and Dowsett 1998a). In addition to Nouabalé-Ndoki (where three singing birds were located along the 31-km Bomassa–Ndoki track in 1997), we also found it in Nki Faunal Reserve to the west, in two places including the buffer zone at Kupandaka (Dowsett-Lemaire and Dowsett 1998b). *Caprimulgus prigoginei* is classified as Vulnerable in Collar *et al.* (1994).

### Dja River Warbler *Bradypterus grandis*

Classified as Data Deficient by Collar *et al.* (1994), this is one of the rarest and least known birds in central Africa. Before 1997, it was reported in very small numbers only from two areas in central Gabon (Chaillu and Lopé), and near Bitye in southern Cameroon, where Bates's collector obtained one bird in 1914, the type of the species (Ogilvie-Grant 1917). Thus it was only "rediscovered" in Cameroon in December 1997 when we found at least six singing birds holding territory in *Rhynchospora* marsh in Lobéké "Petite Savane", in *c.* 6 ha. Two weeks later, we also found a pair holding a territory in a 1-ha patch of *Rhynchospora corymbosa* in a small isolated salt-pan (Mala) in Nki Faunal Reserve. The male was mist-netted, ringed and photographed. On our third visit to Lobéké, we found the birds were again very vocal at Petite Savane, but none were singing spontaneously in the much bigger sedge swamps of Djangé marsh. Through per-

Table 1. Distribution of the birds recorded from three neighbouring protected areas in central Africa. Forest: F, forest species. Chorology is given for Palaearctic migrants (P), and for Afrotropical species with a well-defined affinity to the Guineo-Congolian region (GC). Brackets denote a species not completely endemic to this category. Status (when known): B, breeding visitor; M, migrant (seasonal visitor); N, non-breeding visitor; R, resident; V, vagrant; W, winters. Lobéké: this study; Dzanga-Ndoki, République Centrafricaine: Green and Carroll (1991), Dowsett-Lemaire (\* unpubl.); Nouabalé-Ndoki, Congo: Dowsett-Lemaire (1997), Dowsett-Lemaire and Dowsett (1997). For Dzanga-Ndoki National Park we do not include those species reported by Green and Carroll only from villages, savannas or the banks of the Sangha outside the park. For several species noted for the park by these observers, we prefer to await confirmation before accepting them here.

| Species  | Forest | Choro-logy | Status | Lobéké | Dzanga-Ndoki | Nouabalé-Ndoki |
|--|--------|------------|--------|--------|--------------|----------------|
| Little Grebe <i>Tachybaptus ruficollis</i>               |        |            | N      | —      | —            | X              |
| Reed Cormorant <i>Phalacrocorax africanus</i>            |        |            | N      | X      | X            | X              |
| Darter <i>Anhinga rufa</i>                               |        |            | N      | X      | —            | X              |
| Little Bittern <i>Ixobrychus minutus</i>                 |        | P          | M      | —      | —            | X              |
| White-crested Tiger Heron <i>Tigriornis leucolophus</i>  | F      | GC         | R      | X      | X            | X              |
| Black-crowned Night Heron <i>Nycticorax nycticorax</i>   |        |            | M?     | X      | X            | X              |
| White-backed Night Heron <i>Gorsachius leuconotus</i>    |        |            | R      | X      | —            | X              |
| Common Squacco Heron <i>Ardeola ralloides</i>            |        | P          | W      | X      | X            | X              |
| Cattle Egret <i>Bubulcus ibis</i>                        |        |            | N      | X      | X            | X              |
| Green-backed Heron <i>Butorides striatus</i>             |        |            | R      | X      | X            | X              |
| Little Egret <i>Egretta garzetta</i>                     |        | P          | W      | X      | X            | X              |
| Yellow-billed Egret <i>Egretta intermedia</i>            |        |            | N      | X      | X            | —              |
| Great White Egret <i>Egretta alba</i>                    |        |            | M      | X      | X            | X              |
| Purple Heron <i>Ardea purpurea</i>                       |        | P          | W      | X      | X            | X              |
| Grey Heron <i>Ardea cinerea</i>                          |        |            | N      | X      | X            | X              |
| Black-headed Heron <i>Ardea melanocephala</i>            |        |            | N      | X      | X            | X              |
| Goliath Heron <i>Ardea goliath</i>                       |        |            | V      | X      | X            | —              |
| Hamerkop <i>Scopus umbretta</i>                          |        |            | R      | X      | X            | X              |
| Abdim's Stork <i>Ciconia abdimii</i>                     |        |            | M      | X      | X            | X              |
| Woolly-necked Stork <i>Ciconia episcopus</i>             |        |            | R      | X      | X            | X              |
| Saddle-billed Stork <i>Ephippiorhynchus senegalensis</i> |        |            | V      | —      | X            | X              |
| Marabou Stork <i>Leptoptilos crumeniferus</i>            |        |            | V      | —      | X            | X              |
| Hadada <i>Bostrychia hagedash</i>                        |        |            | R      | X      | X            | X              |
| Green Ibis <i>Bostrychia olivacea</i>                    | F      |            | R      | X      | —            | X              |
| Spot-breasted Ibis <i>Bostrychia rara</i>                | F      | (GC)       | R      | X      | X*           | X              |
| Knob-billed Duck <i>Sarkidiornis melanotos</i>           |        |            | M      | X      | X            | X              |
| Hartlaub's Duck <i>Pteronetta hartlaubii</i>             | F      | (GC)       | R      | X      | X            | X              |
| Pygmy Goose <i>Nettapus auritus</i>                      |        |            | V      | X      | —            | X              |
| Honey Buzzard <i>Pernis ptilorhynchus</i>                |        | P          |        | X      | —            | X              |
| Bat Hawk <i>Macheiramphus alcinus</i>                    |        |            | R      | —      | —            | X              |
| Black (Yellow-billed) Kite <i>Milvus migrans</i>         |        |            | M      | X      | X            | X              |

Table 1. cont.

| Species   | Forest | Choro-<br>logy | Status | Lobéké | Dzanga-<br>Ndoki | Nouabalé-<br>Ndoki |
|---|--------|----------------|--------|--------|------------------|--------------------|
| African Fish Eagle <i>Haliaeetus vocifer</i>            |        |                | R      | X      | X                | X                  |
| Palm-nut Vulture <i>Gypohierax angolensis</i>           | F      |                | R      | X      | X                | X                  |
| Congo Serpent Eagle <i>Dryotriorchis spectabilis</i>    | F      | (GC)           | R      | X      | X                | X                  |
| Gymnogene <i>Polyboroides typus</i>                     | F      |                | R      | X      | X                | X                  |
| Eurasian Marsh Harrier <i>Circus aeruginosus</i>        |        | P              |        | —      | X                | X                  |
| Black Goshawk <i>Accipiter melanoleucus</i>             | F      |                | R      | X      | X                | X                  |
| Western Little Sparrowhawk <i>Accipiter erythropus</i>  | F      | GC             | R      | —      | X                | X                  |
| Chestnut-flanked Sparrowhawk <i>Accipiter castanius</i> | F      | (GC)           | R      | X      | X                | —                  |
| African Goshawk <i>Accipiter tachiro</i>                | F      |                | R      | X      | —                | X                  |
| Long-tailed Hawk <i>Urotriorchis macrourus</i>          | F      | GC             | R      | X      | X                | X                  |
| Lizard Buzzard <i>Kaupifalco monogrammicus</i>          |        |                | R      | —      | X                | X                  |
| Common Buzzard <i>Buteo buteo</i>                       |        | P              | M      | —      | X*               | X                  |
| Red-necked Buzzard <i>Buteo auguralis</i>               |        |                | M      | —      | X                | X                  |
| Lesser Spotted Eagle <i>Aquila pomarina</i>             |        | P              | M      | X      | X*               | X                  |
| Booted Eagle <i>Hieraaetus pennatus</i>                 |        | P              |        | X      | —                | —                  |
| Ayres's Hawk Eagle <i>Hieraaetus ayresii</i>            | F      |                | R      | X      | —                | X                  |
| Cassin's Hawk Eagle <i>Spizaetus africanus</i>          | F      | (GC)           | R      | X      | —                | X                  |
| Long-crested Eagle <i>Lophaetus occipitalis</i>         | F      |                | R      | X      | X                | X                  |
| Crowned Eagle <i>Stephanoaetus coronatus</i>            | F      |                | R      | X      | X                | X                  |
| Osprey <i>Pandion haliaetus</i>                         |        | P              | V      | X      | —                | X                  |
| Lesser Kestrel <i>Falco naumanni</i>                    |        | P              | V      | —      | X*               | X                  |
| Peregrine Falcon <i>Falco peregrinus</i>                |        | P              |        | X      | —                | —                  |
| Forest Francolin <i>Francolinus lathamii</i>            | F      | (GC)           | R      | X      | X                | X                  |
| Scaly Francolin <i>Francolinus squamatus</i>            | F      |                | R      | X      | X                | X                  |
| Black Guinea fowl <i>Agelastes niger</i>                | F      | GC             | R      | X      | X                | X                  |
| Plumed Guinea fowl <i>Guttera plumifera</i>             | F      | GC             | R      | X      | X                | X                  |
| Crested Guinea fowl <i>Guttera pucherani</i>            | F      |                | R      | —      | X                | —                  |
| Nkulengu Rail <i>Himantornis haematopus</i>             | F      | GC             | R      | X      | X                | X                  |
| White-spotted Flufftail <i>Sarothrura pulchra</i>       | F      | (GC)           | R      | X      | X*               | X                  |
| Buff-spotted Flufftail <i>Sarothrura elegans</i>        | F      |                | R      | X      | —                | —                  |
| Red-chested Flufftail <i>Sarothrura rufa</i>            |        |                | R      | X      | —                | —                  |
| Grey-throated Rail <i>Canirallus oculus</i>             | F      | GV             | R      | —      | —                | X                  |
| African Crane <i>Crecoptis egregia</i>                  |        |                | M      | X      | X                | —                  |
| Black Crane <i>Amauromis flavirostris</i>               |        |                | R      | X      | X                | X                  |



Table 1. cont.

| Species  | Forest | Choro-logy | Status | Lobéké | Dzanga-Ndoki | Nouabalé-Ndoki |
|--|--------|------------|--------|--------|--------------|----------------|
| African Finfoot <i>Podica senegalensis</i>                 | F      |            | R      | X      | X            | X              |
| African Jacana <i>Actophilornis africanus</i>              |        |            | R      | X      | X            | X              |
| Egyptian Plover <i>Pluvianus aegyptius</i>                 |        |            | B      | X      | X            | X              |
| Common Pratincole <i>Glareola pratincola</i>               |        |            | M      | —      | —            | X              |
| Rock Pratincole <i>Glareola nuchalis</i>                   |        |            | B      | X      | X            | X              |
| Grey Pratincole <i>Glareola cinerea</i>                    |        |            | B      | X      | X            | X              |
| Little Ringed Plover <i>Charadrius dubius</i>              |        | P          |        | X      | X            | X              |
| Ringed Plover <i>Charadrius hiaticula</i>                  |        | P          |        | —      | X            | X              |
| Kittlitz's Plover <i>Charadrius pecuarius</i>              |        |            | M      | X      | —            | X              |
| White-fronted Plover <i>Charadrius marginatus</i>          |        |            | B      | X      | X            | X              |
| White-crowned Plover <i>Vanellus albiceps</i>              |        |            | R      | X      | X            | X              |
| Brown-chested Wattled Plover <i>Vanellus superciliosus</i> |        |            | M      | —      | —            | X              |
| Common Snipe <i>Gallinago gallinago</i>                    |        | P          |        | X      | X            | —              |
| Great Snipe <i>Gallinago media</i>                         |        | P          |        | —      | —            | X              |
| Marsh Sandpiper <i>Tringa stagnatilis</i>                  |        | P          |        | —      | X            | —              |
| Greenshank <i>Tringa nebularia</i>                         |        | P          | W      | X      | X            | X              |
| Green Sandpiper <i>Tringa ochropus</i>                     |        | P          |        | X      | X            | X              |
| Wood Sandpiper <i>Tringa glareola</i>                      |        | P          |        | X      | X            | X              |
| Common Sandpiper <i>Actitis hypoleucos</i>                 |        | P          | W      | X      | X            | X              |
| Little Stint <i>Calidris minuta</i>                        |        | P          |        | X      | X            | —              |
| Curlew Sandpiper <i>Calidris ferruginea</i>                |        | P          |        | X      | X            | X              |
| Ruff <i>Philomachus pugnax</i>                             |        | P          |        | —      | X            | —              |
| African Skimmer <i>Rynchops flavirostris</i>               |        |            | M      | X      | —            | X              |
| Afep Pigeon <i>Columba unicincta</i>                       | F      | (GC)       | R      | X      | X            | X              |
| Bronze-naped Pigeon <i>Columba delegorguei</i>             | F      |            | R      | X      | X*           | X              |
| Blue-spotted Dove <i>Turtur afer</i>                       | F      |            | R      | X      | X            | X              |
| Tambourine Dove <i>Turtur tympanistria</i>                 | F      |            | R      | X      | X*           | X              |
| Blue-headed Wood Dove <i>Turtur brehmeri</i>               | F      | GC         | R      | X      | X            | X              |
| Green Pigeon <i>Treron australis</i>                       | F      |            | R      | X      | X            | X              |
| African Grey Parrot <i>Psittacus erithacus</i>             | F      | (GC)       | R      | X      | X            | X              |
| Red-fronted Parrot <i>Poicephalus gulielmi</i>             | F      |            | R      | X      | X            | X              |
| Red-headed Lovebird <i>Agapornis pullarius</i>             |        |            | R      | —      | X            | —              |
| Black-collared Lovebird <i>Agapornis swindernianus</i>     | F      | GC         | R      | X      | X            | X              |
| Guinea Turaco <i>Tauraco persa</i>                         | F      | (GC)       | R      | X      | X            | X              |
| Great Blue Turaco <i>Corythaesola cristata</i>             | F      | (GC)       | R      | X      | X            | X              |
| Jacobin Cuckoo <i>Clamator jacobinus</i>                   |        |            | M      | —      | —            | X              |
| Striped Cuckoo <i>Clamator levallantii</i>                 |        |            | M      | —      | X            | X              |
| Red-chested Cuckoo <i>Cuculus solitarius</i>               | F      |            | R      | X      | X            | X              |



Table 1. cont.

| Species   | Forest | Choro-logy | Status | Lobéké | Dzanga-Ndoki | Nouabalé-Ndoki |
|---|--------|------------|--------|--------|--------------|----------------|
| Black Cuckoo <i>Cuculus clamosus</i>                          | F      |            | R      | X      | X            | X              |
| European Grey Cuckoo <i>Cuculus canorus</i>                   |        | P          |        | X      | —            | —              |
| Dusky Long-tailed Cuckoo <i>Cercococcyx mechowi</i>           | F      | (GC)       | R      | X      | X            | X              |
| Olive Long-tailed Cuckoo <i>Cercococcyx olivinus</i>          | F      | (GC)       | R      | X      | X*           | X              |
| Emerald Cuckoo <i>Chrysococcyx cupreus</i>                    | F      |            | R      | X      | X            | X              |
| Yellow-throated Green Cuckoo <i>Chrysococcyx flavigularis</i> | F      | GC         | R      | X      | —            | X              |
| Klaas's Cuckoo <i>Chrysococcyx klaas</i>                      | F      |            | R      | X      | X*           | X              |
| Didric Cuckoo <i>Chrysococcyx caprius</i>                     |        |            | R      | X      | —            | X              |
| Green Coucal <i>Ceuthmochares aereus</i>                      | F      |            | R      | X      | X            | X              |
| African Black Coucal <i>Centropus grillii</i>                 |        |            | M      | X      | —            | —              |
| Gaboon Coucal <i>Centropus anselli</i>                        | F      | (GC)       | R      | X      | X            | X              |
| Blue-naped Coucal <i>Centropus monachus</i>                   |        |            | R      | X      | —            | —              |
| Senegal Coucal <i>Centropus senegalensis</i>                  |        |            | R      | —      | X            | —              |
| Sandy Scops Owl <i>Otus icterorhynchus</i>                    | F      | GC         | R      | X      | X*           | X              |
| Fraser's Eagle Owl <i>Bubo poensis</i>                        | F      |            | R      | X      | X            | X              |
| Akun Eagle Owl <i>Bubo leucostictus</i>                       | F      | GC         | R      | X      | —            | X              |
| Pel's Fishing Owl <i>Scotopelia peli</i>                      | F      |            | R      | X      | X*           | X              |
| Bouvier's Fishing Owl <i>Scotopelia bouvieri</i>              | F      | GC         | R      | X      | X*           | X              |
| Red-chested Owlet <i>Glaucidium tephronotum</i>               | F      | (GC)       | R      | X      | —            | X              |
| Barred Owlet <i>Glaucidium capense</i>                        | F      |            | R      | X      | —            | X              |
| Wood Owl <i>Strix woodfordii</i>                              | F      |            | R      | X      | X            | X              |
| Brown Nightjar <i>Caprimulgus binotatus</i>                   | F      | GC         | R      | X      | X            | X              |
| Bates's Nightjar <i>Caprimulgus batesi</i>                    | F      | GC         | R      | X      | —            | X              |
| Unident. Nightjar <i>Caprimulgus sp. (prigoginei?)</i>        | F      | GC         | R      | X      | —            | X              |
| Pennant-winged Nightjar <i>Macrodipteryx vexillarius</i>      |        |            | M      | X      | X            | X              |
| Chapin's Spinetail <i>Telacanthura melanopygia</i>            | F      | GC         | R      | X      | X            | X              |
| Sabine's Spinetail <i>Rhaphidura sabini</i>                   | F      | (GC)       | R      | X      | X            | X              |
| Cassin's Spinetail <i>Neafrapus cassini</i>                   | F      | GC         | R      | X      | X            | X              |
| African Palm Swift <i>Cypsiurus parvus</i>                    |        |            | R      | X      | X            | X              |
| European Swift <i>Apus apus</i>                               |        | P          |        | X      | X*           | X              |
| Little Swift <i>Apus affinis</i>                              |        |            | R      | —      | X            | X              |
| Horus Swift <i>Apus horus</i>                                 |        |            | R      | —      | —            | X              |
| Bates's Swift <i>Apus batesi</i>                              | F      | GC         | R      | X      | —            | X              |
| Narina Trogon <i>Apaloderma narina</i>                        | F      |            | R      | X      | X            | X              |
| Bare-cheeked Trogon <i>Apaloderma aequatoriale</i>            | F      | GC         | R      | X      | X*           | X              |
| Shining-blue Kingfisher <i>Alcedo quadribrachys</i>           | F      | (GC)       | R      | X      | X            | X              |

Table 1. cont.

| Species   | Forest | Choro-<br>logy | Status | Lobéké | Dzanga-<br>Ndoki | Nouabalé-<br>Ndoki |
|---|--------|----------------|--------|--------|------------------|--------------------|
| Malachite Kingfisher <i>Alcedo cristata</i>                       |        |                | R      | X      | X                | X                  |
| White-bellied Kingfisher <i>Alcedo leucogaster</i>                | F      | (GC)           | R      | X      | X                | X                  |
| Dwarf Kingfisher <i>Ceyx lecontei</i>                             | F      | (GC)           | R      | X      | X                | X                  |
| Pygmy Kingfisher <i>Ceyx pictus</i>                               |        |                | R      | X      | X                | X                  |
| Chocolate-backed Kingfisher <i>Halcyon badia</i>                  | F      | GC             | R      | X      | X                | X                  |
| Chestnut-bellied Kingfisher <i>Halcyon leucocephala</i>           |        |                | M      | X      | —                | —                  |
| Blue-breasted Kingfisher <i>Halcyon malimbica</i>                 | F      |                | R      | X      | X*               | X                  |
| Senegal Kingfisher <i>Halcyon senegalensis</i>                    |        |                | R      | X      | X                | X                  |
| Giant Kingfisher <i>Megaceryle maxima</i>                         |        |                | R      | X      | X                | X                  |
| Pied Kingfisher <i>Ceryle rudis</i>                               |        |                | R      | X      | X                | X                  |
| Black-headed Bee-eater <i>Merops breweri</i>                      | F      | (GC)           | R      | —      | X                | —                  |
| Blue-headed Bee-eater <i>Merops muelleri</i>                      | F      | (GC)           | R      | X      | X                | X                  |
| Black Bee-eater <i>Merops gularis</i>                             | F      | (GC)           | R      | X      | X                | X                  |
| White-cheeked Bee-eater <i>Merops variegatus</i>                  |        |                | R      | X      | X                | X                  |
| White-throated Bee-eater <i>Merops albicollis</i>                 |        |                | M      | X      | X                | X                  |
| European Bee-eater <i>Merops apiaster</i>                         |        | P              | M      | X      | —                | X                  |
| Blue-throated Roller <i>Eurystomus gularis</i>                    | F      | (GC)           | R      | X      | X                | X                  |
| White-headed Wood Hoopoe <i>Phoeniculus bollei</i>                | F      |                | R      | X      | X                | —                  |
| Forest Wood Hoopoe <i>Phoeniculus castaneiceps</i>                | F      | (GC)           | R      | X      | —                | X                  |
| White-crested Hornbill <i>Tropicranus albocristatus</i>           | F      | (GC)           | R      | X      | X                | X                  |
| Black Dwarf Hornbill <i>Tockus hartlaubi</i>                      | F      | GC             | R      | X      | X                | X                  |
| Red-billed Dwarf Hornbill <i>Tockus camurus</i>                   | F      | (GC)           | R      | X      | X                | X                  |
| Pied Hornbill <i>Tockus fasciatus</i>                             | F      | (GC)           | R      | X      | X                | X                  |
| White-tailed Hornbill <i>Bycanistes fistulator</i>                | F      | (GC)           | R      | X      | X                | X                  |
| White-thighed Hornbill <i>Bycanistes cylindricus</i>              | F      | (GC)           | R      | X      | X                | X                  |
| Black-and-white Casqued Hornbill <i>Bycanistes subcylindricus</i> | F      | (GC)           | R      | X      | X                | X                  |
| Black-wattled Hornbill <i>Ceratogymna atrata</i>                  | F      | (GC)           | R      | X      | X                | X                  |
| Grey-throated Barbet <i>Gymnobucco bonapartei</i>                 | F      |                | R      | X      | X                | X                  |
| Yellow-spotted Barbet <i>Buccanodon duchailloi</i>                | F      | (GC)           | R      | X      | X                | X                  |
| Speckled Tinkerbird <i>Pogoniulus scolopaceus</i>                 | F      | (GC)           | R      | X      | X                | X                  |
| Golden-rumped Tinkerbird <i>Pogoniulus bilineatus</i>             | F      |                | R      | X      | X                | X                  |

Table 1. cont.

| Species   | Forest | Choro-logy | Status | Lobéké | Dzanga-Ndoki | Nouabalé-Ndoki |
|---|--------|------------|--------|--------|--------------|----------------|
| Yellow-throated Tinkerbird<br><i>Pogoniulus subsulphureus</i> | F      | (GC)       | R      | X      | X*           | X              |
| Red-rumped Tinkerbird <i>Pogoniulus atroflavus</i>            | F      | (GC)       | R      | X      | X            | X              |
| Hairy-breasted Barbet <i>Tricholaema hirsuta</i>              | F      | (GC)       | R      | X      | X            | X              |
| Yellow-billed Barbet <i>Trachyphonus purpuratus</i>           | F      | (GC)       | R      | X      | X            | X              |
| Cassin's Honeyguide <i>Prodotiscus insignis</i>               | F      | (GC)       | R      | —      | —            | X              |
| Zenker's Honeyguide <i>Melignomon zenkeri</i>                 | F      | GC         | R      | X      | —            | X              |
| Spotted Honeyguide <i>Indicator maculatus</i>                 | F      | (GC)       | R      | X      | —            | X              |
| Lesser Honeyguide <i>Indicator minor</i>                      | F      |            | R      | X      | —            | X              |
| Western Least Honeyguide <i>Indicator exilis</i>              | F      | (GC)       | R      | X      | —            | X              |
| Willcocks's Honeyguide <i>Indicator willcocksii</i>           | F      | (GC)       | R      | X      | X*           | X              |
| Lyre-tailed Honeyguide <i>Melichneutes robustus</i>           | F      | GC         | R      | X      | X            | X              |
| Piculet <i>Sasia africana</i>                                 | F      | (GC)       | R      | X      | X            | X              |
| Little Spotted Woodpecker<br><i>Campethera cailliautii</i>    | F      |            | R      | X      | X            | X              |
| Buff-spotted Woodpecker<br><i>Campethera nivosa</i>           | F      | (GC)       | R      | X      | X*           | X              |
| Brown-eared Woodpecker<br><i>Campethera caroli</i>            | F      | (GC)       | R      | X      | X            | X              |
| Gabon Woodpecker <i>Dendropicos gabonensis</i>                | F      | GC         | R      | X      | X            | X              |
| Yellow-crested Woodpecker <i>Thripias xantholophus</i>        | F      | (GC)       | R      | X      | X            | X              |
| Elliot's Woodpecker <i>Mesopicos elliotii</i>                 | F      | (GC)       | R      | X      | X            | X              |
| Rufous-sided Broadbill <i>Smithornis rufolateralis</i>        | F      | GC         | R      | X      | X*           | X              |
| Square-tailed Saw-wing<br><i>Psalidoprocne nitens</i>         | F      | GC         | R      | X      | X            | X              |
| Black Saw-wing <i>Psalidoprocne pristoptera</i>               |        |            | R      | —      | X            | —              |
| Red-breasted Swallow <i>Hirundo semirufa</i>                  |        |            | R      | —      | X            | X              |
| Mosque Swallow <i>Hirundo senegalensis</i>                    |        |            | R      | —      | X            | X              |
| Lesser Striped Swallow <i>Hirundo abyssinica</i>              |        |            | R      | —      | —            | X              |
| Wire-tailed Swallow <i>Hirundo smithii</i>                    |        |            | R      | —      | —            | X              |
| White-throated Blue Swallow<br><i>Hirundo nigrita</i>         | F      | (GC)       | R      | X      | X            | X              |
| European Swallow <i>Hirundo rustica</i>                       |        | P          | W      | X      | X            | X              |
| House Martin <i>Delichon urbica</i>                           |        | P          |        | X      | —            | —              |
| Yellow Wagtail <i>Motacilla flava</i>                         |        | P          | W      | X      | X            | X              |
| Mountain Wagtail <i>Motacilla clara</i>                       |        |            | R      | X      | —            | X              |
| Purple-throated Cuckoo-shrike<br><i>Campephaga quiscalina</i> | F      |            | R      | X      | X            | X              |

Table 1. cont.

| Species   | Forest | Choro-<br>logy | Status | Lobéké | Dzanga-<br>Ndoki | Nouabalé-<br>Ndoki |
|---|--------|----------------|--------|--------|------------------|--------------------|
| Blue Cuckoo-shrike <i>Coracina azurea</i>                 | F      | GC             | R      | X      | X                | X                  |
| Little Greenbul <i>Andropadus virens</i>                  | F      |                | R      | X      | X                | X                  |
| Little Grey Greenbul <i>Andropadus gracilis</i>           | F      | (GC)           | R      | X      | X*               | X                  |
| Ansorge's Greenbul <i>Andropadus ansorgei</i>             | F      | (GC)           | R      | X      | X*               | X                  |
| Cameroon Sombre Greenbul <i>Andropadus curvirostris</i>   | F      | (GC)           | R      | X      | X*               | X                  |
| Slender-billed Greenbul <i>Andropadus gracilirostris</i>  | F      |                | R      | X      | X*               | X                  |
| Yellow-whiskered Greenbul <i>Andropadus latirostris</i>   | F      |                |        | X      | X*               | X                  |
| Golden Greenbul <i>Calyptocichla serina</i>               | F      | GC             | R      | X      | X*               | X                  |
| Honeyguide Greenbul <i>Baeopogon indicator</i>            | F      | (GC)           | R      | X      | X*               | X                  |
| Sjöstedt's Honeyguide Greenbul <i>Baeopogon clamans</i>   | F      | GC             | R      | X      | X*               | X                  |
| Spotted Greenbul <i>Ixonotus guttatus</i>                 | F      | (GC)           | R      | X      | X                | X                  |
| Simple Greenbul <i>Chlorocichla simplex</i>               | F      | (GC)           | R      | X      | —                | X                  |
| Yellow-throated Leaflove <i>Chlorocichla flavicollis</i>  | F      |                | R      | X      | X                | X                  |
| Swamp Palm Bulbul <i>Thescelocichla leucopleura</i>       | F      | (GC)           | R      | X      | X                | X                  |
| Leaflove <i>Pyrrhurus scandens</i>                        | F      | (GC)           | R      | —      | X                | X                  |
| Icterine Greenbul <i>Phyllastrephus icterinus</i>         | F      | (GC)           | R      | X      | X*               | X                  |
| Xavier's Greenbul <i>Phyllastrephus xavieri</i>           | F      | (GC)           | R      | X      | X*               | X                  |
| White-throated Greenbul <i>Phyllastrephus albigularis</i> | F      | (GC)           | R      | X      | X*               | X                  |
| Bristlebill <i>Bleda syndactyla</i>                       | F      | (GC)           | R      | X      | X                | X                  |
| E. Green-tailed Bristlebill <i>Bleda (eximia) notata</i>  | F      | GC             | R      | X      | X*               | X                  |
| Eastern Bearded Greenbul <i>Criniger chloronotus</i>      | F      | GC             | R      | X      | X*               | X                  |
| Red-tailed Greenbul <i>Criniger calurus</i>               | F      | GC             | R      | X      | X                | X                  |
| White-bearded Greenbul <i>Criniger olivaceus</i>          | F      | GC             | R      | X      | X*               | X                  |
| Common Bulbul <i>Pycnonotus barbatus</i>                  |        |                | R      | X      | X                | X                  |
| Red-tailed Ant Thrush <i>Neocossyphus rufus</i>           | F      |                | R      | X      | X*               | X                  |
| White-tailed Ant Thrush <i>Neocossyphus poensis</i>       | F      | (GC)           | R      | X      | —                | X                  |
| Rufous Ant Thrush <i>Stizorhina fraseri</i>               | F      | (GC)           | R      | X      | X*               | X                  |
| Fire-crested Alethe <i>Alethe diademata</i>               | F      | (GC)           | R      | X      | X*               | X                  |
| Brown-chested Alethe <i>Alethe poliocephala</i>           | F      |                | R      | X      | X*               | X                  |
| Forest Robin <i>Stiphornis erythrothorax</i>              | F      | (GC)           | R      | X      | X*               | X                  |
| Akalat <i>Sheppardia cyornithopsis</i>                    | F      | (GC)           | R      | X      | X*               | X                  |
| Blue-shouldered Robin <i>Cossypha cyanocampter</i>        | F      | (GC)           | R      | X      | X*               | X                  |
| Whinchat <i>Saxicola rubetra</i>                          |        | P              | W      | X      | —                | —                  |

Table 1. cont.

| Species   | Forest | Choro-logy | Status | Lobéké | Dzanga-Ndoki | Nouabalé-Ndoki |
|---|--------|------------|--------|--------|--------------|----------------|
| Dja River Warbler <i>Bradypterus grandis</i>                  |        | GC         | R      | X      | —            | —              |
| Black-faced Rufous Warbler<br><i>Bathmocercus rufus</i>       | F      | (GC)       | R      | X      | X            | X              |
| Sedge Warbler <i>Acrocephalus schoenobaenus</i>               |        | P          |        | X      | X            | X              |
| Reed Warbler <i>Acrocephalus scirpaceus</i>                   |        | P          | W      | X      | —            | —              |
| Great Reed Warbler <i>Acrocephalus arundinaceus</i>           |        | P          | W      | X      | —            | —              |
| Rufous-crowned Eremomela<br><i>Eremomela badiceps</i>         | F      | (GC)       | R      | X      | —            | X              |
| Green Crombec <i>Sylvietta virens</i>                         | F      | (GC)       | R      | X      | X            | X              |
| Lemon-bellied Crombec <i>Sylvietta denti</i>                  | F      | GC         | R      | X      | X*           | X              |
| Grey Longbill <i>Macrosphenus concolor</i>                    | F      | (GC)       | R      | X      | X*           | X              |
| Yellow Longbill <i>Macrosphenus flavicans</i>                 | F      | (GC)       | R      | X      | X*           | X              |
| Willow Warbler <i>Phylloscopus trochilus</i>                  |        | P          | M      | —      | —            | X              |
| Uganda Woodland Warbler<br><i>Phylloscopus budongoensis</i>   | F      | (GC)       | R      | X      | —            | —              |
| Violet-backed Hyliota <i>Hyliota violacea</i>                 | F      | GC         | R      | X      | —            | X              |
| Green Hylia <i>Hylia prasina</i>                              | F      | (GC)       | R      | X      | X*           | X              |
| Chattering Cisticola <i>Cisticola anonymus</i>                |        | (GC)       | R      | X      | X            | X              |
| White-chinned Prinia <i>Prinia leucopogon</i>                 | F      | (GC)       | R      | —      | —            | X              |
| Banded Prinia <i>Prinia bairdii</i>                           | F      |            | R      | X      | X            | X              |
| Black-throated Apalis <i>Apalis jacksoni</i>                  | F      |            | R      | X      | —            | —              |
| Black-capped Apalis <i>Apalis nigriceps</i>                   | F      | (GC)       | R      | X      | —            | —              |
| Buff-throated Apalis <i>Apalis rufogularis</i>                | F      | (GC)       | R      | X      | X*           | X              |
| Gosling's Apalis <i>Apalis goslingi</i>                       | F      | (GC)       | R      | X      | X*           | X              |
| Bleating Bush Warbler <i>Camaroptera brachyura</i>            |        |            | R      | X      | X            | X              |
| Yellow-browed Camaroptera<br><i>Camaroptera supercilialis</i> | F      | (GC)       | R      | X      | X*           | X              |
| Olive-green Camaroptera<br><i>Camaroptera chloronota</i>      | F      | (GC)       | R      | X      | X*           | X              |
| Forest Flycatcher <i>Fraseria ocreata</i>                     | F      | GC         | R      | X      | X            | X              |
| White-browed Forest Flycatcher<br><i>Fraseria cinerascens</i> | F      | GC         | R      | X      | X*           | X              |
| Spotted Flycatcher <i>Muscicapa striata</i>                   |        | P          | M      | —      | X            | —              |
| Olivaceous Flycatcher <i>Muscicapa olivascens</i>             | F      | GC         | R      | X      | X            | X              |
| Cassin's Grey Flycatcher <i>Muscicapa cassini</i>             | F      | (GC)       | R      | X      | X            | X              |
| Little Grey Flycatcher <i>Muscicapa epulata</i>               | F      | GC         | R      | X      | —            | —              |
| Yellow-footed Flycatcher <i>Muscicapa sethsmithi</i>          | F      | GC         | R      | X      | X            | X              |
| Ashy Flycatcher <i>Muscicapa caerulescens</i>                 | F      |            | R      | X      | —            | X              |

Table 1. cont.

| Species  | Forest | Choro-<br>logy | Status | Lobéké | Dzanga-<br>Ndoki | Nouabalé-<br>Ndoki |
|--|--------|----------------|--------|--------|------------------|--------------------|
| Dusky Blue Flycatcher <i>Muscicapa comitata</i>                | F      | (GC)           | R      | X      | X                | X                  |
| Sooty Flycatcher <i>Muscicapa infuscata</i>                    | F      | (GC)           | R      | X      | X                | X                  |
| Tessmann's Flycatcher <i>Muscicapa tessmanni</i>               | F      | GC             | R      | X      | —                | —                  |
| Lead-coloured Flycatcher <i>Myioparus plumbeus</i>             |        |                | R      | X      | X                | X                  |
| Grey-throated Flycatcher <i>Myioparus griseigularis</i>        | F      | (GC)           | R      | X      | X*               | X                  |
| Shrike-Flycatcher <i>Megabyas flammulatus</i>                  | F      | (GC)           | R      | X      | —                | X                  |
| Black-and-white Flycatcher <i>Bias musicus</i>                 | F      |                | R      | —      | X                | X                  |
| Fernando Po Batis <i>Batis poensis</i>                         | F      | GC             | R      | X      | X*               | X                  |
| Yellow-bellied Wattle-eye <i>Dyaphorophyia concreta</i>        | F      | (GC)           | R      | —      | X                | X                  |
| Black-necked Wattle-eye <i>Dyaphorophyia chalybea</i>          | F      | (GC)           | R      | X      | —                | —                  |
| Chestnut Wattle-eye <i>Dyaphorophyia castanea</i>              | F      | (GC)           | R      | X      | X                | X                  |
| White-spotted Wattle-eye <i>Dyaphorophyia tonsa</i>            | F      | (GC)           | R      | X      | —                | X                  |
| Chestnut-capped Flycatcher <i>Erythrocerus mcalli</i>          | F      | GC             | R      | X      | X                | X                  |
| Dusky Crested Flycatcher <i>Elminia nigromitrata</i>           | F      | (GC)           | R      | X      | X                | X                  |
| Blue-headed Crested Flycatcher <i>Trochocercus nitens</i>      | F      | (GC)           | R      | X      | X                | X                  |
| Paradise Flycatcher <i>Terpsiphone viridis</i>                 |        |                | R      | X      | X                | X                  |
| Red-bellied Paradise Flycatcher <i>Terpsiphone rufiventris</i> | F      | (GC)           | R      | X      | X                | X                  |
| Brown Illadopsis <i>Illadopsis fulvescens</i>                  | F      | (GC)           | R      | X      | X*               | X                  |
| Pale-breasted Illadopsis <i>Illadopsis rufipennis</i>          | F      |                | R      | X      | X*               | X                  |
| Blackcap Illadopsis <i>Illadopsis cleaveri</i>                 | F      | GC             | R      | X      | X                | X                  |
| Dusky Tit <i>Parus funereus</i>                                | F      | (GC)           | R      | X      | X                | X                  |
| Yellow-fronted Penduline Tit <i>Anthoscopus flavifrons</i>     | F      | GC             | R      | X      | —                | X                  |
| Tit-hylia <i>Pholidornis rushiae</i>                           | F      | (GC)           | R      | X      | X*               | X                  |
| Fraser's Sunbird <i>Anthreptes fraseri</i>                     | F      | (GC)           | R      | X      | X*               | X                  |
| Violet-tailed Sunbird <i>Anthreptes aurantium</i>              | F      | GC             | R      | X      | X*               | X                  |
| Yellow-chinned Sunbird <i>Anthreptes rectirostris</i>          | F      | (GC)           | R      | X      | X*               | X                  |
| Collared Sunbird <i>Anthreptes collaris</i>                    | F      |                | R      | X      | X                | X                  |
| Little Green Sunbird <i>Nectarinia seimundi</i>                | F      | (GC)           | R      | X      | —                | X                  |
| Bates's Sunbird <i>Nectarinia batesi</i>                       | F      | (GC)           | R      | X      | —                | —                  |
| Olive Sunbird <i>Nectarinia olivacea</i>                       | F      |                | R      | X      | X                | X                  |
| Reichenbach's Sunbird <i>Nectarinia reichenbachii</i>          | F      | (GC)           | R      | X      | —                | X                  |
| Green-headed Sunbird <i>Nectarinia verticalis</i>              | F      |                | R      | —      | X                | X                  |

Table 1. cont.

| Species   | Forest | Chorology | Status | Lobéké | Dzanga-Ndoki | Nouabalé-Ndoki |
|---|--------|-----------|--------|--------|--------------|----------------|
| Blue-throated Brown Sunbird<br><i>Nectarinia cyanoaema</i>        | F      | (GC)      | R      | X      | X*           | X              |
| Green-throated Sunbird <i>Nectarinia rubescens</i>                | F      | (GC)      | R      | X      | X            | X              |
| Olive-bellied Sunbird <i>Nectarinia chloropygia</i>               | F      |           | R      | X      | X            | X              |
| Tiny Sunbird <i>Nectarinia minulla</i>                            | F      | GC        | R      | X      | —            | X              |
| Coppery Sunbird <i>Nectarinia cuprea</i>                          |        |           | V      | —      | —            | X              |
| Splendid Sunbird <i>Nectarinia coccinigaster</i>                  |        |           | V      | —      | X            | —              |
| Johanna's Sunbird <i>Nectarinia johannae</i>                      | F      | GC        | R      | X      | X*           | X              |
| Superb Sunbird <i>Nectarinia superba</i>                          | F      | (GC)      | R      | X      | —            | X              |
| Western Black-headed Oriole<br><i>Oriolus brachyrhynchus</i>      | F      | (GC)      | R      | X      | X            | X              |
| Black-winged Oriole <i>Oriolus nigripennis</i>                    | F      | (GC)      | R      | X      | X            | X              |
| Black-shouldered Puffback<br><i>Dryoscopus senegalensis</i>       | F      | GC        | R      | X      | —            | X              |
| Sabine's Puffback <i>Dryoscopus sabini</i>                        | F      | GC        | R      | X      | X            | X              |
| Lühder's Bush Shrike <i>Laniarius luehderi</i>                    | F      | (GC)      | R      | —      | —            | X              |
| Tropical Boubou <i>Laniarius aethiopicus</i>                      |        |           | R      | —      | X            | —              |
| Sooty Boubou <i>Laniarius leucorhynchus</i>                       | F      | (GC)      | R      | X      | X            | X              |
| Grey-green Bush Shrike <i>Malaconotus bocagei</i>                 | F      | (GC)      | R      | —      | —            | X              |
| Fiery-breasted Bush Shrike<br><i>Malaconotus cruentus</i>         | F      | GC        | R      | X      | —            | X              |
| Western Nicator <i>Nicator chloris</i>                            | F      | (GC)      | R      | X      | X*           | X              |
| Yellow-throated Nicator <i>Nicator vireo</i>                      | F      | (GC)      | R      | X      | X*           | X              |
| Northern Red-billed Helmet Shrike<br><i>Prionops caniceps</i>     | F      | (GC)      | R      | X      | X            | X              |
| Shining Drongo <i>Dicrurus atripennis</i>                         | F      | GC        | R      | X      | X            | X              |
| Fork-tailed Drongo <i>Dicrurus adsimilis</i>                      | F      |           | R      | X      | —            | X              |
| Narrow-tailed Starling <i>Poeoptera lugubris</i>                  | F      | (GC)      | R      | X      | —            | —              |
| Forest Chestnut-winged Starling<br><i>Onychognathus fulgidus</i>  | F      | (GC)      | R      | X      | —            | X              |
| Purple-headed Glossy Starling<br><i>Lamprotornis purpureiceps</i> | F      | (GC)      | R      | X      | X            | X              |
| Splendid Glossy Starling<br><i>Lamprotornis splendidus</i>        | F      |           | R      | X      | X            | X              |
| Yellow-billed Oxpecker <i>Buphagus africanus</i>                  |        |           | R      | X      | X            | X              |
| Grey-headed Sparrow <i>Passer griseus</i>                         |        |           | R      | —      | —            | X              |
| Black-necked Weaver <i>Ploceus nigricollis</i>                    |        |           | R      | —      | —            | X              |
| Spectacled Weaver <i>Ploceus ocularis</i>                         |        |           | R      | —      | X            | —              |
| Orange Weaver <i>Ploceus aurantius</i>                            | F      | (GC)      | R      | X      | X            | X              |



Table 1. cont.

| Species   | Forest     | Choro-<br>logy | Status | Lobéké     | Dzanga-<br>Ndoki | Nouabalé-<br>Ndoki |
|---|------------|----------------|--------|------------|------------------|--------------------|
| Vieillot's Black Weaver <i>Ploceus nigerrimus</i>     |            | GC             | R      | X          | —                | X                  |
| Village Weaver <i>Ploceus cucullatus</i>              |            |                | R      | —          | —                | X                  |
| Yellow-mantled Weaver <i>Ploceus tricolor</i>         | F          | (GC)           | R      | X          | —                | X                  |
| Maxwell's Black Weaver <i>Ploceus albinucha</i>       | F          | GC             | R      | X          | X*               | X                  |
| Preuss's Golden-backed Weaver <i>Ploceus preussi</i>  | F          | (GC)           | R      | X          | —                | X                  |
| Yellow-capped Weaver <i>Ploceus dorsomaculatus</i>    | F          | GC             | R      | X          | —                | X                  |
| Blue-billed Malimbe <i>Malimbus nitens</i>            | F          | GC             | R      | X          | X                | X                  |
| Crested Malimbe <i>Malimbus malimbicus</i>            | F          | (GC)           | R      | X          | X                | X                  |
| Cassin's Malimbe <i>Malimbus cassini</i>              | F          | GC             | R      | X          | X*               | X                  |
| Red-headed Malimbe <i>Malimbus rubricollis</i>        | F          | (GC)           | R      | X          | X                | X                  |
| Red-bellied Malimbe <i>Malimbus erythrogaster</i>     | F          | GC             | R      | X          | —                | X                  |
| Red-crowned Malimbe <i>Malimbus coronatus</i>         | F          | GC             | R      | X          | —                | X                  |
| Thick-billed Weaver <i>Amblyospiza albifrons</i>      |            |                | R      | X          | X                | —                  |
| Red-headed Flower-pecker <i>Parmoptila woodhousei</i> | F          | (GC)           | R      | X          | X*               | X                  |
| Grey-crowned Nigrofinch <i>Nigrita canicapilla</i>    | F          |                | R      | X          | X                | X                  |
| Pale-fronted Nigrofinch <i>Nigrita luteifrons</i>     | F          | (GC)           | R      | X          | —                | X                  |
| Chestnut-breasted Nigrofinch <i>Nigrita bicolor</i>   | F          | (GC)           | R      | X          | X*               | X                  |
| White-breasted Nigrofinch <i>Nigrita fusconota</i>    | F          | (GC)           | R      | X          | X                | X                  |
| Black-bellied Seed-cracker <i>Pyrenestes ostrinus</i> | F          |                | R      | X          | —                | X                  |
| Grant's Bluebill <i>Spermophaga poliogenys</i>        | F          | GC             | R      | —          | —                | X                  |
| Bluebill <i>Spermophaga haematina</i>                 | F          | (GC)           | R      | X          | X*               | X                  |
| Green Twinspot <i>Mandingoa nitidula</i>              | F          |                | R      | X          | —                | X                  |
| Common Waxbill <i>Estrilda astrild</i>                |            |                | R      | —          | X                | —                  |
| Black-headed Waxbill <i>Estrilda atricapilla</i>      |            |                | R      | X          | X                | X                  |
| Locust Finch <i>Ortygospiza locustella</i>            |            |                | R      | X          | —                | —                  |
| Bronze Mannikin <i>Lonchura cucullata</i>             |            |                | R      | —          | —                | X                  |
| Black-and-white Mannikin <i>Lonchura bicolor</i>      |            |                | R      | X          | X                | X                  |
| <b>Totals</b>   | <b>356</b> |                |        | <b>305</b> | <b>261</b>       | <b>314</b>         |
| <b>Forest species</b>                                 | <b>236</b> |                |        | <b>223</b> | <b>181</b>       | <b>223</b>         |

sistent observation and tape playback, eventually three birds were located (two provoked into song), one in each of the three main patches of *Rhynchospora* marsh found at Djangé. In the absence of spontaneous vocal activity, it is not possible to give density figures for Djangé marsh, but the available habitat could hold at least 20 pairs. *Rhynchospora* sedges are an important constituent of most of the large marshes of Lobéké (L. Usongo, pers. comm.), and the warbler seems entirely confined to this type of vegetation (as also observed in Gabon: Christy 1994). Given the extensive habitat available (as evident in aerial photos examined) and the small size of territories, it is possible that Lobéké could hold over 100 pairs, although further surveys are necessary to confirm this. Nki and Lobéké represent a notable extension of known range to the east of some 400 km.

#### African Grey Parrot *Psittacus erithacus*

Although not globally threatened, the status of the species gives cause for concern as its range has contracted in many regions (including several parts of Cameroon), following trapping of live birds for trade. The saline swamps of Lobéké attract many thousands of birds who come daily to seek minerals and several thousands are caught illegally each year by trappers; such numbers are likely to come from an area several times that of the Reserve, but this incessant trapping is bound to have serious consequences on the species's population dynamics. The livelihood of many people depends solely on this industry; trappers continue to operate almost at will as the local "ecoguards" (who started to patrol the area in 1999) are too few and have no authority. The bird-catchers also take Red-fronted Parrots *Poicephalus gulielmi* when they can, but this species is of rare occurrence in the area.

## Discussion

### *Biodiversity*

The number of 305 species recorded in Lobéké compares well with the 314 species observed in adjacent Nouabalé-Ndoki (Table 1), which benefited from similar observer coverage (Dowsett-Lemaire 1997, Dowsett-Lemaire and Dowsett 1997). Just to the west of Lobéké, we also recorded a total of 303 species in the Faunal Reserves of Boumba-Bek and Nki, in surveys adding up to six weeks (Dowsett-Lemaire and Dowsett 1998b). At Dzangha-Ndoki in RCA, the forest avifauna was studied incompletely by Green and Carroll (1991), and many species numerous in the understorey of forest in this region are absent from their list. A brief investigation in the border area between RCA and neighbouring Nouabalé-Ndoki in April 1996 (F.D.L.) added 67 mostly forest species to Green and Carroll's list in a few hours spent on the Wali stream and the Sangha near Bomassa. Knowledge of the avifauna of Dzangha-Ndoki is still too incomplete and superficial for any further comparison with that of Lobéké to be worthwhile, except to say that several species of dry savanna present in RCA are unlikely to occur in Lobéké (e.g. Senegal Coucal *Centropus senegalensis*). Clearly more surveys are needed in that area: in particular, key species such as the unidentified

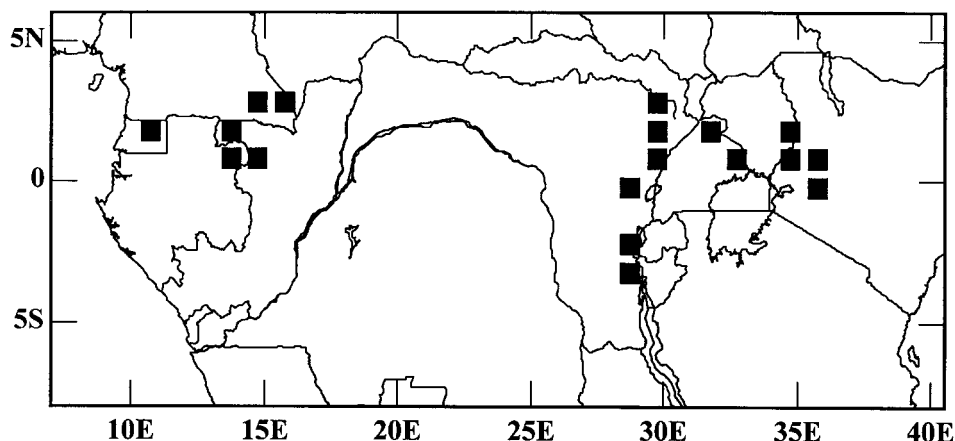


Figure 2. Known distribution of Uganda Woodland Warbler *Phylloscopus budongoensis*.

forest nightjar and the Dja River Warbler should be sought in suitable habitat. The occurrence of the warbler on the Congo side also remains possible, but the one swamp we saw in Nouabalé-Ndoki (Mbéli bai) did not have the right type of vegetation; other small swamps exist but are difficult of access.

Published information on Lobéké prior to our fieldwork was limited to Smith *et al.* (1996), who spent a week in Djangé marsh in 1992 and produced a short list of 75 species. Of these, two remain unconfirmed and are excluded from Table 1 as we consider them likely to be the result of misidentification: Red-eyed Dove *Streptopelia semitorquata* (for Afep Pigeon *Columba uncinata*, not mentioned but in fact common) and Magpie Mannikin *Lonchura fringilloides* (likewise for Black-and-white Mannikin *L. bicolor*).

The altitude of the part of Bomassa-Ndoki explored up to now is about 340 m, and the Park in general is on average 200 m lower than the Lobéké Reserve. These differences in altitude explain almost certainly why some species, such as White-headed Wood Hoopoe *Phoeniculus bollei*, Uganda Woodland Warbler *Phylloscopus budongoensis* and Black-throated Apalis *Apalis jacksoni*, are common at Lobéké but probably absent from Ndoki. *P. budongoensis* has only recently been discovered in central Africa (Figure 2), occurring usually above the altitude of 400 m whereas the apalis is normally found above 500 m (see Dowsett-Lemaire and Dowsett 1996, 1998c).

#### Conservation importance

The total of 356 species for the three conservation areas combined (Table 1) shows clearly the potential importance of this area for the conservation of a representative fauna of western Central Africa. Of these, 185 belong to the Guineo-Congolian biome, all but 10 known from Lobéké. Lobéké may prove to be the most important site anywhere in Cameroon/Gabon for the preservation of range-restricted *Bradypterus grandis* (see above); the nightjar *Caprimulgus* sp. ?*prigoginei* certainly qualifies as a "Bird to watch". Capturing a forest nightjar is exceedingly difficult,

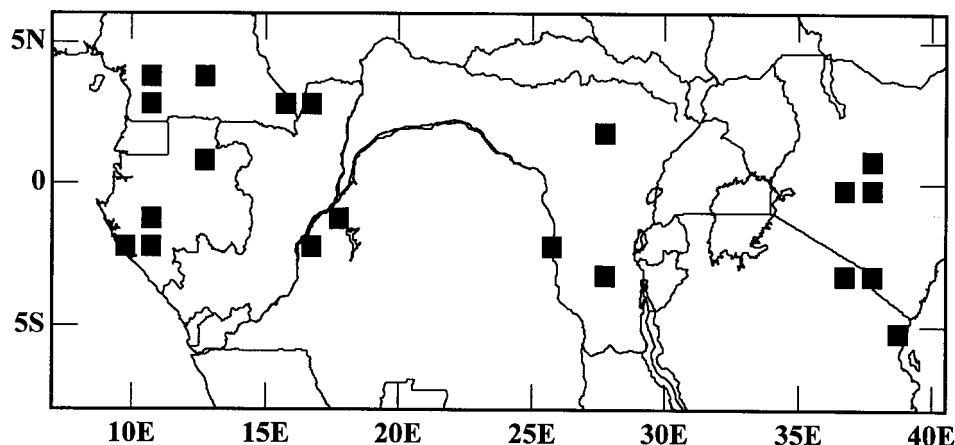


Figure 3. Eastern range of Olive Ibis *Bostrychia olivacea* (excluding Upper Guinea).

as unlike savanna species, they never settle on tracks and sing rather high up in trees (Dowsett-Lemaire and Dowsett 1998a). Another species of conservation concern, the Grey-necked Rockfowl *Picathartes oreas*, was discovered in 1998 on the eastern bank of the Boumba river (at 2°40'N, 15°13'E: Dowsett-Lemaire and Dowsett 1998b), thus extending its known range considerably to the east. We feel, however, that it is unlikely to be found further east in the Sangha area, as the soils of the region are very sandy and the rocky habitat needed by the Rockfowl appears to be absent.

In addition to *Red Data Book* species, this forested region holds an important number of birds that are generally rare throughout their range, including Olive Ibis *Bostrychia olivacea*, Sandy Scops Owl *Otus icterorhynchus*, Zenker's Honeyguide *Melignomon zenkeri*, Tessmann's Flycatcher *Muscicapa tessmanni* and Yellow-capped Weaver *Ploceus dorsomaculatus*. The first three have also been recorded from Boumba-Bek Faunal Reserve to the west and the flycatcher from both Boumba-Bek and Nki (Dowsett-Lemaire and Dowsett 1998b). The number of localities in Africa whence the Olive Ibis is known is not great (Figure 3), and in central Africa, it appears to be much scarcer than ill-named Spot-breasted Ibis *B. rara*. At Nouabalé-Ndoki we found just two pairs of the former, one near Ndoki camp and one roosting at Bomassa camp but crossing the Sangha river daily to feed on the Cameroon (Lobéké) side. Our record from Boumba-Bek is of a single bird seen in a three-week survey.

The rest of south-east Cameroon is poorly documented. Good (1953) reports a number of species collected in the region of Moloundou by himself: only a handful of these we have not found in the reserves; some are non-forest species and none is of conservation concern. Louette (1981), on the other hand, reports Bates's Weaver *Ploceus batesi* from "Molundu", without details; there is a specimen in the American Museum of Natural History (AMNH) collected there by Haberer in the early 1900s (Mrs M. LeCroy *in litt.* 1999). This is the most easterly known record. The bird is unaccountably rare throughout its small range but could conceivably occur in Lobéké.

*Biogeographical considerations*

Within the forest zone, some ecological vicariants replace each other around the "Sangha interval", i.e. in the vicinity of the Sangha and Ubangui rivers. Examples of these replacements can be found in the genera *Tauraco* and *Illadopsis*. Thus two green turacos of West Africa drop out respectively just west of the Sangha river in Congo (Verreaux's Turaco *Tauraco macrorhynchus*, pers. obs.) and just east of the Ubangui in extreme north-west Zaire (Guinea Turaco *T. persa*, Snow and Louette 1981), to be replaced by Black-billed Turaco *T. schuetti* in the Congo basin. The Blackcap Illadopsis *Illadopsis cleaveri* is replaced on the other side of the Ubangui and Congo rivers by its close relative the Scaly-breasted Illadopsis *I. albipectus*. The Sangha itself may represent the limit of distribution of some other species more recently recorded in the region: the Black-necked Wattle-eye *Dyaphorophyia chalybea*, although not uncommon in Lobéké, has still not been recorded from RCA nor northern Congo. The most westerly record of the closely related Jameson's Wattle-eye *D. jamesoni* is from Ibembo (Schouteden 1963), so there is a gap of some 800 km that has neither (on present evidence). On the other hand, several Grant's Bluebills *Spermophaga poliogenys* were mist-netted in Nouabalé-Ndoki in 1997, a westerly extension of range. It is still unrecorded from west of the Sangha in Cameroon.

Finally, the Barred Owlet *Glaucidium capense* was only recently discovered in central Africa, in Ngotto in RCA (Dowsett *et al.* 1999), northern Congo (Dowsett-Lemaire and Dowsett 1998c) and south-east Cameroon (this survey, Dowsett and Dowsett-Lemaire in prep.). It is locally common in open-canopy forest and readily answers tapes of various races of the species. Specimens are needed to identify the race involved, but the most likely to be expected is *castaneum*, recorded from north-east Zaire and western Uganda (and by some considered an "incipient species"). There is no reason to suppose that the species will not in time be found in suitable habitat all along the northern edge of the Guineo-Congolian forest block in Zaire, in a continuum between the Sangha-Ubangui basin and north-east Zaire. This last area remains one of the least explored in central Africa.

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