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Notes on the avifauna of the Noyau Central, Forêt Classée de la Lama, Republic of Benin

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Summary

Based on field work in 1998, an avifaunal list of 106 species is presented of the previously ornithologically neglected Noyau Central. This core area of the Forêt Classée de la Lama is c. 4500 ha in extent and constitutes one of the last remaining natural forests in the south of Benin. Fifteen species were recorded for the first time in Benin. As other forest areas in Benin are much smaller, the conservation of the Noyau Central may be of crucial importance to the country's avifauna.

Résumé

A partir d'un travail de terrain réalisé en 1968, une liste d'oiseaux de 106 espèces est établie pour le Noyau Central jusqu'ici négligé du point de vue ornithologique. Cette partie essentielle de la Forêt Classée de la Lama s'étend sur environ 4500 ha et constitue l'une des dernières forêts naturelles du sud du Bénin. Quinze espèces furent observées pour la première fois au Bénin. Comme les autres surfaces boisées du Bénin sont bien plus petites, la conservation du Noyau Central est d'une importance cruciale pour l'avifaune du pays.

Introduction and study area

Published information on Benin's forest avifauna is scarce and is mainly presented in older works, dating from times when the south of Benin still contained large tracts of forest (Dowsett & Dowsett-Lemaire 1993). At present, forests are rare in S Benin and it is doubtful whether large forest species, such as the *Ceratogymna* hornbills, can still maintain viable populations in the country. In this paper, we present a list of birds observed in the Noyau Central, Forêt Classée de la Lama, which is believed to be one of the largest forest remnants in the southern part of Benin.

The Noyau Central represents the core area of the Forêt Classée de la Lama (Lama Forest, in total 16250 ha). It is situated in the Dahomey Gap, about 80 km north of Cotonou and is an important production area for Teak *Tectona grandis*. It ranges between 6°55′ and 7°0′N and between 2°4′ and 2°12′E (Fig.1). The mean annual rainfall is 1163 mm, with a pronounced dry season from November to April. The Noyau Central lies 60 m above sea level in the shallow, but large, east-west orientated, Lama depression. The soil contains much clay, resulting in the flooding of vast areas during the rainy season. In the dry season the soil cracks, forming deep crevices. Although these special conditions allow forest to grow, few tree species can cope. Dominant species include *Afzelia africana*, *Bombax buonopozense*, *Ceiba pentandra* and *Parinari excelsa*.

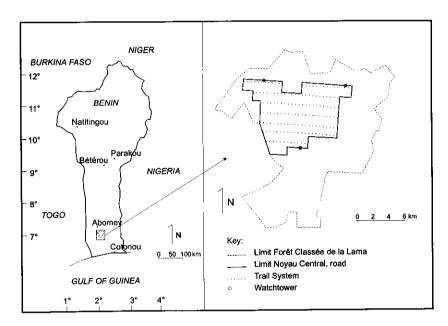


Figure 1. The location of the Lama Forest and other places mentioned in the text.

In 1950, most of the Forêt Classée de la Lama comprised natural forest but, due to clear-cutting and shifting cultivation, this decreased to about 2363 ha by 1986. In that year, forest authorities established a management plan to start timber production and stop deforestation. The core area called "Noyau Central" with the last remaining natural forest, in total 4500 ha, was set aside for protection. At present the Noyau Central contains about 1800 ha of low, dense forest, including secondary as well as

mature forest patches, while the rest is very degraded forest (about 200 ha) and open bush with dominance of the invasive pioneer *Chromolaena odorata*. A good system of parallel trails (evenly spaced 900 m apart) exists. A good laterite road runs around the area. Three 25m watchtowers have been built for fire control. The surroundings of the Noyau Central are mainly plantations of Teak *Tectona grandis* (about 7000 ha) and farmland with very few trees.

Anciaux (1996) has reported on the avifauna of the Allada Plateau and the south of the Lama depression (covering c. 2140 km² from about 6°26′N, 2°10′E to 6°55′N, 2°16′E). Her study area included mainly deforested areas with the exception of the Niaouli forest (6°44′N 2°29′E), a forest island of about 100 ha. Between 1991 and 1994 she recorded 124 species. Claffey (1995) spent eight years in the Bétérou area (8°40′N, 1°40′E to 9°30′N, 2°20′E). His list includes observations from the Forêts Classées of Wari Maro and Ouémé Superieur lying within the savannah woodland zone and Green & Sayer's (unpubl. 1977) observations from the Monts Kouffé area. In this paper, we compare our observations with these two papers and with the Benin list of Dowsett & Dowsett-Lemaire (1993) and the additions to it of Cheke (1996).

Methods

Between 16 Apr and 7 May 1998 and again between 23 Jul and 2 Aug 1998 (31 days fieldwork), birds were recorded within the Noyau Central with the following methods: c. 160 h of direct observation (one observer); six nights acoustical recognition of night-active birds; mist-netting of 112 individuals (marked by tail-clipping); observation from watchtowers (2 h); road counts of raptors; collection of nightjars on the road on five evenings.

Systematic List

In the following, bird abundance is indicated as follows (after Morel & Tye 1995):

A: Abundant 11–100 may be seen or heard in suitable habitat per day 1–10 may be seen or heard in suitable habitat per day

F: Frequent often seen but not every day.

Notes on the breeding condition of trapped individuals are also given. Species not listed for Benin by Dowsett & Dowsett-Lemaire (1993), Claffey (1995), Anciaux (1996) or Cheke (1996) are considered as first records for Benin and are marked with an asterisk. Sequence and nomenclature follow *Birds of Africa* up to the most recent volume (Urban *et al.* 1997), and Elgood *et al.* (1994) for the remaining species.

Accipitridae

Aviceda cuculoides African Cuckoo Falcon, C. Pairs, 26 Apr., 1May.

Pernis apivorus Honey Buzzard. One, 1 May.

Elanus caeruleus Black-shouldered Kite. F.

Milvus migrans Black Kite. C.

Gypohierax angolensis Palm-nut Vulture. An adult, 17 and 21 Apr.

Circaetus cinerascens Smaller Banded Snake Eagle. One, 2 May; two, 5 May.

Polyboroides typus African Harrier Hawk. C.

Accipiter tachiro African Goshawk. F.

A. badius Shikra, C.

Kaupifalco monogrammicus Lizard Buzzard. F.

Aquila wahlbergi Wahlberg's Eagle. One, 30 Apr.

Lophaetus occipitalis Long-crested Eagle. F. Pair with nest material, 2 May.

Falco biarmicus Lanner Falcon, C.

Phasianidae

Guttera pucherani Crested Guineafowl. F. Only in small groups. In S Benin, recorded at Kétou (c. 7°30′N, 2°50′E: Brunel 1958). Recent records only from the Mount Kouffé area (Green & Sayer 1977, B. Sinsin pers. comm.). The Noyau Central probably plays a crucial role in the survival of this species in the south of Benin.

Francolinus ahantensis Ahanta Francolin. F.

F. bicalcaratus Double-spurred Francolin. C.

Rallidae

Sarothrura pulchra White-spotted Crake. Song, 30 Apr, 1 May. Confirms first Benin records of Anciaux (1996) near Allada (6°39'N, 2°9'E).

Columbidae

Treron calva African Green Pigeon. F.

Turtur tympanistria Tambourine Dove. F.

T. afer Blue-spotted Wood-Dove. F.

Columba iriditorques Western Bronze-naped Pigeon. F.

Streptopelia semitorquata Red-eved Dove. F.

Musophagidae

Tauraco persa Green Turaco. F.

Crinifer piscator Western Grey Plantain-eater. C.

Psittacidae

Poicephalus senegalus. Two, 1 Aug.

Cuculidae

Oxylophus levaillantii African Striped Cuckoo. One, 28 Apr.

Cuculus clamosus Black Cuckoo. Heard singing, 27 Apr; one individual of the forest race, C. c. gabonensis, seen 23 Jul. The Benin records of this species from the end of the 19th century were recently confirmed by Claffey (1998) at Wari Maro.

Chrysococcyx cupreus Emerald Cuckoo. Song, 7 May.

C. klaas Klaas's Cuckoo. F.

C. caprius Didric Cuckoo. F.

Ceuthmochares aereus Yellowbill, F.

Centropus senegalensis Senegal Coucal. C.

Strigidae

Strix woodfordii African Wood Owl. F.

Caprimulgidae

Caprimulgus climacurus Long-tailed Nightjar. C. Male with large brood patch, 22 Apr; another male with enlarged gonads, 2 Aug.

C. inornatus Plain Nightjar, Three: 21 Apr., 30 Apr., 3 May.

Macrodipterix longipennis Standard-winged Nightjar. Two, 3 and 5 May.

Apodidae

Telacanthura ussheri Mottled Spinetail. F.

Cypsiurus parvus African Palm Swift. Two, 24 Jul.

Apus pallidus/apus Pallid/European Swift. Flocks up to 60, 17 Apr to 6 May.

A. affinis Little Swift. One, 30 Apr.

Trogonidae

Apaloderma narina Narina Trogon. F.

Alcedinidae

Haleyon malimbica Blue-breasted Kingfisher. One, 7 May.

H. senegalensis Woodland Kingfisher. C.

Meropidae

Merops albicollis White-throated Bee-eater.A. Only Apr-May.

M. malimbicus Rosy Bee-eater. F. Only Jul-Aug.

Coraciidae

*Eurystomus gularis Blue-throated Roller. One, 1 May. Identified by loud, harsh call and blue throat. First record for Benin. Occurs in relict forest patches in S Nigeria (Elgood et al. 1994); not uncommon forest resident in Togo (Cheke & Walsh 1996). Its occurrence in the Noyau Central is therefore not surprising.

E. glaucurus Broad-billed Roller. F.

Phoeniculidae

Phoeniculus purpureus Green Wood-Hoopoe. F.

Bucerotidae

Tockus albocristatus White-crested Hornbill. F. An adult with a juvenile taking a sand-bath, 2 Aug. Wing-coverts spotted (= T. a. cassini). This may be the last population of the species in the country, but its viability is doubtful, given the scarcity of the remaining suitable habitat. Listed by Brunel (1958). Ssp. macrourus in Togo (Cheke & Walsh 1996).

T. fasciatus semifasciatus Pied Hornbill. C.

T. nasutus Grey Hornbill. An ad. with a juvenile, 1 May.

Capitonidae

Pogoniulus bilineatus Yellow-rumped Tinkerbird. F.

P. chrysoconus Yellow-fronted Tinkerbird. One, 29 Apr.

Picidae

Dendropicos pyrrhogaster Fire-bellied Woodpecker. F.

Hirundinidae

Hirundo semirufa Red-breasted Swallow. F.

H. aethiopica Ethiopian Swallow. X. Two records, 28 Apr and 2 May.

Campephagidae

*Campephaga quiscalina Purple-throated Cuckoo-Shrike. One record, 25 Apr: a female in the crown of a small, caterpillar-infested tree at a height of c. 10m, at the edge of a forest patch. In overall size and coloration it recalled Nicator Nicator chloris, but clearly showed a grey head and a smaller bill. Other features noted include black lores and eye-stripe, indistinct whitish supercilium from base of bill to above eye, white throat, greenish-yellow underparts, olive-green tail edged yellowish. After the bird had disappeared, a high-pitched whistle consisting of two notes, the second drawn out and falling in pitch, was heard twice and was thought to come from this bird. First record for Benin. In Nigeria, only known from a single forest patch on the Jos Plateau (Elgood et al. 1994). In Togo it is known from several forest patches (Cheke & Walsh 1996).

Pycnonotidae

Andropadus virens Little Greenbul. C.

- *A. curvirostris Cameroon Sombre Greenbul. C. Four adults mist-netted and photographed. Identified by distinctive, trilling call, often introduced with tii-toowit. In the hand, differed from A. virens in having a more slender, slightly down-curved bill and, in profile, a straighter contour line from top of head to bill tip. Also showed an open, pale brown eye-ring. First record for Benin. In Nigeria occurs west of the Lower Niger (Elgood et al. 1994); a not uncommon forest resident in Togo (Cheke & Walsh 1996).
- *A. gracilirostris Slender-billed Greenbul. F. A loose group of four or five birds observed foraging on small fruits in the canopy of a forest patch, 26 and 30 Apr. They had pale-olive-grey underparts contrasting with darker, olive-brown upperparts, a fairly long, slender bill, and a rather long tail. Vocalizations included a call ti-twee-wee-up and a characteristic, drawn-out whistle, falling in pitch. Two more birds were seen in the top of a small tree in a clearing, 1 Aug. First record for Benin. Not uncommon resident in SW Nigeria (Elgood et al. 1994) and recently recorded in Togo (Cheke & Walsh 1996).

Chlorocichla simplex Simple Greenbul. F.

Phyllastrephus albigularis White-throated Greenbul. C. Twenty adults mist-netted, of which at least three females with large brood patches, 18–19 Apr and 4 May.

*Bleda syndactyla Red-tailed Bristlebill. F. Singing birds heard in dense undergrowth of mature forest patches, 6 May, 1 Aug, 3 Aug. Song (tape-recorded) consisted of a repeated introductory kaw-kaw-kaw-... followed by a characteristic, drawn-out, melancholic trilling whistle. None of the birds was seen, but we were familiar with this species' vocalizations from fieldwork in Ivory Coast, and identity of the recordings was subsequently confirmed (R. Demey in litt.). First record for Benin. Resident S Nigeria (Elgood et al. 1994); but unrecorded Togo (Cheke & Walsh 1996).

B. canicapilla Grey-headed Bristlebill. C. 13 adults mist-netted. Large brood patches in two captured females, 29 Apr, 6 May.

Pvcnonotus barbatus Common Bulbul. C.

Turdidae

*Stiphrornis erythrothorax Forest Robin. C in forest patches. Four adults mist-netted. A captured male with brood patch and enlarged gonads, 27 Apr. First record for Benin. Present in SW Nigeria (Elgood et al. 1994), but uncertain in Togo, where there are only two 19th century records (Cheke & Walsh 1996).

Turdus pelios African Thrush. One, 16 Apr.

Sylviidae

Prinia subflava Tawny-flanked Prinia. C.

*Apalis rufogularis Buff-throated Apalis. F. Sightings include: a female, 20 Apr; a male and two females, 26 Apr. The male was in a mixed bird party and was identified by its blackish head and throat, contrasting white breast, and white outer tail-feathers. The females were distinguished by their buff throat, shading to orange in warm light, white lower breast and belly, slender tail with white outer feathers (appearing wholly white from below) and grey head. The song, which was frequently heard in forest patches, was tape-recorded and was similar in rhythm to the song of Sharpe's Apalis A. sharpii, with which we were familiar from Ivory Coast, but had a different, harder tone. First records for Benin and westernmost to date. Present in SW Nigeria (Elgood et al. 1994) but not in Togo, where it is replaced by A. sharpii (Cheke & Walsh 1996). Camaroptera brachyura Grey-backed Camaroptera. A.

C. chloronota Olive Green Camaroptera. F. One mist-netted.

Sylvietta virens Green Crombec. F. An adult with a brood patch, netted 21 Apr.

*Hylia prasina Green Hylia. F. The characteristic call, a harsh prrrsh, followed by a whistled teee-tee was first heard in dense undergrowth of secondary forest, 27 Jul. First record for Benin. Common forest resident in Nigeria and Togo (Elgood et al. 1994, Cheke & Walsh 1996).

Muscicapidae

*Fraseria ocreata Fraser's Forest-Flycatcher. One in a mixed-species flock, 26 Apr. Identified by its blackish upperparts and white underparts with distinct markings on breast; no supercilium. We were familiar with the species from Ivory Coast. First record for Benin. Present in SW Nigeria (Elgood et al. 1994), but not recorded in Togo (Cheke & Walsh 1996).

Muscicapa caerulescens Ashy Flycatcher. Two records, 21 and 26 Apr.

Platysteiridae

*Megabyas flammulatus Shrike-Flycatcher. A pair, forest canopy, 30 Apr. Male identified by black upperparts; more reminiscent of Sabine's Puffback *Dryoscopus sabini* than of Black-and-White Flycatcher *Bias musicus*. Female distinguished by white underparts heavily streaked brown. Both birds constantly swayed the tail from side to side. The female carried small sticks and uttered a hard clicking trill. First record for Benin. Not uncommon forest resident Nigeria and Togo (Elgood *et al.* 1994, Cheke & Walsh 1996).

Dyaphorophyia castanea Chestnut Wattle-eye. F. In mixed flocks in forest patches. Six individuals captured, of which pairs with brood patches and males with enlarged gonads, 18 and 29 Apr (all males with white neck collars: D. c. hormophora). Not included in Dowsett & Dowsett-Lemaire (1993), Claffey (1995) nor Anciaux (1996), but mentioned for Benin in Urban et al. (1997). Known also from Togo (Cheke & Walsh 1996) and Nigeria (Elgood et al. 1994).

Monarchidae

Terpsiphone rufiventer Red-bellied Paradise-Flycatcher. C. Eleven individuals mistnetted. Two captured birds with brood patches, 17 Apr and 6 May.

T. viridis African Paradise-Flycatcher. Two white-tailed birds; 19 Apr, 1 May.

Timaliidae

*Illadopsis puveli Puvel's Illadopsis. F. Five birds mist-netted in forest patches, between 21 Apr and 4 May. All with large brood patches. Song frequently heard. Distinguished from I. fulvescens and Pale-breasted Illadopsis I. rufipennis by larger size, with longer, pale legs and whitish underparts; from similar-sized I. rufescens by brown (not grey) flanks. Song similar in structure to that of Rufous-winged Illadopsis I. rufescens, but with a different rhythm and falling in pitch. After its release, a trapped bird uttered a drawn-out whistle falling in pitch, somewhat reminiscent of European Starling Sturnus vulgaris, for several minutes. First records for Benin. Uncommon resident in Nigeria (Elgood et al. 1994); rare (or overlooked?) forest resident in Togo (Cheke & Walsh 1996).

I. fulvescens Brown Illadopsis. F. Two netted.

Nectariniidae

Anthreptes collaris Collared Sunbird. F. Ten netted: two with brood patches, a male 19 Apr, a female 5 May.

Nectarinia olivacea Olive Sunbird, C.

N. venusta Variable Sunbird. Two, 16 Apr. 4 May.

N. chloropygia Olive-bellied Sunbird. F.

N. cuprea Copper Sunbird. One, 1 May.

N. coccinigaster Splendid Sunbird. Two, 1 May, 23 Jul.

Malaconotidae

Nicator chloris Nicator. C. Two with large brood patches, netted 17 Apr, 5 May.

Prionopidae

Prionops plumatus Straight-crested Helmet-Shrike. F.

P. caniceps Red-billed Shrike. F.

Dicruridae

Dicrurus adsimilis Drongo. F.

Oriolidae

Oriolus auratus African Golden Oriole. One, 28 Jul.

*O. brachyrhynchus Western Black-headed Oriole. One in a mixed flock, 20 Apr, showed combination of black head, greenish (not black) upper tail and white wing-patch at primary coverts or outer secondaries. A second black-headed individual

observed some days later again showed the white wing patch. The call was a repeated, short, whistled *tee-hu*, with the stress on the first syllable. First record for Benin. Suggested to occur in S Benin by Brunel (1958). Widespread but uncommon in SW Nigeria (Elgood *et al* 1994); not uncommon in Togo forests (Cheke & Walsh 1996).

Sturnidae

*Lamprotornis purpureiceps Purple-headed Glossy Starling. Two together in the canopy, 5 May. Medium-sized with relative short bill and tail, dark brown eye, glossy bluish-purple head and throat, and contrasting glossy greenish lower breast and belly. First record for Benin and westernmost to date. Uncommon resident in Nigeria (Elgood et al 1994), but not recorded in Togo, where it is replaced by Copper-tailed Glossy Starling L. cupreocauda (Cheke & Walsh 1996).

Ploceidae

Ploceus cucullatus Village Weaver. C.

- P. nigerrimus castaneofuscus Vieillot's Black Weaver. C. Large colony occupied Apr-May.
- *P. tricolor Yellow-mantled Weaver. One in a mixed flock, 26 Apr, showed the yellow triangle on its back and the chestnut underparts, as it climbed through the branches of a low mid-storey tree. First record for Benin. Not uncommon forest resident in Nigeria (Elgood et al 1994); common in Togo (Cheke & Walsh 1996).

Malimbus nitens Blue-billed Weaver. One netted, 29 Apr.

M. rubricollis Red-headed Malimbe. F. Small colony in Apr-May.

Ouelea erythrops Red-headed Quelea. C.

Estrildidae

Nigrita canicapilla Grey-headed Negro -Finch. F.

*Spermophaga haematina Bluebill. A female with a large brood patch, mist-netted 29 April. While handling the bird, the short repeated metallic call of a second bird was heard in the nearby undergrowth. First record for Benin. Uncommon forest resident in Togo (Cheke & Walsh 1996); common in Nigeria (Elgood et al. 1994).

Estrilda melpoda Orange-cheeked Waxbill. F.

Lonchura cucullata Bronze Mannikin, A.

L. bicolor Black and White Mannikin. Two records along the road in company of L. cucullata, 27 and 30 Apr.

Viduidae

Vidua macroura Pin-tailed Whydah. C.

Discussion

One hundred and six species were recorded, of which 15 appear to be hitherto unreported in Benin. These are: Eurystomus gularis, Campephaga quiscalina, Andropadus curvirostris, A. gracilirostris, Bleda syndactyla, Stiphrornis erythrothorax, Hylia prasina, Apalis rufogularis, Fraseria ocreata, Megabyas

flammulatus, Illadopsis puveli, Oriolus brachyrhynchus, Lamprotornis purpureiceps, Ploceus tricolor, Spermophaga haematina. All these and about 50 others, that is, nearly half of the total number, can be considered as resident forest species. As the area is perhaps the largest natural forest remnant in southern Benin and had not been visited by ornithologists previously, this result is not surprising. It is probable that more forest species will be reported from the area.

Although former shifting cultivation has produced a mosaic of forest and nonforest habitats, the overall ecological conditions of the Noyau Central still seem to meet the requirements of forest species, or at least of the smaller ones. The forest patches within the Noyau Central do not show obvious damage e.g. from logging. They join each other and extend over several hundreds of meters, so that most individuals of the forest species may be able to have their entire home ranges within these areas. However, the overall surface of forest is reduced to such an extent that larger species such as White-crested Hornbill Tropicranus albocristatus or Crested Guineafowl Guttera pucherani, must have already been reduced to very small populations. For these two species, the Noyau Central may be a crucial site in the country, as other forest remnants in the region are considerably smaller. Very large forest species, such as the Ceratogymna hornbills, were not recorded. As a whole, the guild of frugivore species seems not to be well represented. This is illustrated by the low densities or absence of Green Pigeons Treron calva and various barbets Capitonidae, which could otherwise be expected to occur in good numbers (cf. Claffey 1995). The availability of fruits is probably much reduced due to the low tree species richness.

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