MALIMBUS

Journal of the West African Ornithological Society
Revue de la Société d'Ornithologie de l'Ouest Africain

VOLUME 21 Number 1 March 1999
ISSN 0331-3689

West African Ornithological Society
Société d'Ornithologie de l'Ouest Africain

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Additions and corrections to the avifauna of Central African Republic

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Received 26 March 1997
Revised 18 January 1999

Summary

A further 44 species are added to the list of birds of Central African Republic presented by Dowsett (1993, Afrotropical avifaunas: annotated country checklists. *Tauraco Res. Rep.* 5: 1–322), as a result of recent exploration of the Ngotto area in the south. Explanation is given for the deletion of 54 species formerly reported from the country. The number of species known from the country now stands at 698.

Résumé

Sont ajoutées 44 espèces à la liste des oiseaux de la République Centrafricaine présentée par Dowsett (1993, Afrotropical avifaunas: annotated country checklists. *Tauraco Res. Rep.* 5: 1–322), à la suite d'observations faites principalement dans la région de Ngotto, dans le sud. Explication est donné, de la radiation de 54 espèces antérieurement signalés de ce pays. Le nombre d'espèces actuellement connues de R.C.A. s'établit à 698.

Introduction

Recent fieldwork in southern Central African Republic by PC, F. Dowsett-Lemaire (FDL) and RJD has added a further 41 species to the list of the country's avifauna (as documented by Dowsett 1993: 168–175). It is also necessary to elucidate the status of some species listed for C.A.R. in the key checklist of Carroll (1988), and even to reject some, as we had already anticipated (Dowsett 1993). Further examination of the literature shows there to be a few claimed records of species overlooked by these authors, some of which we believe are acceptable.

Carroll (1988) presented an annotated checklist of the birds of C.A.R., resulting in a large part from his own research there, but including also observations of MG

(especially in the Lobaye region). Unfortunately some of MG's observations were misrepresented and, as discussed by Germain (1992), a significant number had to be deleted from the Lobaye area list, as he had no firm record of them there (merely listing them as hypothetical). Dowsett (1993) has indicated for which species these were the only claimed observations in C.A.R. and which, therefore, needed to be deleted from the country's avifauna. Our recent investigations in the Lobaye region mean that a number of these species can now be reinstated.

There are also a number of species in Carroll's list whose occurrence in the country was based on unproven if not improbable observations from areas other than the Lobaye. We present here our reasons for rejecting or withholding acceptance of these species. Our comments are made in the light of MG's considerable experience of the Lobaye avifauna, and of recent exploration of the Ngotto area of the Lobaye, notably by PC. The taxonomic treatment is that of Dowsett & Forbes-Watson (1993).

We also discuss a few doubtful records based on sources other than Carroll (1988).

Additions to the Central African Republic avifauna

Additions from the Ngotto area (3°50′N, 17°20′E) result from a day's visit by RJD in Mar 1994, and a total of two months spent in that area in Jun–Jul 1994 and Feb–Mar 1995 by PC. Most of these species were to be expected; those marked with a [1] had in fact been listed by Carroll (1988) but rejected by Germain (1992) through lack of evidence at that time. Fourteen of these (marked [2]) were also found in the Dzanga-Ndoki area (*c.* 2°13′N, 16°12′E), on the border with Congo-Brazzaville, by FDL in Apr 1996. In addition to the following, some species new to Dowsett's (1993) list were detailed by Bretagnolle (1993) and Germain & Cornet (1994).

Accipitridae

Aquila pomarina Lesser Spotted Eagle. While at Bomassa (2°12′N, 16°12′E), on the Congo-Brazzaville/C.A.R. border, FDL saw two singles fly northwards on 16 and 17 Apr 1996 (Dowsett-Lemaire 1997b); the distinctive shape and lack of any obvious underwing pattern were well seen.

Falconidae

Falco subbuteo European Hobby. Blancou (1938) collected a specimen at Ndélé, 29 Apr 1934: a record overlooked by Carroll (1988) and Dowsett (1993).

Rallidae

Rallus caerulescens African Water Rail. Although Dowsett (1993) doubted a record from Manovo (Carroll 1988), J.L. Tello (pers. comm.) has subsequently confirmed the existence of the species there.

Otididae

Ardeotis arabs Arabian Bustard. Rejected by Dowsett (1993) as firm evidence was lacking, although its occurrence had been suggested by Serle & Morel (1977) and

Mackworth-Praed & Grant (1970–3). However, PC has since found it in Bamingui National Park: one bird seen several times at Sangba airstrip (7°35′N, 20°15′E), Apr 1998. J.L. Tello reports that it breeds in the area.

Burhinidae

Burhinus oedicnemus Stone Curlew. PC identified one that had been hit by a car at night near Grima (4°01′N, 17°04′E), 26 Feb 1995. This is considerably further south than any other report from central Africa.

Columbidae

Columba delegorguei Bronze-naped Pigeon. Ngotto, in undisturbed forest and exploited areas, Jun 1994 (PC).

Cuculidae

Cercococcyx olivinus Olive Long-tailed Cuckoo[2]. Ngotto, in gallery and closed forest, Feb–Mar 1995 (PC).

Strigidae

Otus icterorhynchus Sandy Scops Owl. Heard (a series of descending whistles) at Bomassa (Congo-Brazzaville/C.A.R.) by FDL, 17 Apr 1996 (Dowsett-Lemaire 1997b).

Bubo leucostictus Akun Eagle Owl[1]. Detected in forest near Mbaere river, Ngotto, Jul 1994, by its call, with which the observer is very familiar (PC).

Glaucidium tephronotum Red-chested Owlet. Heard calling in exploited forest, Ngotto, Jun 1994 (up to 4 singers at same station); once in closed forest, dry season, Mar 1995 (PC).

G. sjostedti Sjöstedt's Barred Owlet. Seen and heard in closed forest, Ngotto area, Jun 1994, Feb 1995 (PC).

G. capense Barred Owlet. Seen and heard often in degraded forest and edge, Ngotto, Jun 1994 (PC).

Apodidae

Apus pallidus Pallid Swift. A small group (fewer than 10) was observed in good conditions by PC, 23 Feb 1995, hunting over savanna near the Lobaye river, Ngotto (together with House Martins *Delichon urbica*).

Trogonidae

Apaloderma aequatoriale Bare-cheeked Trogon[1,2]. Frequent in Ngotto area, especially in swampy forest, near Batouri and Limbalakata, Jun–Jul 1994, Mar 1995; also in exploited forest, Jun–Jul (PC).

Meropidae

Merops apiaster European Bee-eater. Ngotto (PC).

Phoeniculidae

Phoeniculus castaneiceps Forest Wood Hoopoe[1]. One pair, forest edge, Gbenguendara, Ngotto area, Mar 1995 (PC).

Hirundinidae

Pseudochelidon eurystomina River Martin. 3 or 4 seen at Ngotto 20 Mar 1994 (RJD). This migrant was already known from as far up the Ubangui River as Bétou, Congo-Brazzaville (3°05′N, 18°32′E) (Chapin 1953).

Pycnonotidae

Andropadus ansorgei Ansorge's Greenbul[2]. Seen and heard in undisturbed forest, and edge near Bambio, Ngotto (PC).

Calyptocichla serina Golden Greenbul[1,2]. Seen in exploited forest and edge, Ngotto area, Jun 1994 (PC).

Baeopogon clamans Sjöstedt's Honeyguide Greenbul[2]. *C.* 10 observations in undisturbed and exploited forest, Ngotto (PC).

Criniger chloronotus Eastern Bearded Greenbul[2]. Frequent in understorey of undisturbed forest, Ngotto (PC).

Turdidae

Neocossyphus rufus Red-tailed Ant Thrush[1]. Quantrill (1995) reported this species from the Bayanga area (2°54′N, 16°15′E); it was found common at Ngotto (PC).

Erythropygia hartlaubi Brown-backed Scrub Robin[1]. Frequent in forest edge at Bambio (3°56′N, 17°00′E) and closed savanna near Mbaere River, Ngotto (PC).

Sylviidae

Eremomela badiceps Rufous-crowned Eremomela. Seen in canopy of degraded forest, gallery, and forest edge near Bambio, Ngotto (PC).

Sylvietta denti Lemon-bellied Crombec[1,2]. Seen well, forest canopy, Ngotto, singing Jun–Jul (RJD,PC).

Cisticola eximius Black-backed Cloud Cisticola. Several singing at Gordil airstrip (9°44′N, 21°35′E), Jul 1998; common in floodplains of Manovo-Gounda-St Floris N.P. at Gounda (9°25′N, 20°57′E); mostly in grassland without trees or shrubs (PC). Mapped by Hall & Moreau (1970) on Oubangui River at *c.* 20°E, but this is the locality Bosodula (Schouteden 1955) in Congo-Kinshasa. Possibly occurs on the C.A.R. side of the river; recently found in N Congo-Brazzaville (Dowsett-Lemaire 1997a).

Apalis jacksoni Black-throated Apalis. Ngotto: seen and heard in emergents in exploited forest, Jun 1994 (PC).

A. nigriceps Black-capped Apalis. Dowsett (1993) questioned the occurrence of this species in C.A.R., having found no record to support the comment by White (1962) of "Nola–Mbaiki" (*i.e.* between Nola and Mbaiki). But PC has confirmed its presence in the same area, in emergents at Ngotto, Jun 1994.

A. rufogularis Buff-throated Apalis[2]. Frequent at edge of clearing, Gbenguendara, Ngotto, Mar 1995; nominate race, with male blackish on face and chest (RJD, PC).

Muscicapidae

Ficedula albicollis Collared Flycatcher. Dowsett (1993) questioned this species, mentioned by Mackworth-Praed & Grant (1973), in view of possible confusion with the recently separated Half-collared Flycatcher *F. semitorquata.* However, MG subsequently examined the specimen collected by Dybowski and confirmed it as *F. albicollis* (Germain & Cornet 1994).

Muscicapa epulata Little Grey Flycatcher[1]. Ngotto (PC).

Platysteiridae

Batis poensis Fernando Po Batis. Three observations, Ngotto: forest edge at

Gbenguendara, Mar 1995; gallery between Ngotto and Lobaye River, Jun 1994; in a mixed party in exploited forest, Jun 1994 (PC).

Dyaphorophyia tonsa White-spotted Wattle-eye[1,2]. One seen in a mixed party in undisturbed forest, Ngotto, Jul 1994 (PC).

Nectariniidae

Nectarinia batesi Bates's Sunbird. Two observations by forest roads, Ngotto, Jun 1994 (PC).

N. reichenbachii Reichenbach's Sunbird. Ngotto: locally common in riverine forest of Mbaere River and clumps of trees in swampy savannas at Gbenguendara (PC).

N. minulla Tiny Sunbird[2]. Ngotto: swampy forest by Mbaere River, especially at flowering *Anthocleista*, Feb 1995 (PC).

N. bifasciata Purple-banded Sunbird. Common in savanna around Ngotto and to the Lobaye River, including singing males, a female with young, Feb–Mar 1995 (PC).

N. johannae Johanna's Sunbird[2]. Uncommon in clearings near Mbaere River, Jun 1994, Feb 1995; gallery forest between Ngotto and Lobaye River, Feb 1995 (PC).

Anthreptes fraseri Fraser's Sunbird[2]. Uncommon in all forest types, Ngotto; red tufts of males seen well, as was the olive head (separating it from *A. f. axillaris*) (RJD, PC).

Ploceidae

Ploceus albinucha Maxwell's Black Weaver[2]. Seen in exploited and undisturbed forest (once in mixed party), Ngotto, Jun 1994, Mar 1995 (PC).

P. preussi Preuss's Golden-backed Weaver. Found not uncommon by FDL in the Bomassa area, Apr 1996 (Dowsett-Lemaire 1997b).

Malimbus coronatus Red-crowned Malimbe[1,2]. Frequent in Ngotto area in degraded forest where seen nesting over old forest roads, Jun 1994 (PC).

Brachycope anomala Bob-tailed Weaver. Jehl (1976) reports this species from Bangui, an extension northwards of its known range. This record was overlooked by Carroll (1988) and Dowsett (1993).

Estrildidae

Spermophaga haematina Bluebill. Listed by Carroll (1988), but transferred to Red-headed Bluebill *S. ruficapilla* by Dowsett (1993), who believed there to have been a misidentification, based on the occurrence of this species in the south-east of the country (Friedmann 1978). However, Germain & Cornet (1994) confirmed that the species present in southwestern C.A.R. is indeed *S. haematina,* and PC found it common in Ngotto.

Deletions from the Central African Republic avifauna

There are some 40 species listed from C.A.R. by Carroll (1988), and not discussed by Germain & Cornet (1994), whose occurrence is either highly improbable or of such rarity, or which present identification problems, that without further details they

cannot be accepted for the country. These are listed with the part of the country from which Carroll (1988) reported each, as follows: Region 1 Manovo-Gounda-Saint Floris National Park (i.e. northern C.A.R.); Region 2 Lobaye Préfecture (southern C.A.R.); Region 4 Bamingui area (northern C.A.R.); Region 5 Haute Sangha Préfecture (south-western C.A.R.); Region 6 Bamingui-Bangoran National Park (northern C.A.R.). Some of these species we consider possible but in need of proof (P), while others are so unlikely as to be almost certainly wrong (X).Our comments on distribution in other African countries are based in large part on the annotated tables of Dowsett (1993).

We also include below a few doubtful records based on sources other than Carroll (1988).

Phalacrocoracidae

Phalacrocorax carbo White-breasted Cormorant. Region 1; P. No more than a very scarce non-breeding visitor to neighbouring countries, and often confused with *P. africanus* when not in nuptial dress.

Anatidae

Thalassornis leuconotus White-backed Duck. P. Two reportedly collected at Botambi on 26 Nov 1970 (Moindrot), but the specimens could not be found by MG in 1977.

Anas sparsa African Black Duck. A possible sight record (Blancou 1938) cannot be accepted, but ought to be kept in mind.

Accipitridae

Neophron percnopterus Egyptian Vulture. Region 1; P. Known to the north of C.A.R., in neighbouring Chad and Sudan. Although it may well occur in C.A.R., and is thus mapped by Brown *et al.* (1982), confirmation would be desirable. Often confused with Palm-nut Vulture *Gypohierax angolensis*, as admitted by Blancou (1938–39) in C.A.R..

Gyps fulvus Griffon Vulture. Region 4; X. Palaearctic migrant with very few records in NE Africa, south to about 13°N in Sudan (Nikolaus 1987) and perhaps the Lake Chad area (Salvan 1968). Any record as far south as C.A.R. would need careful documentation.

Circaetus gallicus Short-toed Eagle. Region 4. This species, *C. pectoralis* and *C. beaudouini* (all reported by Carroll 1988), are very closely related or even considered conspecific, *e.g.* by Dowsett & Forbes-Watson (1993). Dowsett (1993: 168) admits this species to the C.A.R. list merely as an intra-African migrant, on the basis of Carroll's report of *C. (g.) beaudouini. C. g. gallicus* might occur as a migrant from the Palaearctic, but would be very difficult to separate in the field from *beaudouini. C. (g.) pectoralis* (reported from Region 1) is absent from W Africa, and although known from Sudan (Nikolaus 1987), it is essentially a bird of S and E Africa, north to S Congo-Brazzaville (Dowsett-Lemaire & Dowsett 1991), and unlikely in N C.A.R.

Accipiter minullus Little Sparrowhawk. Region 1; X. Unknown from W and west-central Africa, probably confused with the allopatric sibling *A. erythropus* . Carroll (1988) was wrong to list both.

Buteo rufinus Long-legged Buzzard. Region 1; X. This palaearctic migrant avoids the forest zone of central Africa; occurrence in C.A.R. not impossible, but often confused with other species (Dowsett & Kemp 1988).

Aquila verreauxii Black Eagle. Region 1; P.This species of extensive rocky hills is known from very few parts of the Sahel in NE Africa. It is known not far from the C.A.R. border in W Sudan (Nikolaus 1987), and has been mapped from C.A.R. by Brown *et al.* (1982), but its occurrence in northern C.A.R. would represent an range extension, and we believe it should be documented in detail.

Hieraaetus ayresii Ayres's Hawk Eagle. Region 2; P. A few records from neighbouring countries, but although mapped throughout C.A.R. by Brown *et al.* (1982), the only published records are by Carroll (1988), and we believe details are desirable. It has, however, recently been found in nearby SE Cameroon and N Congo (Dowsett-Lemaire & Dowsett 1998).

Falconidae

Polihierax semitorquatus Pygmy Falcon. Region 1; X. Known in NE Africa from Sudan and Ethiopia, but not Chad. The nearest record to C.A.R. is in the extreme south of Sudan at about 4°N, 30°E (Dowsett *in* Snow 1978; Nikolaus 1987), in the Juba region at Missa, Hannar Koke (specimen in National Museum, Nairobi, examined by RJD). Any observations from C.A.R. would require proof.

Phasianidae

Francolinus streptophorus Ring-necked Francolin. Region 1; X. Known only from Cameroon (Louette 1981) and E Africa, no nearer to C.A.R. than W Uganda (Britton 1980). Full details should be published of any C.A.R. record.

Turnicidae

Ortyxelos meiffrenii Quail-plover. Region 1; P. The nearest known populations are in the Sahel zone in N Cameroon and Chad (Snow 1978; Urban *et al.* 1986). Its occurrence in C.A.R. is at first glance unlikely, even though reported from this country by Serle & Morel (1977), presumably following Mackworth-Praed & Grant (1970), whom we suspect of having confused localities. We have traced no published specimen data.

Rallidae

Canirallus oculeus Grey-throated Rail. Region 1; P. Listed from Manovo by Carroll (1988) but improbable so far north. May occur in the southern forests.

Sarothrura lugens Long-toed Flufftail. P. Although not detailed in the text by Keith *et al.* (1970), a locality is clearly shown on their map for this species, which seems to be within C.A.R., in the Bouar-Bozoum area. But there is no record in the text that cannot be accounted for as extralimital to C.A.R. Without details of the locality, which may be that mapped as being in neighbouring Congo-Brazzaville by Snow (1978) and Urban *et al.* (1986), we cannot accept *S. lugens* for the country.

Gruidae

Anthropoides virgo Demoiselle Crane. Bouet (1955) mentions it (noted by Blancou) from C.A.R.; while not impossible, we believe this requires confirmation.

Otididae

Eupodotis ruficrista Red-crested Korhaan. X. Reported from C.A.R. by Serle & Morel (1977) but we are unaware of firm evidence; perhaps based on Mackworth-Praed & Grant (1970–3).

Burhinidae

Burhinus vermiculatus Water Dikkop. Region 1; X. Carroll (1988) reported it from Manovo, but PC has searched there in vain and believes the record a misidentification of *B. senegalensis*.

Scolopacidae

Limosa lapponica Bar-tailed Godwit. Region 1; P. Rare inland in Africa on passage (Dowsett 1980), and full details of the C.A.R. observation are needed.

Tringa erythropus Spotted Redshank. Region 1; P. Listed by both Carroll (1988) and Green & Carroll (1991). There are few good records of this Palaearctic migrant in central Africa and, as it has at times been confused with other species, details of any C.A.R. observations are desirable. A.A. Green (pers. comm.), who found Common Redshank *Tringa totanus* to be uncommon to frequent on sandbars in the Sangha River in the dry season, but never saw Spotted Redshank, concurs with this deletion.

T. solitaria Solitary Sandpiper. Region 5; X. Only one acceptable Afrotropical record: one seen and photographed in Zambia (Aspinwall *et al.* 1995). One specimen was claimed (from Cabinda), by Bocage (1881); but it is not mentioned by Pinto (1983), and the specimen would presumably have perished in the Museu Bocage fire of 1975. One tentative sight record from South Africa (Kieser 1980) was not accepted by Hockey *et al.* (1986), but was unfortunately included without comment by Hayman *et al.* (1986). Without full details of the C.A.R. record (which was not mentioned by Carroll 1982) we do not believe it should be accepted.

Calidris canutus Knot. Region 1; X. Dowsett (1980) found no acceptable inland record, though there has subsequently been one from Zambia (Dowsett *et al.* in press). Full documentation is required for records from C.A.R.

Sternidae

Sterna albifrons guineae Little Tern. Bouet (1955) mentions it (noted by Dybowski) from C.A.R.; while not impossible, we believe this requires confirmation.

Columbidae

Streptopelia capicola Cape Turtle Dove. Region 1; X. This southern and eastern species is known no nearer to C.A.R. than E Sudan (Nikolaus 1987) and S Congo-Brazzaville (Dowsett-Lemaire & Dowsett 1991), and was presumably misidentified by Carroll (1988).

Strigidae

Jubula lettii Maned Owl. Reported from Ngotto (Christy 1995), based on call, but in view of confusion over the voice of this species, best considered unproven.

Apodidae

Apus batesi Bates's Swift. Region 1; P. Claimed by Carroll (1988) to be present in Manovo. Unlikely so far north but may occur in southern forest area.

Alcedinidae

Alcedo semitorquata Half-collared Kingfisher. Region 5; X. A bird of E and S Africa, unknown from countries bordering C.A.R. in west-central Africa. The transposition of captions on the map presented by Snow (1978) might have given the impression that it is this species rather than *A. quadribrachys* which occurs in C.A.R.

Meropidae

Merops oreobates Cinnamon-breasted Bee-eater. Regions 2, 6; X. A highland species of E Africa (Fry 1984). It seems certain that C.A.R. reports result from confusion with some other species, such as *M. variegatus*. A.A. Green (pers. comm.) found the latter species in savanna patches surrounded by forest of Bayanga (Dzanga-Sangha) but never saw *M. oreobates* , nor did he at Bamingui-Bangoran National Park, in north-central C.A.R., where *M. hirundineus* occurs and looks somewhat similar.

M. malimbicus Rosy Bee-eater. Region 2; P. Germain (1992) has rejected this species from the Lobaye list. It was also reported from the Oubangui (Thibaut, *in* Bouet 1961); its status remains to be confirmed.

Bucerotidae

Tockus alboterminatus Crowned Hornbill. Region 1; X. Unknown from this part of west-central Africa (see Fry *et al.* 1988, Kemp 1995), and likely confused (probably with *T. fasciatus*).

Lybiidae

Gymnobucco peli Bristle-nosed Barbet. Region 2; X. Although listed from the Lobaye by Carroll (1988) and not rejected by Germain (1992), our further researchj in the area suggests it is unlikely to occur there.

Picidae

Campethera maculosa Golden-backed Woodpecker. Region 5; X. Absent east of Ghana; its claimed occurrence in C.A.R. must represent a misidentification, probably of *C. cailliautii*, which A.A. Green (pers. comm.) found both at the Bayanga area, in the rainforest of the south-west, and the Bamingui area, in Guinea savanna of the north-central C.A.R.. Carroll (1982) does not list *C. maculosa*. Although Carroll (1988) lists both *C cailliautii* and *C. permista* from C.A.R., the two are allopatric (probably conspecific).

Alaudidae

Mirafra cantillans Singing Bush-Lark. Region 1; P. Reported from Manovo by Carroll (1988) but not found during recent visits by PC.

M. africana Rufous-naped Lark. Region 2; X. The nearest populations of this species are in highland N Cameroon and adjacent Nigeria (Louette 1981, Ash *et al.* 1989), reappearing in central Congo-Brazzaville (Dowsett & Dowsett-Lemaire 1989) and adjacent Gabon (Dowsett 1993). The superficially similar Red-winged Bush Lark *M. hypermetra* occurs in W Sudan (Nikolaus 1987). The occurrence of either in southern C.A.R. seems unlikely.

Hirundinidae

Psalidoprocne obscura Fanti Saw-wing. Region 1; X. Not known east of Mt Came-

roon (Louette 1981); its claimed occurrence in C.A.R. is most likely the result of misidentification. Unfortunately Carroll's record was accepted by Keith *et al.* (1992).

Motacillidae

Anthus richardi Richard's Pipit. Region 1; X. Practically unknown from west-central Africa, but occurs in highland populations in Cameroon and adjacent Nigeria (Louette 1981, RJD & FDL) and central Congo-Brazzaville (Dowsett & Dowsett-Lemaire 1989). It is reported as a migrant in Chad and Sudan (Salvan 1968, Nikolaus 1987). Not always easy to identify, and details needed to prove occurrence in C.A.R..

Campephagidae

Campephaga flava Black Cuckoo-shrike. Region 1; P. This migrant is almost unknown from W and west-central Africa, where it is replaced by Red-shouldered Cuckoo-shrike *C. phoenicea*, with which there may have been confusion. But known from Sudan not far from the C.A.R. border (Nikolaus 1987).

Coracina caesia Grey Cuckoo-shrike. Region 1; X. A highland species, unexpected in C.A.R.. Probably a misidentification, and it is unfortunate that Keith *et al.* (1992) accepted it (as vagrant). Full details should be published.

Turdidae

Turdus philomelos Song Thrush. Region 1; X. Palaearctic species known south of the Sahara only by a very few records in extreme W and NE Africa. Possible vagrants to C.A.R. would need to be documented.

Cercotrichas podobe Black Scrub Robin. Region 4; P. Given the distribution of this Sahel species in W Sudan (Nikolaus 1987), its presence in C.A.R. would not be impossible. But it represents a significant extension southwards, and ought to be documented.

Myrmecocichla tholloni Congo Moor Chat. Region 1; X. Although this record was accepted by Dowsett (1993), we now believe that the occurrence of this species in northern C.A.R. is highly unlikely.

Sylviidae

Acrocephalus gracilirostris Lesser Swamp Warbler. Region 1; P. Except for a population at Lake Chad (Dowsett & Moore 1997), absent from W and west-central Africa. C.A.R. reports probably result from confusion with the widespread Greater Swamp Warbler *A. rufescens,* known from specimens and birds captured by MG.

Timaliidae

Turdoides tenebrosus Dusky Babbler. Region 1; P. Known from a very limited area of E Africa, but occurs in Sudan on the border with eastern C.A.R. (Nikolaus 1987). Its occurrence elsewhere in C.A.R. needs confirmation.

Oriolidae

Oriolus larvatus Eastern Black-headed Oriole. Regions 2, 5; X. Claims for this southern species from the Lobaye and Sangha area (Carroll 1988) are probably the result of misidentifications.

Laniidae

Lanius excubitor Great Grey Shrike. Region 1; X. Known from neighbouring

Cameroon, Chad and Sudan, but can be confused with other grey shrikes, particularly Grey-backed Fiscal *L. excubitoroides*, which occurs in NE C.A.R. Bretagnolle (1993), so details would be required.

Malaconotidae

Dryoscopus angolensis Pink-footed Puffback. Region 1; X. Almost entirely a highland species, in west-central Africa from Cameroon (Louette 1981), mainland Equatorial Guinea (Dowsett-Lemaire & Dowsett in prep.) and S Congo-Brazzaville (Dowsett & Dowsett-Lemaire 1989). Although reported from "Ostliches Kamerun" (Reichenow 1911), its presence in C.A.R. would need documentation.

Sturnidae

Creatophora cinerea Wattled Starling. P. Reported from eastern C.A.R. by Mackworth-Praed & Grant (1973), and from C.A.R. by Serle & Morel (1977), but we are unaware of firm evidence.

Buphagus erythrorhynchus Red-billed Oxpecker. Region 2; X. Absent from W and west-central Africa (unlike Yellow-billed *B. africanus*); its occurrence in southern C.A.R. appears unlikely.

Passeridae

Petronia pyrgita Yellow-spotted Petronia. Region 1; X. Known no nearer than E Chad and E Sudan (Salvan 1969, Nikolaus 1987), and unrecorded from Cameroon; presence in C.A.R. would need confirmation.

Ploceidae

Bubalornis albirostris White-billed Buffalo Weaver. P. Although Dowsett (1993) reported this as resident, based on Carroll (1988), the supporting reference is in fact Mackworth-Praed & Grant (1973). We have not traced the original evidence for this reference, so believe its occurrence remains to be confirmed.

Ploceus insignis Brown-capped Weaver. Region 2; X. Germain (1992) rejected this species from the Lobaye. It was also reported from Bangui (Jehl 1976), but we believe this was probably based on a misidentification (perhaps of *P. preussi*).

P. intermedius Lesser Masked Weaver. Region 1; X. This southern species was listed by Carroll (1988) from Manovo, probably in error.

Quelea cardinalis Cardinal Quelea. Region 2; X. Absent from W and west-central Africa. Records in C.A.R. probably result from confusion with Red-headed Quelea *Q. erythrops*, which is not uncommon.

Estrildidae

Estrilda atricapilla Black-headed Waxbill. Region 5; P. Listed by both Carroll (1988) and Green & Carroll (1991), but easily confused with the widespread Black-crowned Waxbill *E. nonnula*. Germain & Cornet (1994) examined many of the latter in the Bangui area, but found no *E. atricapilla*. According to A.A. Green (pers. comm.), the record of *E. atricapilla* from Bayanga, in south-western C.A.R., may be based on such confusion. However, *E. atricapilla* is present locally in neighbouring parts of west-central Africa, as near as Nouabalé-Ndoki in northern Congo and the Lobéké in SE Cameroon (Dowsett-Lemaire 1997a, Dowsett-Lemaire & Dowsett 1997).

Vidua paradisaea Long-tailed Paradise Widow. Regions 1, 4–6; P. Carroll (1988) reported just one species of paradise widow from C.A.R. (both northern and southern areas), which he called *V. orientalis*, as did Bretagnolle (1993) who worked in the north-east of the country. Payne (1985) had shown that *orientalis* is a subspecies of *V. paradisaea* , while the form known from C.A.R. is now considered a separate species, *V. interjecta*. Most or all of Carroll's records presumably refer to *interjecta*, as could Bretagnolle's (as it ranges into Sudan). However, Blancou (I938–9), a careful observer, believed he could distinguish two forms in C.A.R. and further investigation may well show that *V. paradisaea* also occurs.

Conclusions

The corrections necessary to Carroll's (1988) list show that the avifauna of C.A.R. has not been well documented. No fewer than 56 species reported in the literature for C.A.R. were overlooked by Carroll (1988), many of which appear to be acceptable. These have been detailed above or by Dowsett (1993). Some difficulties are caused by the various names (such as French Equatorial Africa, Oubangui-Chari, eastern Cameroons *etc.*) used to describe the region of which present-day C.A.R. is part.

The number of species now known with certainty from C.A.R.is 698. We believe we have now clarified most of the problems with previous records, but most parts of the country are still poorly explored and documented. This is well shown by the additions to the C.A.R. list documented here from just one small part of the country, and by RJD's finding a dozen species unrecorded from the Bamingui-Bangoran national park during less than 24 hours spent in the neighbouring Sangba hunting area (Dowsett 1997). We urge those who have observations adding to, amending or correcting our own to document them thoroughly in print.

Acknowledgments

Visits to Ngotto by PC and RJD were sponsored by the European Union-funded Ecofac project. We thank Dr. R.W. Carroll for commenting on some points, Dr F. Dowsett-Lemaire and Dr. A.Tye for critical reading, A.A. Green for his valuable comments and communications, J.L. Tello for his unpublished observations, and Mme F. Pelletier, J.-P. Bricard and O. Langrand for help on the internet.

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The Birds of the Waza–Logone Area, Far North Province, Cameroon

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Received 28 May 1997
Revised 30 December 1998

Summary

Based on extensive observations from 1992 to 1998 and complemented by an extended literature review of observations since 1958, a list of 379 bird species is presented for the sahelo-sudanian Waza–Logone area in N Cameroon. This number includes 26 species that have not been seen since 1980. Eleven species are new for Cameroon, 26 are new for Far North Province and new distributional information is provided for another 12. The variety of habitats and year-round water availability make the area attractive to resident as well as migratory birds, but floodplain degradation, due to upstream dam construction, has reduced waterfowl diversity. Recently, efforts are being made to rehabilitate the hydrological regime of the area. The list presented below forms a base-line for future bird population monitoring.

Résumé

Les auteurs donnent une liste de 379 oiseaux pour la région sahélo-soudanienne de Waza–Logone au nord Cameroun; elle repose sur des observations approfondies de 1992 à 1998 complétées par une revue bibliographique importante des observations depuis 1958. Ce nombre comprend 26 espèces qui n'ont pas été vues depuis 1980. Onze espèces sont nouvelles pour le Cameroun, 26 pour la Province de l'extrême nord et de nouvelles données sur la répartition sont fournies pour 12 autres espèces. La diversité des habitats et la présence d'eau toute l'année rendent la région attirante aussi bien pour les oiseaux résidents que pour les migrateurs; mais la dégradation de la plaine inondable, causée par une digue en amont, a diminué la diversité des oiseaux d'eau. Des efforts ont récemment été faits pour

restaurer le régime hydrique de la région. La liste présentée ci-après constitue une base de départ pour suivre l'évolution des populations d'oiseaux .

Introduction

The Waza–Logone area covers approximately 8000 km² in the Far North Province of Cameroon (Fig. 1). This region is characterised by floodplains of the Logone river, which are used intensively for fishing and dry season grazing (Scholte *et al.* 1996b). The area includes two national parks, Waza and Kalamaloué, which contain a diverse large mammal population. Since 1979, the natural hydrological regime of the Logone floodplain has been affected by the construction of a dam near Maga and an embankment along the Logone river, as part of the irrigated rice scheme SEMRY II. These structures, combined with lower than average rainfall in recent years, have reduced both the depth and extent of flooding, leading to serious ecological degradation of the floodplain (Scholte *et al.* 1996a, b).

The Waza–Logone project started in 1992, with the objective of restoring the zone's biological diversity while sustaining development for its inhabitants (IUCN/CML 1994). Due to the limited success of rice cultivation, water has become available from Lake Maga and, to a lesser extent, directly from the Logone river. However, the necessary infrastructural changes are radical and expensive (IUCN 1996). With the agreement of local communities, a pilot release was performed, to evaluate the impact of re-flooding on the ecosystem and the human population. The former water-course, the "Petit Goroma", blocked by the embankment along the Logone river near Tikélé (see Fig. 1), was re-opened in May 1994. The importance of the area for wildlife was one of the major arguments for the formulation of the Waza–Logone project. Various studies are under way to monitor the impact of re-flooding on large mammals and birds. Based on preliminary results, more large scale re-flooding measures have been planned (IUCN 1996, Scholte *et al.* 1996a, b).

Waza National Park has attracted ornithologists for decades. Several provisional check-lists were produced in the 1970s (Fry 1970, Pettet 1976, Vanpraet 1977), with subsequent more specific raptor and waterfowl surveys (Thiollay 1978, Roux & Jarry 1984, 1986, 1987). More recent Waza–Logone project studies include Wetten & Spierenburg (1993), Kort & van Weerd (1995), Scholte *et al.* (1995, in press, 1996c) and Kadiri *et al.* (1997). The present paper compiles this information into an overview of the avifauna of the Waza–Logone area.

The Study Area

The Waza–Logone area receives a mean annual rainfall of *c.* 750 mm in the south and *c.* 550 mm in the north, although there are between-year fluctuations of up to 100%.

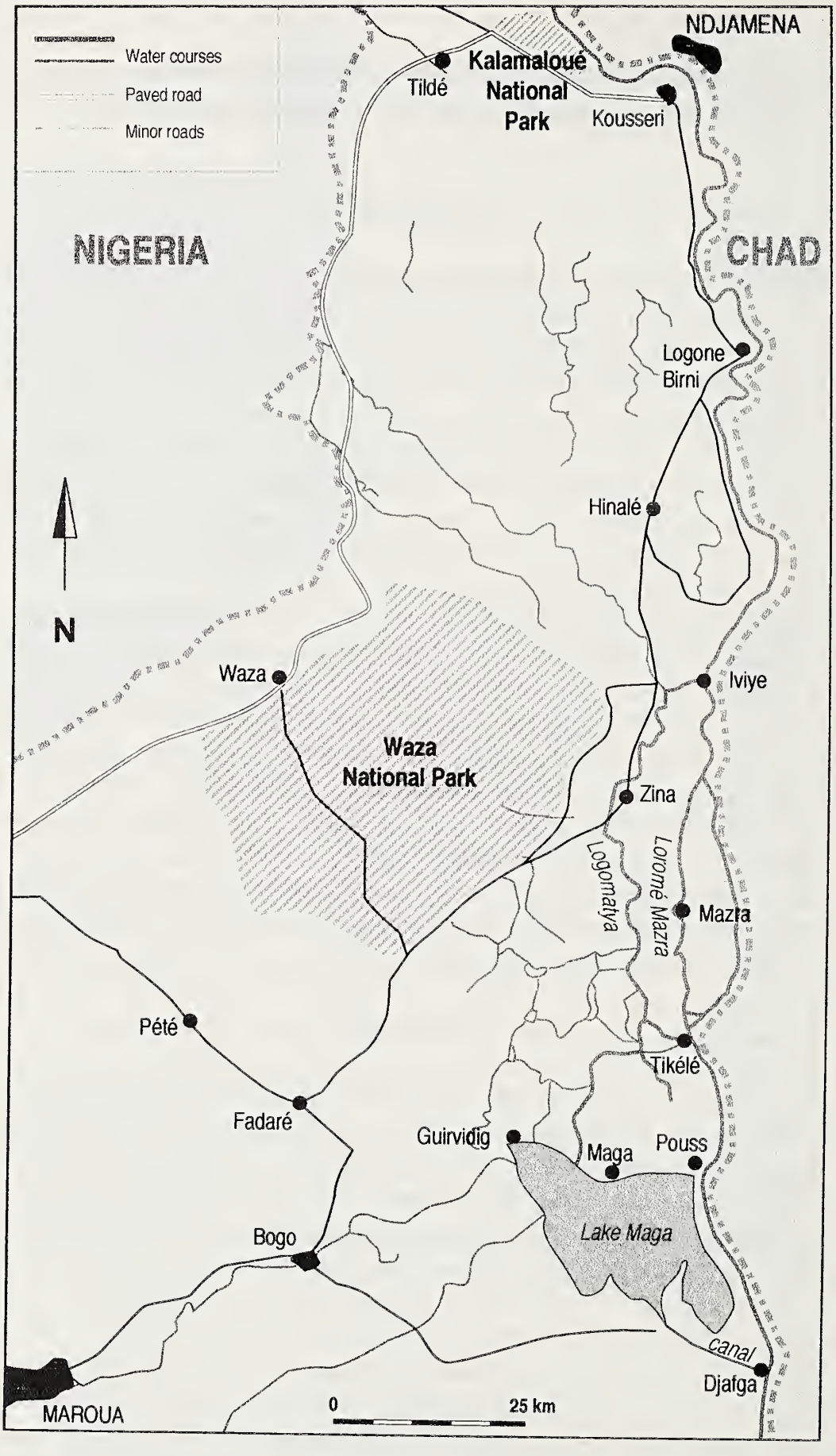

Figure 1. The study area.

There is also some evidence of a decline over the past 20 years. The rainy season is from June to September. In parts of the area, the Logone river and its branches flood during August to November. During the dry season, temperatures rise as high as 45°C during April and May. At this time, the only remaining water sources are a number of waterholes in Waza NP and pools associated with the perennial water courses.

The area falls in the transition zone between sudan and sahel savannas. The sandier soils in and south of Waza NP support a wooded *Sclerocarya birrea* and *Anogeissus leiocarpus* savanna. On the northern floodplain, sandy soils are vegetated with scattered *Hyphaene thebaica* and *Borassus aegyptiaca* palms. Most of the area is dominated by heavy cracking clayey soils, which are, or used to be, subject to flooding. Vegetation types differ in relation to the depth of present and past flooding. In general, the clayey soils above the flood line in the western part of Waza NP, in the southern floodplain, and in large tracts of the northern floodplain, are dominated by *Acacia seyal* shrublands. The areas formerly flooded, which used to be productive perennial grasslands, are now covered by annual grasses, especially *Sorghum arundinaceum*, a large reed-like grass which has invaded the area. In the eastern and northern parts, vast tracts are still subject to annual flooding. Perennial grasses such as *Echinochloa pyramidalis, Oryza longistaminata* and, on the slightly elevated parts, *Vetiveria nigritana* and *Hyparrhenia rufa* dominate. The rather monotonous grasslands are broken by dwelling mounds, often inhabited by fishing communities, and wooded levees associated with the rivers. Each year, immediately after the area dries up at the end of December, most parts are burned, leaving a bare landscape. Only some local humid spots remain with vivid green vegetation and concentrations of fishermen, livestock and birdlife.

For this study we have distinguished seven habitats, based on criteria such as physiography and land use.

Lake Maga and adjoining rice schemes

Located in the extreme south east of the study area, Lake Maga is the only open water, with a surface area of about 400 km^2. On the south it is fringed by a 5-km wide floodplain dominated by *Oryza longistaminata*. On the north, about 5000 ha of rice are cultivated bi-annually, supporting a concentrated human population.

Southern Floodplain

The largest part of the degraded floodplain is situated immediately north of the Maga rice scheme and up to the line passing along the northern edge of Waza NP in the west and to Ivye in the east (confluence of Logomatya with Logone river). This unit is dominated by *Sorghum arundinaceum* and other annual grasses. Due to re-flooding, parts of this area are returning to productive perennial grassland. The areas between the perennial water-courses are still well flooded. The western part of the area is dominated by *Acacia seyal* shrubland. Included are the Logomatya and associated pools, a branch of the Logone river containing water in the dry season from drainage of the rice schemes. It is fringed by dense *Vossia cuspidata* and *Echinochloa stagnina* grassland.

Southern sandy plain
In southern Waza NP and south of it, the wooded savanna of *Sclerocarya birrea* and *Anogeissus leiocarpus* trees and of *Hyperthelia dissoluta* and other *Andropogon*-like perennial grasses, is almost intact. Further south, sorghum cultivation is practised and grazing by livestock is more intensive. Large parts of the area have been transformed into *Guieria senegalensis* shrubland, with scattered *Balanites aegyptiaca* trees and a ground cover of annual grasses like *Schoenefeldia gracilis*.

Waza NP
Waza NP covers 170,000 ha encompassing various physiographical units. In the east there are both degraded and still-inundated parts of the floodplain. In the south and south-west, the park is covered by the southern sandy plain. The centre and north-west are covered by *Acacia seyal* shrubland. Almost no human exploitation occurs.

Logone
This unit encompasses the Logone and Loromé Mazra rivers. It comprises extensive river beds, with sand bars from December to May and *Vetiveria nigritana* grassland in the higher reaches.

Northern Floodplain
The area north of the line running from the north edge of Waza NP in the west to Ivye in the east (confluence of Logomatya and Logone), and northward to Kalamaloué NP. The area is very diverse with extensive *Acacia seyal* shrublands in west and centre and well inundated floodplains in the east, as well as higher sandier parts with *Hyphaene* and *Borassus* palms.

Kalamaloué NP
Despite its limited size of only 4500 ha, this national park is extremely varied. It lies partly in the floodplain of the Chari river and is crossed by several river branches and associated levees. In the lower parts, a dense *Mimosa pigra* scrub dominates, while locally *Echinochloa stagnina* forms productive grasslands. *Tamarindus indicus* and *Celtis africana* form woodland forests on the levees. Most of the higher areas, outside the floodplains, are covered by open *Balanites aegyptiaca* woodland and annual grassland. The southern part of the park is dominated by *Acacia nilotica* woodland.

Ornithological studies in the Waza–Logone area

Bates (1927) was the first ornithologist to record his observations when he visited the Waza–Logone area on his trip to Lake Chad. None of his observations has been included in the present list, due mainly to lack of accuracy on locations. Dragesco (1960, 1961), reported some species (*e.g. Rynchops flavirostris*) in 1958, which have not been seen since. In the late 1960s and early 70s, coinciding with the creation of Waza NP and the construction of a lodge, the Waza–Logone area was more frequently visited by ornithologists (Fry 1970, Broadbent 1971, Greling 1972a, b, Mundy 1972, Holmes 1972, 1974, Pettet 1976, Kavanagh 1977). Most of these visits

were limited to the more accessible western part and lasted only a few days. Only Greling (1972a) carried out a longer study of the birds of the *Acacia seyal* shrubland in Waza NP (Feb 1966 to Apr 1967), and of the birds of the wooded savanna of the southern part of Waza NP (Dec 1966 to Jul 1967). In these two habitats, he recorded 61 and 100 species respectively. Apart from a useful species list for these two habitats, he only mentioned the bird biomass per ha throughout the year, making it difficult to use his study for a comparison with present abundance information.

Vanpraet (1977) presented a checklist of 149 species for Waza NP, observed in the period 1973–1977, just before the construction of the Maga dam and thus before the degradation process started. His list is difficult to interpret, in part because of the nomenclature he used. Moreover, many species groups such as sunbirds, wheatears, flycatchers and most warblers are missing.

Thiollay (1978) reported his extensive raptor observations of 1973 and 1975, and quantified presence as numbers per km travelled. Louette (1981) compiled various sources of information for the whole of Cameroon. He visited Waza NP in Dec 1974 and Jan 1976 and documented the following collections from the Waza Logone area, to which we refer when they provide new information: W. Verheyen and F. De Vree (Nov 1970 to Jan 1971), F.Puylaert and P.Elsen (Jul–Sep 1971), F. De Vree, J. Hulselmans and E. Geraert (Sep–Oct 1972). Louette & Prevost (1987) also reported on birds collected by Prevost during March in 1973 or 1974, near Andirni, on the extreme southern point of Waza NP. In a study of warthog *Phacochoerus aethiopicus* ecology, Allo (1994) listed 93 bird species observed in Kalamaloué NP. He did not specify the year of observations, but it was most probably 1981.

Aerial waterfowl counts were conducted by Roux & Jarry (1984, 1986, 1987), on Lake Maga and other parts of N Cameroon. Unfortunately no distinction was made between the Waza–Logone area and the area north of Kalamaloué NP up to Lake Chad. OAG Münster (1991) organised a bird expedition to the Far North Province, to count waders, with special reference to *Philomachus pugnax*. Their check-list includes some interesting observations, but also some doubtful ones. Robertson (1993) visited Waza NP and the northern floodplain in Feb–Mar 1992. Finally, Beirs (1997) reported a spectacular observation when he visited Waza NP in Feb 1993.

Methods

Our own observations cover the period from 1992 onwards. During his study on *Numida meleagris*, P. Edelaar covered mainly the western side of Waza NP from Nov 1992 to Apr 1993. He was followed by A. Schaftenaar, who stayed from Feb to Jun 1993. In the northern floodplain, observations were made by P. Spierenburg during a vegetation study in Mar–Apr 1992. He and Edelaar contributed to the Jan 1993 waterfowl census. Most of the data from the southern floodplain were collected by S. de Kort and M. van Weerd, who studied the impact of (re-)flooding on birds from

May to Dec 1994 and returned for the mid-winter count of Feb 1995, as well as for other studies throughout most of 1998. P. Scholte visited Kalamaloué NP monthly from Dec 1991 to May 1993. He covered the entire area, often only in passing, in Jan and Apr 1992, Feb 1993 and from May 1993 to Nov 1997. He contributed, together with E. Battokok and R. Azombo of the Wildlife School in Garoua, to all four waterfowl censi. In the 1996 and 1997 census Bobo Kadiri and Philippe Kirda, both of the Waza–Logone project, participated as well.

With the exception of the collections made by Louette and his colleagues (Louette 1981, Louette & Prevost 1987), all observations have been based on sight or sound. Observations were often by car in the dry season and by motorized boats and local canoes or on foot in the rainy/flooding season. The study by Kort & van Weerd (1995), the four Jan/Feb waterfowl censi (Wetten & Spierenburg 1993, Scholte *et al.* 1995, Scholte *et al.* 1996a, Kadiri *et al.* 1997) and the current study on Black Crowned Cranes by Scholte and colleagues, have been the only longer lasting studies which were specifically designed to observe and quantify the bird fauna. In this paper we will present only qualitative data. A paper is in preparation on the international importance of the area for waterfowl in which quantitative data will be presented.

Published observations have been noted separately, where they have not been confirmed by us recently. We only include observations which give specific reference to the area concerned. A description such as "occurs in the inundation area" (see Louette 1981) was not sufficient for inclusion in this list. However such birds have been included in Appendix 1, as have records which appeared somewhat questionable after comparing with other observations and the literature. Records of species having distributions otherwise only known far from the study area, and where closely similar and common species were not recorded, have been rejected, as were most unlikely species which were not noted as being of special interest (Appendix 2).

The taxonomy and sequence of species up to Grey-headed Batis follows *The Birds of Africa* (Brown *et al.* 1982, Urban *et al.* 1986, 1997, Fry *et al.* 1988, Keith *et al.* 1992). For the remainder of the passerines, taxonomy and sequence follow Louette (1981), with English names based on Serle & Morel (1977). Subspecies are only mentioned if more than one has been observed, and clearly identified.

Results

A total of 379 species has been observed in the Waza–Logone area (Lists 1 and 2). Twenty-six species seen only before 1980, the year after the construction of the Maga dam and embankments, can be found in List II. Another five species have not been observed with certainty (Appendix 1). Ten species mentioned in the literature have been rejected (Appendix 2). If we consider *Circaetus gallicus beaudouni, Aquila rapax belisarius* and *Falco peregrinus pelegrinoides* as full species, as at present proposed (see also Clark 1992), the total number of species observed in the Waza–Logone area would be 382. This list is still far from complete. Several species have

frequently been reported from neighbouring areas and will doubtlessly be found in the area in future. Species listed in Appendix 1 are also likely to be included in future.

For each species the status, abundance and locality of observations are given. The period of presence of migrants, and breeding periods, are given only when sufficient records are available. Previous information is given in brackets at the end of an account, if our observations differ from these.

For species recorded less than five times, no indication of status is given. For all other species the following categories are used: Res: resident whole year; Res?: probably resident; AM: intra-African migrant; PM: Palaeartic migrant. When Res? is used, it means that there is no local evidence in support, but experience and knowledge about the status of the species in surrounding regions would suggest it to be resident. When a species is quoted as "probably resident", we did not observe breeding, but it is known that it breeds in comparable neighbouring regions and it was observed throughout the year.

Localities are abbreviated as follows: Maga: Lake Maga and adjoining rice scheme; SF: southern floodplain; NF: northern floodplain; SNF: southern and northern floodplain; SP: southern sandy plain, south of Waza NP; WNP: Waza National Park; Logone: Logone and Loromé Mazra rivers; KNP: Kalamaloué National Park.

For all species an assesment of abundance has been made, following the system used in The Birds of Africa (Brown *et al.* 1982): VA (Very Abundant) >100 may be seen or heard in suitable habitat per day; A (Abundant) 11–100 may be seen or heard in suitable habitat per day; C (Common) 1–10 may be seen or heard in suitable habitat per day; F (Frequent) often seen but not every day; U (Uncommon) several records per year; R (Rare) one record per several years. The estimation applies to all the area units indicated, unless there is a large difference in abundance between the various parts of the area.

Observers other than the authors are only mentioned for striking observations: PE Pim Edelaar; AS Aat Schaftenaar; PS: Peter Spierenburg. L refers to Louette (1981). All other literature sources are quoted completely.

New observations are indicated before the species' name in superscript as follows (mainly based on L): [1] species not documented before for Cameroon; [2] species not documented before in Far North Province, Cameroon; [3] species recorded once before in (Far) North Cameroon or important range extension.

List 1. Birds observed in the Waza–Logone area from 1980 onwards

Struthionidae

Struthio camelus Ostrich. Res. C: WNP; U: SP, SF (up to 30 km from edge of WNP). Hen with three chicks, WNP, 15 Jun 1994; hen with one chick a few days old, WNP, 30 Mar 1996; two females and one male with three chicks, WNP, 14 Apr 1996, one

female with five chicks and one male plus one female with five chicks (size of guineafowl), WNP, 25 Apr 1997. We estimate the numbers of this last remaining "viable" population in Cameroon at no more than 100.

Podicipedidae

Tachybaptus ruficollis Little Grebe. Four, WNP, 11–28 Jun 1993 (AS). One adult in breeding plumage, SF, Jun 1994. [Two collected by L.]

Phalacrocoracidae

Phalacrocorax africanus Reed Cormorant. Res. A: Maga, floodplains, WNP, Logone, KNP. Large groups of adults and juveniles along the Logone, Dec. Breeding Andirni colony (see *Ardea melanocephala*), Aug 1997.

Anhingidae

[3]*Anhinga melanogaster* Darter. One observation, S edge of Waza–Logone area, 5 Jul 93 (AS). [One record (Vielliard 1971).]

Pelecanidae

Pelecanus onocrotalus White Pelican. Res? & PM. VA: SNF, WNP, Logone, KNP, Dec–Feb; F, Mar–Nov. No recent breeding evidence in Mandara Mts (Dragesco 1960, Mahé 1988, Scholte unpubl.) and it seems doubtful whether Mandara pelicans ever visited our study area, as they more likely depended on the nearby Nigerian Yedseram rivers system, as indicated by villagers interviewed in the Mandara Mts. In the 1980s Mandara pelican numbers were limited to an estimated 30 pairs (Mahé 1988), compared to the hundreds observed in our study area.

P. rufescens Pink-backed Pelican. Res? or migrant. F: Maga, SNF, Logone, KNP. Young about to leave colony in WNP, 30 Mar 96 (Fig. 2). [Contrary to L, not observed during rainy season, and characteristically present in dry season.]

Figure 2. Pink-backed Pelican, breeding in Waza NP, March 1996

Ardeidae

[3]*Botaurus stellaris* Eurasian Bittern. PM. Six records in SF, perhaps sometimes same individual: 30–31 Oct 1994, 14 Nov 1994, 10 Oct 1995, 21–27 Oct 1997. [One previous Waza record (Wetten & Spierenburg 1993). Only one other Cameroon record (L).]

Ixobrychus m. minutus Little Bittern. (*I.m. payesii* not recorded). PM. F: SF, Aug–Dec. [Earlier than mentioned by L.]

I. sturmii Dwarf Bittern. Four records SF: 16 Sep 1994, 18, 28, 30 Oct 1994. [First Cameroon records outside Jan–Jun (L), during which period we did not see it.]

Nycticorax nycticorax Black-crowned Night Heron. PM. A: SNP, WNP, KNP, Oct–Jun. In May and Jun only juveniles.

Ardeola ralloides Squacco Heron. Res, PM. VA: Jul–Nov; A: rest of year. Maga, SNF, WNP, Logone, KNP. Several in breeding plumage, Oct.

Bubulcus ibis Cattle Egret. Res. VA: entire area. Breeding Jun–Aug. At least 5 colonies in the area.

Butorides striatus Green Heron. Res. F: Maga, SNF, WNP, Logone, KNP. Two newly fledged young 18 Oct 1994. [Contrary to L, present throughout the year.]

Egretta ardesiaca Black Heron. Res? C: Maga, SNF, WNP, KNP, Aug–Feb. [Far more common than concluded by L.]

E. garzetta Little Egret. Res? & PM. A: entire area.

E. intermedia Intermediate Egret. Res. C: Maga, SNF, WNP, Logone, KNP. Breeding Andirni colony, Aug 1997 (cf. *Ardea melanocephala*).

E. alba Great Egret. Res? & PM. A: Nov; C: rest of year. Maga, SNF, Logone, WNP, KNP.

Ardea purpurea Purple Heron. PM. A: Sep–Oct, C: rest of year. Maga, SNF, WNP, KNP.

A. cinerea Grey Heron. Res? & PM. C: Maga, SNF, WNP, Logone, KNP.

A. melanocephala Black-headed Heron. Res. A: entire area. Colony of *c.* 2000 pairs near Andirni (Fig. 3; see Scholte *et al.* in press). Smaller colony in WNP. Breeding Jun–Sep.

A. goliath Goliath Heron. Five records. 10 May 1992 (KNP), 16 Jan 1993 (Maga) 24 Aug, 10 Sep and 2 Nov 1994 (SF). [All year round; cf. L.]

Scopidae

Scopus umbretta Hamerkop. Res. U: Maga, WNP; C: KNP. Breeding in KNP in *Tamarindus* woodland, 16 Feb 1992. Copulating KNP, 11 Apr 1993 [See also Vanpraet (1977). Now less common than mentioned by L and no longer in large concentrations as described by Dragesco (1961).]

Ciconiidae

Mycteria ibis Yellow-billed Stork. Res. C: Maga, SNF, WNP, Logone, KNP. Flocks up to 60. Breeding Feb–Apr (floodplain, WNP), nest building and mating 10 Oct 1995. [Observed throughout year, *contra* L.]

Figure 3. Black-headed Heron colony, Andirni, August 1997

Anastomus lamelligerus African Open-bill Stork. AM. C: Nov–Mar, A: Apr–Jun. Maga, SNF, WNP, Logone. Normally not present during inundation period (*pace* L), however nine observed on 1 Sep 1996 as well as several Oct 1997.
Ciconia abdimii Abdim's Stork. AM. F: entire area, Mar–Jun and Sep–Nov. Flocks up to 500 birds. No breeding observed.
C. episcopus Woolly-necked Stork. Res? C: SNF, WNP, Logone, KNP. Flocks up to 60.
C. ciconia White Stork. PM. F: Maga, SNF, WNP, Logone, KNP, Nov–Mar. Flocks up to 1000. Three immature birds near Maga, Jun 1994. [Not previously observed in "spring" period, L. For more detailed information see Mullié *et al.* (1995).]
[3]*C. nigra* Black Stork. PM. Four (including 2 juveniles), WNP, 16 Dec 1992 (PE), one WNP, Mar 1997 (J. Culverwell, pers. comm.). [Mentioned by Vanpraet (1977), but not by L, who predicted its presence based on observations in the Benoué valley in Nigeria.]
Ephippiorhynchus senegalensis Saddle-billed Stork. Res? F: SNF, WNP, Maga. Often in couples. Juveniles observed throughout the year. Surprisingly absent from KNP.
Leptoptilus crumeniferus Marabou Stork. Res. A: entire area. Colonies in towns such as Zina, Guirvidig and Pouss, on the NE edge of WNP and in Chad near KNP. Displaying in Oct, breeding Dec–Jan. [Breeding only from Feb according to L.]

Threskiornithidae

Plegadis falcinellus Glossy Ibis. PM. F: Maga, SNF, WNP, Logone, KNP, Sep–Jun. Flocks up to 500.

Bostrychia hagedash Hadada. Res? F-C: SNF, WNP, Logone, KNP. Absent from floodplain during inundation period. Display flight in wooded savanna of WNP, Jul 1994.

Threskiornis aethiopica Sacred Ibis. Res. C: Maga, SNF, WNP, Logone, KNP. Absent from floodplain during inundation period. One pair breeding in Andirni colony, Jul 1994 (see *Ardea melanocephala*).

[1]*Platalea leucorodia* Eurasian Spoonbill. PM. One adult present in SF, May–Jun 1994. [Observed near Lake Chad in Nigeria (L).]

P. alba African Spoonbill. Res? F: SNF, WNP, KNP, Oct–Jun. Flocks up to 320 birds.

Phoenicopteridae

[2]*Phoenicopterus ruber* Greater Flamingo. One bird in group of White Pelicans, SF, 6 Feb 1995. [Only in S Cameroon (Brown *et al.* 1982, L).]

Anatidae

Dendrocygna bicolor Fulvous Whistling-Duck. Res? F: Maga, SF, WNP, Logone, KNP.

D. viduata White-faced Whistling-Duck. Res. VA: Maga, SNF, WNP (see Fig. 4), Logone, KNP. Three immatures in SF, 16 Sep 1994, showing breeding during the rainy season. [L mentioned lack of accurate breeding data for Cameroon.]

Thalassornis leuconotus White-backed Duck. AM. Three in WNP, 7 Jul 1994.

Figure 4. White-faced Whistling-Duck, Waza, October 1997

Alopochen aegyptiacus Egyptian Goose. AM. Four in KNP throughout Feb 1996. Three ,SF, 30 Oct 1997. Surprisingly rare in the area compared to the Benoué valley. [Four birds on 21 Jan 1993 (Wetten & Spierenburg 1993); now possibly less common than before (see L).]
Plectropterus gambensis Spur-winged Goose. Res? A: Maga, SNF (see Fig. 5), WNP, Logone, KNP.

Figure 5. Spur-winged Goose, S Floodplain, 1996

Sarkidiornis melanotos Comb Duck. Res? A: Maga, SNF, WNP, Logone, KNP. Flocks up to 200.
Nettapus auritus African Pygmy Goose. Res? 60, two and five respectively 16 Jan 1993, 13 May 1993 and 4 Feb 95, Maga. SF: a pair, 26 Aug 1994; 10, 30 Oct 1997. [Collected at WNP (L), but not observed there lately.]
Anas acuta Northern Pintail. PM. F: SNF, WNP. Mainly present, Oct–Feb. Flocks up to 530. One WNP, 24 Apr 1994; one female SF, May–Jun 1994.
A. querquedula Garganey. PM. VA: Maga, SNF, WNP, Logone, KNP, Sep–Feb. 25 in the floodplain, May–Jun 1994. Flocks up to 15,000 in SF.
[1]*A. clypeata* Northern Shoveler. PM. F: SNF, WNP, KNP. [Occurrence unconfirmed (L).]

Pandionidae

Pandion haliaetus Osprey. PM. U: Maga, SNF, Logone. C: KNP, Sep–May. One on 29 Aug. 1994, probably a summering bird. On 16 Jan 1993 seven near Maga. [Almost certainly more than a passage migrant, *contra* L.]

Accipitridae

Pernis apivorus Honey Buzzard. PM. SF: 10, 16, 29 Oct 1994, 24 Nov 1994. NF: one, 2 Nov 1997. [Previously observed by Thiollay (1978) in WNP.]
[2]*Machaerhamphus alcinus* Bat Hawk. Res? Recorded in Zina town, 16 Oct 1994 and Zimado, 23 Feb 1995. Twice recorded near Waza town, 26 May 1993 (AS), 31 May 1996. One, Andirni, 2 Dec 1998. Probably overlooked in N Cameroon. [Only forest and well-wooded savanna zones (L).]

Elanus caeruleus Black-shouldered Kite. Res? F: SNF, WNP, KNP; A: WNP, rainy season. Pair displaying, 16 Jan 93 (PE). Absent from floodplain during inundation.
Chelictinia riocourii African Swallow-tailed Kite. AM. C: Nov-Jun, SNF, WNP, KNP. Group of 11, 1 Nov 1994.
Milvus migrans Black Kite. Res & PM. A: entire area.
Haliaeetus vocifer River Eagle. Res; F: SNF, WNP, Logone, KNP. One on nest, WNP, 16 Dec 1992 (PE).
Neophron percnopterus Egyptian Vulture. PM, AM. F: Nov-Mar, WNP, Logone, KNP. Breeding recorded near study area (Scholte in press). [More common than previously known (L).]
Necrosyrtes monachus Hooded Vulture. Res; A: entire area. Breeding Feb–Jun. (see Scholte in press).
Gyps africanus African White-backed Vulture. Res. A: entire area. Breeding period Jan–Apr (see Scholte in press).
G. rueppellii Rüppell's Griffon. Res. A: entire area. Nests with young on Waza rock, 15 Feb 93 (PE) in colony of 20–30 pairs; four pairs only in 1997 (see Scholte in press). [More common than previously known, (L).]
Aegypius tracheliotus Lappet-faced Vulture. Res. F: WNP, SNF, KNP (see Scholte in press).
A. occipitalis White-headed Vulture. Res. F: WNP, KNP. (see Scholte in press).
Circaetus gallicus European Snake Eagle. Res & PM. F: entire area, Oct–Apr. Nesting Dec–Feb in WNP. We have often not been able to distinguish the two races *gallicus* and *beaudouni* in the field (see also Elgood *et al.* 1994).
C. cinereus Brown Snake Eagle. Res?. F: SNF, WNP, KNP. [More common than previously known (L).]
C. cinerascens Smaller Banded Snake Eagle. Recorded twice in KNP, 16 Feb 1992, 20 Jun 1994. [Observed by Thiollay and Chappuis near Kousseri (quoted by L).]
Terathopius ecaudatus Bateleur. Res. F: entire area. Juveniles, Oct 1994.
Polyboroides typus African Harrier Hawk. Res? F: SNF, WNP, KNP.
Circus macrourus Pallid Harrier. PM. C: entire area, Nov–May. First arrival date 1994, 18 Sep.
C. pygargus Montagu's Harrier. PM. C: entire area, Oct–Apr. [Confirms L that at least as common as *C. macrourus*.]
C. aeruginosus Marsh Harrier. Res? & PM. C: entire area; A: during Palaearctic winter. [More common than suggested by L.]
Micronisus gabar Gabar Goshawk. Res? F: SNF, WNP; C: KNP. Melanistic form regularly recorded.
Melierax metabates Dark Chanting Goshawk. Res? C: entire area. Probably breeding during the inundation period (Aug–Nov).
Accipiter badius Shikra. Res? F: SNF, WNP; C: KNP.
Butastur rufipennis Grasshopper Buzzard. Res. C: entire area, but during the rainy season not recorded in the floodplains [*contra* L.]

Buteo rufinus Long-legged Buzzard. PM. One record, Maga, 5 Feb 1995. [Previous records by Thiollay (1978).]
Buteo auguralis African Red-tailed Buzzard. Res? U: SNF, WNP. C: KNP.
Aquila pomarina Lesser Spotted Eagle. PM. One record Maga, 14 Jun 1994. [Many observations in Feb and Apr 1973 (Thiollay 1978).]
A. rapax. A. r. belisarius Tawny Eagle. Res. C: SNF, WNP, KNP. Breeds WNP and KNP, Dec–Apr. *A. r. nipalensis* Steppe Eagle. PM. Two juveniles, 5 Feb 1993 (PE) and 28 May 1994. [Two observed in 1975 (Thiollay 1978).]
A. wahlbergi Wahlberg's Eagle. Res? U: SF, WNP.
Hieraaetus spilogaster African Hawk Eagle. One record, WNP, 26 Sep 1992. [Twice observed by Thiollay (1978).]
H. pennatus Booted Eagle. PM. U: Maga, SF, WNP, KNP, Oct–Feb. Once recorded during Palaearctic summer, 21 Jun 1994.
Lophaetus occipitalis Long-crested Eagle. Res? F: Maga, SNF, WNP, KNP.
Polemaetus bellicosus Martial Eagle. Res. U: SF, WNP, KNP.

Sagittariidae

Sagittarius serpentarius Secretary Bird. Res? F: WNP, KNP.

Falconidae

Falco naumanni Lesser Kestrel. PM. One, WNP, 5 Dec 1997. [One, Jan 1993 (Wetten & Spierenburg 1993). Regularly observed in 1975 by Thiollay (1978).]
F. tinnunculus Common Kestrel. PM, AM. U: SF, WNP. C: KNP. [More than 10 observed in WNP (Pettet 1976).]
F. alopex Fox kestrel. Res? F: WNP.
F. ardosiaceus Grey Kestrel. Recorded three times: Maga, 28 May 1994; WNP, 25 Feb 1995, 10 Nov 1997.
F. chicquera Red-necked Falcon. Res? C: Maga, SNF, WNP, KNP.
F. vespertinus Red-footed Falcon. PM. One record: SF, 28 Sep 1994. [WNP in Apr and once in Feb (L).]
[2]*F. cuvieri* African Hobby. One observation WNP, 28 Apr 1993 (AS). [Not observed before in savanna in Cameroon (L).]
F. biarmicus Lanner Falcon. Res? C: Maga, SNF, WNP, KNP.
F. peregrinus. F. p. peregrinus Peregrine Falcon. PM. U: WNP, SNF, Nov–Jan. *F. p. pelegrinoidus* Barbary Falcon. One KNP, 21 Jan 1993 (Wetten & Spierenburg 1993). [Not mentioned by L.]

Phasianidae

Numida meleagris Helmeted Guineafowl. Res. VA: SNF, WNP, KNP. Average densities in wooded habitats in WNP fluctuated between 38 and 215 birds/km^2 (H. Njifortii pers. comm.).
[1]*Coturnix coturnix* Common Quail. 15 at drinking pool WNP, evening 25 Mar 1993 (AS); six, 7 Feb 1995, flushed several times by moving car on E border of WNP. Identified by pale wings and call when flushed.
[3]*C. delegorguei* Harlequin Quail. Res? C: SF, WNP. [One previous Cameroon record (L).]

Francolinus clappertoni Clapperton's Francolin. Res? A: SNF, WNP, KNP.

Turnicidae

Ortyxelos meiffrenii Quail plover. Res? U: WNP.

[1]*Turnix sylvatica* African Button Quail. One record, 25 Mar 1993, WNP (AS). [No previous Cameroon observations but known from Chad and Nigeria (L)]

Rallidae

[2]*Crex egregia* African Crake. AM? F: SF, Oct–Dec.

[2]*C. crex* Corncrake. One recorded SF, 11 Oct 1994. [One record (L).]

[2]*Aenigmatolimnas marginalis* Striped Crake. Recorded SF, 16 Oct 1994. [Only recorded from forest zone (L).]

Amaurornis flavirostris Black Crake. Res? F–C: Maga, SNF, WNP, KNP.

Porphyrio alleni Allen's Gallinule. One recorded SF, 23 Aug 1994. [Mentioned by Vanpraet (1977) for WNP.]

[1]*P. porphyrio* Purple Swamphen. 25 Lake Maga, Jan 1997. [Not recorded Cameroon, although observed around Lake Chad in Nigeria (L), see also Elgood *et al.* 1994.]

Gallinula chloropus Moorhen. One recorded WNP, 24 Nov 1992 (PE), two at Maga, Jan 1996, five at Maga, Jan. 1997 [Recorded by Dragesco (1961) and Fry (1970) and collected (L).]

G. angulata Lesser Moorhen. Recorded three times SF, 12 Oct 1994, 27 Nov 1997 and 5 Dec 1997 (Andirni). Also observed WNP (AS).

Gruidae

Balearica pavonina Crowned Crane. Res. A: Maga, SNF, WNP, Logone, KNP. Breeding starts Aug. Nest with chick and egg in water 50 cm deep, Oct 1995 (see Scholte 1996).

Otidae

Neotis denhami Denham's Bustard. AM. U: SP,SF, WNP, Jun–Jul. One male, WNP, 21 Nov 1998.

[1]*Neotis nuba* Nubian Bustard. One male WNP, early May 1998. [Praed & Grant 1970 erroneously mention it from Cameroon (L); once observed Nigeria (Elgood *et al* 1994), rather rare S Chad (Salvan 1968), one observed Apr 1992 in Chad, 20 km east of Zimado, pers. obs.]

Ardeotis arabs Arabian Bustard. Res. C: SF, WNP; once recorded KNP, 27 Mar 1996. Displaying Apr–May. Breeding starts after the first rains at end of May. A hen with one chick, 29 Jun 1994 and a hen with three chicks, 15 Jul 1994.

[1]*Eupodotis ruficrista* Crested Bustard. One male on road in wooded savanna WNP, 18 Sep 1994. In floodplain zone of WNP, one 2 Nov 1995 and one female on 26 Feb 1996. [Present in Nigeria and Chad.]

E. senegalensis White-bellied Bustard. Res? U: SNF, WNP. Calling Nov–Jan.

E. melanogaster Black-bellied Bustard. Res? F: SNF, WNP. Display near Zina, 20 Jul 1994.

Jacanidae

Actophilornis africana African Jacana. Res. A: Maga, SNF, WNP, Logone, KNP. A fledgling, Maga, 4 Feb 1995; male with chicks, Andirni, 21 Nov 1998.

Microparra capensis Lesser Jacana. Res? U: Maga, Feb 1995, Jan 1997; SF in May, Jun 1994, Nov 1996 and Oct 1997. [Two records in N Cameroon (L).]

Rostratulidae

Rostratula benghalensis Painted Snipe. AM. F: SNF, Oct–Jul. [Collected WNP, 1970 (L).]

Recurvirostridae

Himantopus himantopus Black-winged Stilt. PM, Res? A: SNF, WNP, Maga. Numbers increase from Sep to Apr.

Recurvirostra avosetta Eurasian Avocet. R: One KNP, 12 Apr 1992; four, Logone 25 Jan 1996. [Once observed by Dragesco (1961), also mentioned by Vanpraet (1977).]

Burhinidae

Burhinus senegalensis Senegal Thick-knee. Res? F: SNF, WNP, KNP.

B. capensis Spotted Thick-knee. Res? U: SNF, WNP.

Glareolidae

Pluvianus aegyptius Egyptian Plover. Res? A: Maga, SNF, WNP, Logone, KNP. During rainy season also on higher ground.

Cursorius chalcopterus Bronze-wing Courser. Three records in WNP (AS): two, 4 Apr 1993; two, 25 May 1993; one, 10 Jun 1993. [Mentioned for inundation area by L, possibly as transit migrant.]

Glareola pratincola Common Pratincole. PM, Res. Maga, SNF, WNP: VA Nov–May, F Jun–Oct. Breeding Feb 1995.

G. cinerea Grey Pratincole. Three on bank of the Logone, 18 Jul 1994.

Charadriidae

Charadrius dubius Little Ringed Plover. PM. C: SNF, Logone, KNP, Nov–Feb.

C. hiaticula Ringed Plover. PM. C: SNF, Logone, KNP, Oct–Feb. [More common in N Cameroon than suggested by L.]

C. pecuarius Kittlitz's Sand-Plover. Res? F: SNF, Logone.

C. alexandrinus Kentish plover. Three SF, 22 Nov 1992 (PE).

Vanellus senegallus African Wattled Plover. Res? C: SNF, WNP, Logone, KNP.

V. albiceps White-headed Lapwing. Four records: KNP, 14 Nov 1992; SF, 19 Jan 1993 (PE), 12 and 30 Aug 1994.

V. tectus Black-headed Lapwing. Res. A: entire area, especially in denuded areas (locally called "hardé"). On nest under shrub, 3 m from sleeping lions in WNP, 24 Apr 1994.

V. spinosus Spur-winged Plover. Res. A: SNF, WNP, Logone, Maga. Chicks Feb 1995, May and Sep 1994.

[3]*V. lugubris* Senegal Plover. Two records SF, 18 and 20 Jul 1994, possibly same bird. [Not mentioned by L, although Vanpraet (1977) mentioned it for WNP.]

V. crassirostris Long-toed Lapwing. U: SF, Aug-Dec 1994, one 30 Oct 1997. Maga: three, 1 Apr 1994; 15 couples, 4 Feb 1995; 40 in Jan 1996. Logone: two, 1 Apr 1994. [Two previous records; a straggler (L).]

Scolopacidae

Calidris minuta Little Stint. PM. F: SNF, Logone, KNP, Nov–Apr.

[3]*C. temminckii* Temminck's Stint. One, SF, 24 Sep 1994. [Collected once in Cameroon: WNP, Dec 1970 (L).]
C. ferruginea Curlew Sandpiper. Three records: Maga, 24 Jan 1993 (PE), 6 Oct 1994; SF, 1 Nov 1994. [Only in "autumn" (L).]
C. alpina Dunlin. Twice recorded on 20 Feb 1992 by Robertson (1993). [Mentioned by Dragesco (1961), considered an error by L.]
Philomachus pugnax Ruff. PM. VA: Maga, SNF, Logone, WNP, KNP, Oct–Apr. Also present in small numbers May–Sep. [For more details see OAG Münster (1991).]
[2]*Lymnocryptes minimus* Jack Snipe. Recorded SF: one 1 and 5 Nov 1994; one, 9 Oct 1995. [Common in Chad (L).]
Gallinago gallinago Common Snipe. PM. F: SF, KNP, Oct–Feb, one in WNP May 1975 (pers.comm. A.Green) [Not recorded in Palaearctic winter (L).]
G. media Great Snipe. PM. U: SF, Oct–Feb. [Not recorded in Palaearctic winter (L).]
Limosa limosa Black-tailed Godwit. PM. C: SNF, WNP, KNP, Oct–Feb (Mar). F: Apr–Sep.
Numenius arquata Eurasian Curlew. PM. U (*c.* 10 records): SNF KNP, Nov–Feb. [Not mentioned by L; see Dragesco (1961), Robertson (1993).]
Tringa erythropus Spotted Redshank. Seven records: 60, SF, 5 Apr 1991 (PS); one, SF, 15 Jul 1994; one, SF, 7 Feb 1995; 60, SF, 9 Oct 1995; two, WNP, 30 Jan 1997; one, SF, 24 Nov 1997; one, SF, 5 Dec 1997.
T. totanus Common Redshank. PM. U: SNF, WNP, KNP, Oct–Feb.
T. stagnatilis Marsh Sandpiper. PM & Res? C: SNF, WNP, Nov–Apr, F: May–Oct. [More common than suggested by L.]
T. nebularia Common Greenshank. PM. C: Maga, SNF, WNP, KNP, Oct–Apr. F: May–Sep.
T. ochropus Green Sandpiper. PM. C: Maga, SNF, WNP, Logone, KNP, Nov–Apr. F: May–Oct.
T. glareola Wood Sandpiper. PM, Res? A: SNF, WNP, KNP, Sept–May. C: Jun–Aug.
Actitis hypoleucos Common Sandpiper. PM, Res? C: SNF, WNP, Logone, throughout year. [Normally not wintering in N Cameroon (L).]

Laridae

Larus cirrocephalus Grey-headed Gull. Res. A: Maga, SNF, WNP, Logone, KNP.
[3]*L. ridibundus* Black-headed Gull. PM. U: Maga, NF, KNP, 17 Jan 1993 (PE), 23 Mar 1993, 12 Aug 1994. [Two, 20 Feb 1992, (Robertson 1993); not recorded (L).]
[2]*L. fuscus* Lesser Black-backed Gull. PM. U: Logone, Maga, Dec–Feb. Group of 31 along Logone, 5 Feb 1995.
Gelochelidon nilotica Gull-billed Tern. C: Maga, SNF, Logone, KNP, Nov–Apr. [Few records (L).]
[2]*Sterna caspia* Caspian Tern. R: Logone, KNP. Two 17 Jan 1993, five, 5 Feb 1995.
[2]*S. hirundo* Common Tern. PM. U: SF, Logone, KNP, Nov–Jan. [Only coast (L).]
S. albifrons Little Tern. PM. C: SNF, Logone, KNP, throughout year.

[1]*Chlidonias hybridus* Whiskered Tern. PM. F: SF, Oct–Nov.
[3]*C. nigra* Black Tern. PM. A group of 20 SF, 21 Oct 1994. [Reaches Chari according to Bannerman (1931), but this contested by Vielliard (1971).]
C. leucoptera White-winged Black Tern. PM. C: Maga, SNF, WNP, Logone, KNP, Sep–Jan. Present in smaller numbers Jun-Aug. [L suspected its presence all year.]

Pteroclidae

Pterocles exustus Chestnut-bellied Sandgrouse. Res? F: SNF, WNP, KNP. Pair with small chicks, WNP, Apr 1998. [More common than indicated by L.]
P. quadricinctus Four-banded Sandgrouse. Res. A: SNF, WNP, KNP, dry season; F: rainy season. Pair with chick, WNP, 16 Apr 1996. [Breeding only till January in Benoué area (L)]

Columbidae

Treron waalia Bruce's Green Pigeon. Res? C: SP. [Collected WNP, Dec 1970 (L); see also Holmes (1972).]
Turtur abyssinicus Black-billed Wood-dove. Res. C: Maga, SNF, WNP, KNP.
Oena capensis Namaqua Dove. Res. VA: entire area. Nest with two eggs, 28 Nov 1992 (PE).
Columba guinea Speckled Pigeon. Res. A: entire area. Breeding Apr–Aug.
Streptopelia decipiens Mourning Dove. Res. A: entire area. Breeding mainly Feb–Aug but nest-building also in Nov 1997.
S. vinacea Vinaceous Dove. Res. A: entire area. Mainly breeding Feb–Aug, but nest with eggs, WNP, 29 Oct 1993.
S. roseogrisea African Collared Dove. Res? F: SNF, WNP.
S. turtur European Turtle Dove. PM. A: WNP, Nov, Dec and Feb. [According to Pettet (1976), passage in Oct–Nov and Feb–Mar, Fry (1970) estimated that more than 60,000 passed through the study area, a large proportion of the W Palaearctic population.]
S. senegalensis Laughing Dove. Res? C: entire area.

Psittacidae

Poicephalus senegalus Senegal Parrot. Recorded twice: one, KNP, 23 Feb 1992; five, WNP, 4 Jun 1996. [Expected, but not confirmed WNP (L).]
Psittacula krameri Rose-ringed Parakeet. Res? C: KNP, WNP. Recorded once near Zimado, 24 Feb 1995. [Mentioned for WNP by Broadbent (1971).]

Musophagidae

Crinifer piscator Western Grey Plantain-eater. Res. C: in KNP. Recorded WNP, 18 Sep 1994. [Mentioned by Vanpraet (1977). Collecting twigs in Aug 1975 in KNP (Kavanagh 1977).]

Cuculidae

Oxylophus jacobinus. O. j. serratus Black Crested Cuckoo. Recorded twice in SF, 22 Sep 1994, 16 Oct 1994. [No proof of occurrence (L).] *O. j. pica* Black and White Cuckoo. AM. C: entire area, Jul–Dec. Seen being chased by *Ploceus melanocephalus*, Sep 1994.

O. levaillantii Levaillant's Cuckoo. One, WNP, 29 Oct 1993, 9 Aug 1994; one, NF, 23 Jun 1994.
Clamator glandarius Great Spotted Cuckoo. PM, AM. U: SNF, WNP. F: KNP.
[2]*Cuculus clamosus* Black Cuckoo. One, WNP, 19 Jan 1996.
C. canorus Common Cuckoo. PM. U: WNP: 31 Mar 1993, 17 Apr 1993 (AS).
C. gularis African Cuckoo. Res? F: Maga, WNP, KNP.
C. klaas Klaas's Cuckoo. AM. R: WNP, Mar 1993 (AS).
Chrysococcyx caprius Diederik Cuckoo. AM. C: SF, WNP, Jun–Nov. A chick hosted by *Ploceus luteolus*, 29 Oct 1994.
Centropus senegalensis Senegal Coucal. Res? C: entire area.

Strigidae

Tyto alba Barn Owl. Res. F: entire area.
Otus scops Common Scops Owl. Res? F: SF, KNP.
O. leucotis White-faced Scops Owl. Res? U: WNP. [Mentioned by Vanpraet (1977).]
Bubo africanus Spotted Eagle-Owl. Res. U: SNF, WNP, KNP. Nest with two eggs, Zina, Feb 1995. Downy young, WNP, 9 Apr 1996.
B. lacteus Verreaux's Eagle-Owl. KNP in *Tamarindus indicus* woodland: pair, 14 Mar 1993 and 17 Apr 1993; one with *B. africanus*, 20 May 1996. One on bridge near Pété, 2 Dec 1998. [Observed Jul 1975 (Kavanagh 1977).]
Asio capensis African Marsh Owl. AM. U: SF, one, Apr–May 1994, 9 Oct 1995; WNP, one, Oct 1997.

Caprimulgidae

Caprimulgus climacurus Long-tailed Nightjar. Res? C: entire area. Observed all months but especially common during rainy and flood season. [Only in rainy season (L).]
C. inornatus Plain Nightjar. Res? Three observations. KNP: one, 7 Dec 1991; one, 15 Nov 1994. WNP: 26 Nov 1997.
Macrodipteryx longipennis Standard-winged Nightjar. Res? U: WNP, KNP. [KNP: mentioned by Kavanagh (1977), collected Dec 1970 (L). Mentioned by Vanpraet (1977).]

Apodidae

Cypsiurus parvus African Palm Swift. Res. VA: WNP, SNF. A: elsewhere. Breeding throughout the year.
[1]*Apus pallidus* Pallid Swift. Ten, WNP, 8 Jun 1993 (AS).
A. apus European Swift. Recorded twice WNP, 14 May 1994, and in 1993 (AS). [Previously recorded Dec–Apr (L).]
[2]*A. caffer* White-rumped Swift. SF: 9 Jun 1993 (AS) and 21 Jul 1994. [Only once observed in Cameroon, at Ngaoundéré (L).]
A. affinis Little Swift. Res. VA: SNF, WNP, Maga. Breeding Jun–Dec.
[2]*Tachymarptis aequatorialis* Mottled Swift. One, WNP, 9 Jun 1993 (AS).
[2]*T. melba* Alpine Swift. Two, WNP, 8 Jun 1993 (AS); group of *c.* 100 drinking at waterhole, SP, 21 Dec 1997. [Only recorded in S Cameroon (Rodewald *et al.* 1994); not mentioned by L] .

Coliidae
Urocolius macrourus Blue-naped Mousebird. Res? C: entire area.
Alcedinidae
Halcyon leucocephala Grey-headed Kingfisher. Res. C: entire area. One nest in bank of the Logomatya river, late Jul 1994.
H. senegalensis Woodland Kingfisher. AM. C: entire area, May–Dec. One nest in a tree, Jul 1994.
H. chelicuti Striped Kingfisher. Res? U: SF, Jul–Sep.
Ceyx picta Pygmy Kingfisher. AM. R: WNP, Mar–Apr 1993 (AS). [Collected WNP, Dec 1970 (L).]
Corythornis cristata Malachite Kingfisher. Res? F: SNF, WNP, Logone; C: KNP. [Observed throughout the year, *contra* L.]
Megaceryle maxima Giant Kingfisher. Res? F: KNP. [Observed 1958 along Logone (Dragesco 1961).]
Ceryle rudis Pied Kingfisher. Res. A: Maga, SNF, Logone, KNP; F: WNP Breeding Jun–Aug.
Meropidae
Merops pusillus Little Bee-eater. Res? A: Maga, SNF, WNP, Logone, KNP.
M. bullocki Red-throated Bee-eater. Res? C: KNP. [WNP (Vanpraet 1977).]
M. albicollis White-throated Bee-eater. Res. F: WNP, KNP. One breeding colony near Andirni, late Jun 1994.
M. orientalis Little Green Bee-eater. Res? F: SNF, WNP, KNP.
M. persicus Blue-cheeked Bee-eater. One observation: 25 at Zina, 28 May 1994.
M. nubicus Carmine Bee-eater. Res. A: SNF, WNP, KNP. KNP: two colonies with *c.* 100 and 400 individuals, 1992; three colonies along (dry) riverbanks, Apr 1993 (Fig. 6). Especially common around bushfires.
Coraciidae
Coracias abyssinica Abyssinian Roller. Res? A: entire area.
Eurystomus glaucurus Broad-billed Roller. One record, WNP, 8 Aug 1993.
Upupidae
Phoeniculus purpureus Green Wood-Hoopoe. Res? C: WNP, KNP.
P. aterrimus Black Wood-Hoopoe. Res? F: WNP, KNP.
Upupa epops Hoopoe. *U. e. senegalensis*. Res? C: WNP, SP, SNF, KNP. *U. e. epops*. PM. U: WNP. Several observations May–Jun 1994.
Bucerotidae
Bucorvus abyssinicus Abyssinian Ground Hornbill. Res? F: Maga, WNP. Less cómmon than in Benoué valley (pers. obs).
Tockus erythrorhynchus Red-billed Hornbill. Res? C: entire area.
T. nasutus African Grey Hornbill. Res? C: entire area.
Capitonidae
Pogoniulus chrysoconus Yellow-fronted Tinkerbird. Res? U: WNP [Collected L.]
Lybius vieilloti Vieillot's Barbet. Res? C: entire area.

Figure 6. Carmine Bee-eater, Kalamaloué NP, April 1993

L. guifsobalito Black-billed Barbet. R: WNP [Recorded once, WNP, 11 Feb 1993 (Beirs 1997).]

Indicatoridae

Indicator indicator Greater Honeyguide. Recorded once, WNP, 13 Feb 1995. [Less common than described by L.]

Picidae

Campethera punctuligera Fine-spotted Woodpecker. Res? U: WNP, SNF, KNP.

Dendropicos elachus Little Grey Woodpecker. One, SF 24 Feb 1995. [WNP (Greling 1972b).]

[2]*D. fuscescens* Cardinal Woodpecker. Recorded once, KNP, 11 Apr 1993.

D. goertae Grey Woodpecker. Res? F: entire area.

[2]*Picoides obsoletus* Brown-backed Woodpecker. Res? U: SF, WNP.

Alaudidae

Mirafra rufocinnamomea Flappet Lark. Recorded once, SF, 12 Dec 1994.

Galerida cristata Crested Lark. Res? C: SNF, WNP.

Eremopterix leucotis Chestnut-backed Sparrow-lark. AM. VA: entire area, Nov–Jun.

Hirundinidae

Riparia paludicola Brown-throated Sand Martin. AM. F: SF, May–Feb.

R. riparia Sand Martin. PM. U: SNF, WNP, May–Jun. [Considerable numbers Dec (Pettet 1976).]
R. cincta Banded Martin. AM. SF: 20, 14 Jun 1994; SP, hundreds, 22–27 Nov 1997.
Hirundo semirufa Rufous-breasted Swallow. One observation, WNP, 14 Jun 1993 (AS).
[2]*H. senegalensis* Mosque Swallow. Maga, 12 Aug 1994; WNP, 7 May 1998.
H. daurica Red-rumped Swallow. PM. U: WNP, KNP, Nov–Apr.
[2]*H. smithii* Wire-tailed Swallow. Observed once, WNP, 18 May 1994.
H. aethiopica Ethiopian Swallow. Res. VA: Maga, SNF, WNP, KNP. Breeding Jun–Dec.
H. rustica Barn Swallow. PM. C: SNF, Oct–Feb, first arrival date in 1994, 9 Oct.
Delichon urbica Common House Martin. PM. U: Maga, WNP. Only record: several WNP, 13 May 1993. [Common at Maga, 1991 (OAG Münster 1991).]

Motacillidae

Motacilla flava Yellow Wagtail. PM. A: Maga, SNF, WNP, Logone, KNP, Oct–Apr. First arrival date in 1994, 5 Oct. Sspp. *thunbergi, flava* (Greling 1972, L) and *feldegg* observed. ["Tens of thousands" in rice field at Maga (OAG 1991).]
M. alba White Wagtail. PM. U: SNF, WNP, Nov–Feb. [Rare (L).]
[2]*Anthus novaeseelandiae* Richard's Pipit. AM. C: SNF, Dec–Jun. [Restricted to montane district (L).]
[1]*A. campestris* Tawny Pipit. SF, group of five, 18 Oct 1994. [Not mentioned for Cameroon (L), but area included in map of Keith *et al.* (1992).]
[2]*A. trivialis* Tree Pipit. PM. R: WNP. Only a few observations, Apr 1994.
A. cervinus Red-throated Pipit. PM. F: SF, WNP, Oct–Apr. Earliest in 1994: 1 Oct.
Macronyx croceus Yellow-throated Longclaw. One observation WNP, 9 Dec 1995. [Mentioned by Vanpraet (1977).]

Campephagidae

Campephaga phoenicea Red-shouldered Cuckoo-shrike. Couple, WNP, 23 Jun 1994. [Less common than indicated by L.]

Pycnonotidae

Pycnonotus barbatus Common Bulbul. Res. A: entire area. Restricted to human settlements.

Turdidae

Luscinia megarhynchos Nightingale. PM. R: SF 26 Mar 1993; NF 14 Feb 1995.
Cercotrichas galactotes Rufous Scrub-Robin. Res? F: SNF, WNP.
C. podobe Black Scrub-Robin. Res? F: SNF, WNP, KNP.
Phoenicurus phoenicurus Common Redstart. PM. U: SNF, KNP, Oct–Feb. Earliest in 1994: 18 Oct.
Saxicola rubetra Whinchat. PM. A: SNF, KNP. Observed Nov–Apr. Earliest in 1994: 15 Sep.
Oenanthe oenanthe Northern Wheatear. PM. C: SNF, WNP, KNP, Nov–Jun. Earliest in 1994: 1 Nov.
[3]*O. hispanica* Spanish Wheatear. R: Maga, WNP, 3 Mar 1996 [No Cameroon records (L), but included on map in Keith *et al.* 1992. One observation Maga (OAG Münster 1991).]

O. bottae Red-breasted Wheatear. Res. U: SNF, WNP. Breeding starts Apr (PS).
[1]*O. isabellina* Isabelline Wheatear. PM. U: WNP, Feb–Apr. [Not mentioned for Cameroon (L).]
Myrmecocichla aethiops Northern Anteater Chat. Res? F: Maga, SP; U: WNP. [Three collected in 1971–2 (L).]
M. solitaria Blue Rock-Trush. Only observation WNP, 25 Feb 1993 (AS). [Several Nov–Mar (Greling 1972b); possibly regular (L).]

Sylviidae

Acrocephalus schoenobaenus Sedge Warbler. PM. VA: SF, Oct–Dec 1994.
A. scirpaceus Reed Warbler. PM. F: SF, Nov–Dec 1994. Earliest in 1994: 16 Nov.
A. arundinaceus Great Reed Warbler. Three records SF: one, 13 Oct 1994; eight, 16 Nov 1994; two, 12 Oct 1995. [Recorded by Vanpraet (1977).]
[2]*A. rufescens* Greater Swamp Warbler. Res? F: SF. [Presence Cameroon side of Lake Chad, predicted by L, is hereby confirmed.]
Hippolais pallida laeneni Olivaceous Warbler. Res? A: SF, WNP. *H. p. opaca* not observed with certainty.
H. polyglotta Melodious Warbler. PM. Recorded once, SF, 22 Sep 1994.
Cisticola galactotes Winding Cisticola. Res. A: SF.
C. ruficeps Red-pate Cisticola. Res? C: SF. Rufous nape and mottled back; often heard singing. No indication of *C. dorsti*, which occurs nearby, though in different montane habitat (Urban *et al.* 1997).
C. brachypterus Shortwing Cisticola. Recorded once, singing in grassy area bordering wooded savanna, SF, 14 Oct 1994. [Mentioned by Greling (1972a). L doubted its presence and attributed Greling's observation to *C. rufa*.]
C. juncidis Fan-tailed Cisticola. Res. VA: SF, WNP. Breeding Jul–Dec 1994.
Prinia subflava Tawny-flanked Prinia. Res. VA: SF, WNP. Breeding Jul–Dec 1994. Found in virtually all habitat types in the region. Identification mainly based on song. We have not observed River Prinia *P. fluviatilis*, although it occurs nearby (Urban *et al.* 1997).
Camaroptera brachyura Bleating Warbler. Res? F: WNP.
Eremomela pusilla Senegal Eremomela. Res? U: WNP.
Sylvietta brachyura Northern Crombec. Res. F: SF, WNP. Juveniles, Feb 1993 (PE).
Phylloscopus trochilus Willow Warbler. PM. C: SF, WNP, Sep–Dec. Earliest in 1994: 17 Sep. [Only on passage in N Cameroon (L).]
[3]*P. collybita* Chiffchaff. Recorded once, singing male in tree next to waterhole, WNP, 14 Oct 1994. [One previous Cameroon record, WNP (Pettet 1976).]
P. sibilatrix Wood Warbler. PM. C: SF, WNP, Sep–Dec. Earliest in 1994: 17 Sep.
P. bonelli Bonelli's Warbler. PM. U: WNP, Nov–Apr.
Sylvia borin Garden Warbler. PM. U: WNP, Feb–Apr. [Not common (L).]
[3]*S. atricapilla* Blackcap. One male, WNP, 9 Mar 1993 (AS). [One Cameroon record (L).]
S. communis Common Whitethroat. PM. U: SF, WNP. [Common in the north (L).]
S. curruca Lesser Whitethroat. PM. U: WNP, Nov–Apr.

S. cantillans Subalpine Warbler. PM. U: WNP, Dec–Mar.
Hyliota flavigaster Yellow-bellied Hyliota. Recorded once, SP, one male, first week Apr 1998.

Muscicapidae

Melaenornis pallidus Pale Flycatcher. Recorded once, SF, 16 Oct 1994.
Muscicapa striata Spotted Flycatcher. PM. F: SF, Sep–Feb. Earliest in 1994: 22 Sep.
M. aquatica Swamp Flycatcher. Res? U: SF.
Ficedula hypoleuca European Pied Flycatcher. One female, SF, 10 Oct to 7 Nov 1994. [Observed WNP by Greling (1972a).]

Monarchidae

Terpsiphone viridis Paradise Flycatcher. Res? U: Maga, WNP, KNP. Normally brown-red phase, only once one pair of white phase, WNP, 8 Aug 1993. [Further south the white phase seems to be more common, confirming L.]

Platysteiridae

Batis orientalis Grey-headed Batis. One, KNP, 15 Nov 1992. [Earlier collected in Logone Birni; said to be allopatric with *B. senegalensis* (L).]

Laniidae

Nilaus afer Brubru Shrike. Res? U: SNF, WNP. [Recorded WNP (Greling 1972a, Vanpraet 1977), collected WNP (L).]
Tchagra senegala Black-crowned Tchagra. Res? F: SNF; C: KNP.
Laniarius barbarus Barbary Shrike. Res? U: WNP. [See next species.]
L. erythrogaster Black-headed Barbary Shrike. Res? F: SNF; A: KNP. [L suggested that it replaces *L. barbarus* from the inundation area southward and eastward. Our observations confirm this.]
Lanius collurio Red-backed Shrike. Recorded twice in SF: 13 and 16 Oct 1994.
L. isabellinus Isabelline Shrike. PM. F: SNF, Oct–Mar. Earliest in 1994: 10 Oct.
L. minor Lesser Grey Shrike. Recorded once SF, 14 Oct 1994. [Mentioned for WNP by Greling (1972b), not regular *pace* L.]
L. excubitor Great Grey Shrike. Res? F: entire area. Juvenile, Sep 1994. [More common than indicated by L.]
L. excubitorius Grey-backed Shrike. U. SF, several, 30 Nov 1997.
[2]*L. collaris* Fiscal Shrike. Two observations: KNP, 25 Oct 1992; Maga, 13 Oct 1995.
L. senator Woodchat Shrike. PM. Recorded twice: WNP, 28 Feb 1995; NF, 28 Jan 1996.
L. nubicus Masked Shrike. Recorded SNF: 18 Feb to 26 Mar 1993 (AS); 24 Sep 1994; 26 Feb 1995; 8 Jan 1998. [Observed in WNP by Greling (1972b), not regular *pace* L.]

Timaliidae

Turdoides plebejus Brown Babbler. Res? F: SP. U: WNP. Several, 3 Mar 1996. Also observed 1992 (PE). [Recorded by Fry (1970).]

Remizidae

Remiz punctifrons Sudan Penduline tit. Res? F: WNP.

Nectariniidae

Anthreptes platura Pygmy Long-tailed Sunbird. Res? C: WNP, KNP.

Nectarinia senegalensis Scarlet-breasted Sunbird. Res? U: WNP. [Three collected WNP (L).]

N. pulchella Beautiful Long-tailed Sunbird. Res? C: Maga, SNF, WNP, KNP.

Zosteropidae

Zosterops senegalensis Yellow White-Eye. Res? F: WNP.

Emberizidae

Emberiza tahapisi Rock Bunting. Res? F: SF, WNP.

Fringillidae

Serinus leucopygius Grey Canary. Res. C: SF, WNP. Breeding Sep 1994.

Estrildidae

Amadina fasciata Cut-throat Weaver. Res? U: SNF, WNP. [Common in the inundation area (L).]

Pytilia melba Melba Finch. Res? U: SNF, WNP. Several in Waza town, 2 Nov 1995. [Mentioned by Greling (1972a); ten collected WNP (L).]

Estrilda troglodytes Black-rumped Waxbill. Res? C: SNF, Maga. [Collected WNP (L).]

E. caerulescens Lavender Fire-Finch. Res? F: SNF.

E. bengala Red-cheeked Cordon-blue. Res. A: entire area.

Lagonosticta senegala Senegal Fire Finch. Res. A: entire area.

[2]*Amandava subflava* Zebra Waxbill Res? F: SNF.

Ortygospiza atricollis Quail-Finch. Res? U: SF, WNP. [Observed in WNP (Greling 1972a).]

Lonchura malabarica Warbling Silverbill. Res. A: entire area. Breeding Aug–Nov 1994 (–Feb 1995). Concentrations of hundreds around water holes at the end of the dry season.

L. cucullata Bronze Mannikin. One Maga, 17 Apr 1994. [Not in N Cameroon (L). Collected by Greling (1972b) in Logone Birni.]

Ploceidae

Ploceus luteolus Slender-billed Weaver. Res. C: SNF.

P. velatus Vitelline Masked Weaver. Res. C: entire area. [Further north than suggested by Hall & Moreau (1970), confirming L.]

P. heuglini Heuglin's Masked Weaver. Group of 15, SF, 24 Sep 1994.

P. cucullatus Village Weaver. Res. VA entire area.

P. melanocephalus Black-headed Weaver. Res. VA: Maga, SNF, KNP. Breeding in reedbeds along Logomatya, Sep–Oct. [Collected WNP, 1970 and 1972 (L).]

Quelea quelea Black-faced Dioch. Res. VA: entire area. The largest numbrs observed in the floodplain coincided with the ripening of seeds of *Echinochloa pyramidalis* and *Sorghum arundinaceum*. Thousands gather during the ripening of dry season crops (sorghum, rice) and towards the end of the dry season around waterholes in WNP and KNP.

Euplectes afer Yellow-crowned Bishop. Res. VA: entire area. Breeding plumage appeared in Jul 1994.

[2]*E. axillaris* Red-shouldered Whydah. Res. A: SNF. Breeding plumage appeared end Jun, 1994. [Not in N Cameroon, but in similar habitats in neighbouring countries (L).]
[2]*E. macrourus* Yellow-mantled Whydah. R: KNP, several observed 30 Jul 1994.
E. orix Red Bishop. Res. VA: entire area. Breeding plumage appeared end of Jun, 1994.
Bubalornis albirostris Buffalo Weaver. Res. A: entire area.
Plocepasser superciliosus Sparrow-weaver. Res? U: WNP. [Rather frequent (Dragesco (1961).]
Passer griseus Grey-headed Sparrow. Res. A: entire area.
P. luteus Golden Sparrow. AM. U: in KNP: 23 Feb 1992 (hundreds); 17 May 1992 (several with *P. melanocephalus*); 8 Nov 1992 (one male, seven females/juveniles); 14 Nov 1992 (several). [Mentioned by Greling (1972b) for WNP.]
Petronia dentata Bush Sparrow. Res? U: SF, WNP. [Breeding in WNP (Pettet 1976).]
Sporopipes frontalis Scaly-fronted Weaver. Res. C: SF, WNP. Nest in SF, 27 Oct 1994.
Vidua macroura Pin-tailed Whydah. Res. F: entire area. Male displaying, Jul 1994 [Not in WNP according to L, , although mentioned as rather common by Dragesco (1961).]
V. chalybeata Senegal Indigobird. Res? C: entire area.
V. orientalis Broad-tailed Paradise Whydah. Res. F: entire area. Breeding plumage and display appeared Sep 1994 and observed Feb 1995.

Sturnidae

Lamprotornis purpureus Purple Glossy Starling. Res? C: entire area.
L. chalybaeus Greater Blue-eared Glossy Starling. Res? C: entire area.
L. caudatus Long-tailed Glossy Starling. Res. A: entire area.
Cinnyricinclus leucogaster Amethyst Starling. Several juveniles/females, KNP, 14 Nov 1992.
Spreo pulcher Chestnut-bellied Starling. Res. A: SP; C: elsewhere.
Craetophora cinerea Wattled Startling. AM. SP: one in group of *Lamprotornis chalybaeus*, near Andirni, 22 Nov 1998. [No Cameroon records (L). Observed WNP, Feb 1992, including a flock of 60 (Robertson 1993); elsewhere in N Cameroon (Wetten & Spierenburg 1993).]
Buphagus africanus Yellow-billed Oxpecker. Res? C: SNF, WNP, KNP.

Oriolidae

Oriolus oriolus Golden Oriole. PM. F: SNF, WNP, KNP, Sept–May. Earliest in 1994: 24 Sep. More than 30, 14 Apr to 2 May 1993 (AS).
[3]*O. auratus* African Golden Oriole. Observed twice in KNP, 11 Apr 1993 and 8 Aug 1993. [Not north of Yagoua (L).]

Dicruridae

Dicrurus adsimilis Fork-tailed Drongo. Res? C: WNP, KNP.

Corvidae
[2]*Ptilostomus afer* Black Magpie. Res? A: entire area. [Absent from Far North (L).]
Corvus albus Pied Crow. Res. C: entire area.

List 2. Species observed in the Waza–Logone Area only prior to 1980

Phalacrocoracidae
Phalocrocorax carbo Great Cormorant. Observed once in 1940 near Logone Birni, NF (Salvan 1967).
Anatidae
Anas penelope Wigeon. Observed in WNP, Jan–Feb 1958 (Dragesco 1961).
A. strepera Gadwall. One observed in WNP, Dec 1958 (Dragesco 1961).
A. crecca Green-winged Teal. Mentioned for WNP by Dragesco (1961) and Vanpraet (1977); 15 observed in WNP by Fry (1970).
A. capensis Cape Teal. Mentioned for WNP without further details by Vanpraet (1977).
A. hottentota Hottentot Teal. Large flock in WNP, Jan 1976 (L).
Marmaronetta angustirostris Marbled Teal. One flock in WNP, Jan 1976 (L).
Aythya nyroca Ferruginous Duck. Hundreds in WNP, Jan 1976 (L), also in Mar 1967 (Greling 1972b).
Accipitridae
Gypohierax angolensis Palmnut Vulture. Observed in WNP, Mar 1969 (Broadbent 1971); P. Mundy (pers.comm. 1996) confirmed its presence in N Nigeria in the same period (see Scholte in press).
Aquila clanga Spotted Eagle. Two observed, WNP and/or NSF, Feb and/or Apr 1973 (Thiollay 1978).
Falco subbuteo Hobby. One adult observed in WNP, Feb (Thiollay 1978)
F. cherrug Saker. Mentioned for WNP by Vielliard (1971), and three by Thiollay (1978). This unusual observation is accepted because the latter author also observed *F. biarmicus*.
Charadriidae
Limosa lapponica Bar-tailed Godwit. Mentioned without further details for WNP by Vanpraet (1977); no details other than "for the inundation area" (L).
Rynchopidae
Rynchops flavirostris African Skimmer. Common along the Logone in 1958–9 (Dragesco 1961).
Meropidae
Merops apiaster European Bee-eater. Mentioned for WNP without details (Vanpraet 1977).
Coraciidae
Coracias garrulus European Roller. Fairly common in WNP, Dec 1958 to Jan 1959 (Dragesco 1961).

Capitonidae
Lybius dubius Bearded Barbet. One observed in Logone Birni, 16 Jan 1967 (Greling 1972b). L stated not observed in WNP.
L. leucocephalus White-headed Barbet. One observed KNP, March 1975 (Kavanagh 1977). Common in neighbouring Mandara Mts (pers. obs.).
Motacillidae
Motacilla aguimp African Pied Wagtail. Occured along the Logone 1958–9 (Dragesco 1961). Common in the Benoué valley (pers. obs.).
Turdidae
Cercomela melanura Black-tailed Rock-Chat. Once observed in WNP, 10 Apr 1966 (Greling 1972b).
Cossypha heuglini White-browed Robin-Chat. Several near Logone-Birni, NF 1965–7 (Greling 1972b)
Monticola saxatilis Rock-Thrush. Regular at Waza (L), but no recent observations.
Laniidae
Prionops plumata Long-crested Helmet-shrike. Mentioned for WNP without further details (Vanpraet 1977).
Sylviidae
Locustella luscinioides Savi's Warbler. Two well documented records for WNP, Nov 1969 (Fry 1970).
Estrildidae
Estrilda melpoda Orange-cheeked Waxbill. Collected in Pouss, without further details, specimen in Paris (L).
Ploceidae
Anomalospiza imberbis Parasitic Weaver. Collected in WNP, 1971 (L).

Discussion

The present checklist contains eleven species which appear not to have been documented in Cameroon before. Twenty-six species had not been observed before in the Far North Province, of which most were previously thought not to occur north of the Adamawa plateau. Another 12 species had as yet not been observed as far north in Far North Province Cameroon, or had only once been observed there before (see List 1).

In terms of species richness, the Waza–Logone area is only surpassed in West and central Africa, by a few well-studied rainforest areas, such as Korup National Park and environs (approximately 5000 km^2 with 407 species, Rodewald *et al.* 1994, Green & Rodewald 1996). In the Jonglei area, a huge floodplain of 68,000 km^2 in S Sudan, only 270 species have been observed, although the area is less well studied (Howell *et al.* 1988). In contrast, in the well studied, but much smaller, Djoudj National Park (160 km^2), 316 species have been recorded (Rodwell *et al.* 1996).

Compared with savanna areas such as Bamingui-Bangoran NP of 11,000 km² with 278 species (Green 1983, 1984, 1990) and a steppe zone such as Ouadi Rimé-Ouadi Achim of 78,000 km² with 267 species (Newby 1979), the Waza–Logone area harbours an unsurpassed number of species. Reasons for the high diversity include the variety of habitats and year-round water availability, which attract an important number of Palaearctic migrants. The observation intensity, relatively well distributed in space as well as in a time span of 40 years, has also contributed.

Although this is the first detailed checklist for the Waza–Logone area, some general trends can be detected by comparing it with previous records. Most striking are the seven duck species which have not been recorded recently, a change probably caused by the desiccation of the area from 1979 onwards. Changes elsewhere in the Lake Chad Basin may, however, have caused a more general decrease in species diversity and abundance. *Balearica pavonina*, a typical floodplain resident, has decreased from an estimated 10,000 west of the Waza camp in 1971 (Holmes 1972) to an estimated 2500 for the whole area at present (Scholte 1996). It is most likely that degradation of the area started prior to the Maga dam construction, most probably influenced by increasing human exploitation, construction of the Waza-Kousseri road in 1972 (which blocked several water courses), and the general Sahelian drought in 1973–5. Species typical of wooded savanna, such as *Poicephalus senegalus*, *Psittacula krameri*, *Crinifer piscator* and *Lybius dubius*, although already restricted in 1972, seem to have been far more common in the past. Several species, most notably *Coturnix delegorguei,* seem to be more common than suggested by Louette (1981). Various species (*e.g. Ixobrychus minutus*, *I. sturmii*) have recently been recorded much earlier in the season than before, probably due to our presence in the area during inundation, which prevented access to previous ornithologists.

Acknowledgments

The Waza–Logone project is carried out by the Government of Cameroon and IUCN - The World Conservation Union, in cooperation with the Centre of Environmental Science of Leiden University, the Netherlands Development Organisation and WWF-Cameroon, with financial support from the Dutch Ministry of Foreign Affairs and WWF-Netherlands; the authors remain, however, responsible for possible errors and the views expressed in this paper. We should like to thank Pim Edelaar, Aat Schaftenaar and Peter Spierenburg for providing their unpublished checklists. Jeroen van Wetten was involved with the organisation of the early ornithological research. We should also like to thank our colleagues Emmanuel Battokok and Rigobert Azombo of the Wildlife School in Garoua, and Bobo Kadiri and Philippe Kirda of the Waza–Logone Project, as well as Stephany Kersten, for their collaboration in the annual waterfowl census and other bird counts. Arthur Green and Alan Tye commented in detail the manuscript.

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Appendix 1
Observations excluded because of doubtful identification or location

Accipiter ovampensis Ovampo Sparrowhawk. Dark phase with clear yellow legs observed KNP, 28 Apr 1992 and 17 May 1992. [Only once recorded before in Cameroon (L).]

Podica senegalensis Finfoot. Mentioned for the inundation area, without further details (L).

Glareola nordmanii Black-winged Pratincole. Present according to Urban *et al.* (1986) but not according to L.

Mirafra javanica Singing Bush-Lark. Mentioned for "the inundation area near L. Chad" (L).

Cisticola cantans Singing Cisticola. WNP, possible observation (Fry 1970). Included on distribution map in Urban *et al.* (1997).

Appendix 2
Rejected records from the Waza–Logone area

Egretta gularis Western Reef Heron. One observed in NF, 23 Mar 1966 (Greling 1972b). Observation earlier questioned by L.

Milvus milvus Red Kite. Mentioned without further comments by Vanpraet (1977).

Rallus aquaticus Water Rail. Reported by Wetten & Spierenburg (1993) at Maga, without any remark on this exceptional observation, far from its normal range (Urban *et al.* 1986).

Turtur afer Red-billed Wood Dove. Reported by OAG Münster (1991); possibly confused with *T. abyssinicus*, a vicariant that they did not mention.

Caprimulgus europaeus European Nightjar. Very common in WNP late 1958 and early 1959 according to Dragesco (1961). Most probably confused with *C. inornatus*.

Nectarina chloropygia Olive-bellied Sunbird. Several observations by OAG Münster (1991), but according to L only once observed outside the forest and forest galleries,

in the Benoué valley. Together with *N. rubescens* (below) this is the only sunbird observed by OAG Münster (1991).
N. rubescens Green-throated Sunbird. Some observations mentioned by OAG Münster (1991), but this is a species of the equatorial forest block and forest galleries (L).
Euplectis ardens Long-tailed Black Whydah. Said to be common in lightly wooded savanna, according to Dragesco (1961), who does not mention *Vidua orientalis*. L rejected this observation.
E. hordeacea Fire-Crowned Bishop. Questionable observation in WNP by Dragesco (1961) who does not note *E. orix*.
Vidua camerunensis Cameroon Indigo Finch. One report by OAG Münster (1991). Given that they did not report the common *V. chalybeata*, we assume they made an identification error.

Appendix 3
Gazetteer

	N	E
Andirni	11° 4′	14°42′
Fadaré	10°55′	14°36′
Guirvidig	10°53′	14°50′
Ivye	11°25′	15° 3′
Kousseri	12° 5′	15° 2′
Logone Birni	11°47′	15° 6′
Maga	10°50′	14°57′
Maroua	10°36′	14°20′
Mora	11° 3′	14° 9′
N′djamena	12° 8′	15° 2′
Ngodeuni	11°24′	15° 1′
Pété	10°58′	14°30′
Pouss	10°51′	15° 3′
Tikélé	11° 0′	15° 3′
Waza	11°24′	14°34′
Zimado	11°39′	15° 4′
Zina	11°16′	14°58′

Short Notes — Notes Courtes

Vocalisations of the Mouse-brown Sunbird *Anthreptes gabonicus*

The only description of calls or songs of the Mouse-brown Sunbird *Anthreptes gabonicus* is by Barlow *et al.* (1997): a thin, very high pitched "sqee" and a conversational "wit.wit.sqee.witter.witter". In August and September 1986, I regularly saw a pair feeding on insects in trees alongside the St Paul River at Haindi (6°54′N, 10°23′W) near Bong Town, Liberia. On 5 Sept one uttered a soft "tsurp-tseeep-tseeep" whilst in flight. On 8 Sept, what I assumed to be the male sang from a dead bough at the top of a tall tree by the river's bank. The song consisted of "tser-tser-tsew-tsi-tsi-tsi-tsi-tsi-tsi-tseuuur". The latter part of the song was similar to the twittering made by many species of sunbird and the first part ("tser-tser-tsew") was sometimes uttered on its own with no follow-up. The calls resemble the description given by Barlow *et al.* (1997).

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Received 17 July 1998
Revised 7 December 1998

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Crowned Eagle *Stephanoaetus coronatus* and White-breasted Negro-Finch *Nigrita fusconota*, new to the Benin list

***Stephanoaetus coronatus* Crowned Eagle.** I recorded two immatures of this species in Benin on 29 Mar 1997, at 9°12′N, 2°15′E in the Ouémé Valley on the southern end of the Forêt Classée of Ouémé Supérieur. I was attracted by their calls while they soared on thermals above the river, from 30 m upwards, at about 11h30. This behaviour allowed excellent views of both upper- and underparts. The most striking feature on the underparts was the brilliant white belly, particularly evident in the bright sunlight. The breast and wing linings were lightly tinged rufous, the remainder of the underwing being clearly spotted. The upperparts were light grey, the tail long and clearly banded. I thought the primaries had black tips. The enormous size, fine soaring flight, call (a very distinctive "kwee-kwee", cf. Gibbon 1991), plumage and habitat contributed to its ready identification. The Martial Eagle *Polemaetus*

bellicosus has been recorded in the drier country of the Pendjari and Arli National Parks (Green & Sayer 1979), and there is potential for confusion among the immatures of these two species. However, the grey back, rufous breast and wing lining, and longer tail, combined with the habitat, appear to eliminate Martial Eagle in this case (cf. Brown *et al.* 1982, Zimmerman *et al.* 1996).

Crowned Eagle is said to be "frequent to uncommon" throughout its range, and not yet threatened, although its numbers are probably reduced by habitat destruction (Brown *et al.* 1982). It has not previously been recorded in Benin, nor in Niger and Burkina Faso, and Ouémé is probably at the northern edge of its range; suitable habitat is absent from the well-studied Arli and Pendjari National Parks on the Benin–Burkina Faso border (Green & Sayer 1979). In Togo it is said to be a not uncommon resident, north to 8°57′N in the Mo Valley, where it has been reported breeding twice (Cheke & Walsh 1996); in Nigeria it is a rare resident, extending "well north of forest in Guinea zone" (Elgood *et al.* 1994). The Ouémé Valley and the three Forêts Classées of central Benin are particularly suitable habitat for this species, which prefers "remnant forest in river valleys" (Brown *et al.* 1982). The Ouémé Supérieur is well stocked in the small mammals that make up its diet (Green & Sayer 1977). It is therefore an intersting addition to the 52 diurnal raptor species that make up the present Benin list (Dowsett & Dowsett-Lemaire 1993, Claffey 1997).

***Nigrita fusconota* White-breasted Negro-Finch.** On 7 May 1996, also in Ouémé Supérieur, I observed a bird of this species in the upper level of the trees. The dark brown upperparts, sharply contrasting white underparts, and black head, were clearly seen and preclude confusion with other species in the area. The site consists of secondary forest and savanna woodland, at 9°12′N, 2°15′E.

White-breasted Negro-Finch has been recorded as an uncommon resident in both Ghana north to 7°4′N and Nigeria north to 6°12′N (Grimes 1987, Elgood *et al.* 1994). It has not been reported from Togo or Benin (Cheke & Walsh 1996, Dowsett & Dowsett-Lemaire 1993). In Ghana, it occurs in mature and secondary forest, clearings and riverine forest (Grimes 1987).

The forest reserves of central Benin are still in relatively good condition and rather poorly studied, and it is likely that several other discoveries are waiting to be made there.

My thanks to Dr J.F. Walsh for comments on a first draft.

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Received 26 September 1997
Revised 25 September 1998

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Sharp decline in the population of Pin-tailed Whydah *Vidua macroura* in Benin

The Pin-tailed Whydah *Vidua macroura* is regarded as common throughout much of its range, and it is certainly so in the countries surrounding Benin. It is a common resident in Nigeria (Elgood et al 1994) and Ghana (Grimes 1987) and an abundant resident in Togo (Cheke & Walsh 1996). The species is also present as a resident in Niger and a breeding resident in Burkina Faso (Dowsett & Forbes Watson 1993). In eleven years of observation in Benin I have classified it as an abundant resident, with some movements from south to north during the rainy season (Claffey 1995).

The earliest observations of males in breeding plumage in Benin are from March (Bouet 1914), with some present up to the end of November or even into December (pers. obs). My earliest records for males in breeding plumage are for 22 April 1995, in the south. The species has been consistently observed in south Benin up to a month earlier than in the north. In Togo, males in breeding plumage have been noted from May to October; there is a similar pattern in both Nigeria and Ghana.

Pin-tailed Whydah is an abundant breeding resident in the Borgou Province of north Benin. Males are noted with groups of 8–10 females, often in flocks of several males with females. However, an apparent sharp decline in the population occurred during the rainy season of 1997. I had no observations in April or May and only a few

by the end of July. It continued to be scarce until the end of the known breeding season. Local people confirmed this difference from other years. At the same time, a possible, but lesser, decline in *Euplectes* spp. was noted, particularly of Yellow-mantled Whydah *E. macrourus*. Lack of quantitative data make the latter observation more difficult to substantiate, but the decline in the population of *V. macroura* was easily established by the simple lack of field observations in the period Apr–Oct 1997.

I have no idea why this should have occurred, apart from a possible epidemic. There has been no apparent habitat destruction. However the increasing use of pesticides for cotton and other agricultural production in the area must be mentioned and *V. macroura* is considered to be a pest by Dept. of Agriculture officials (J.B. Adjakpa pers. comm). R.A.Cheke (*in litt.*) has speculated that the declines in this species might be associated with reductions in available host species; in the study area, these are Orange-cheeked Waxbill *Estrilda melpoda* and Black-rumped Waxbill *E. troglodytes*. However no observations to support this have been made.

My thanks to Drs. J.F. Walsh and R.A. Cheke for comments on this note.

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Received 1 December 1997
Revised 22 September 1998

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Cream-coloured Courser *Cursorius cursor*, new for Ghana

On 19 May 1996, in the coastal area of Ghana, east of Prampram (*c.* 60 km from Accra), we discovered two Cream-coloured Coursers *Cursorius cursor* along the side of the road. The road runs parallel to the coast, *c.* 300 m from the coastline and the

habitat is stony grassland with low bushes. We were familiar with the species in Syria. As we had only recently taken up our new assignment in Ghana, we merely noted the observation.

Subsequently, on 27 July 1997, we saw Temminck's Courser *C. temminckii* along a track which runs in a northerly direction parallel to the Kpeshie Lagoon just at the eastern outskirts of Accra. We noted a clear difference between that species and the birds seen in May 1996, *i.e.* the chestnut cap. We only realized the significance of the May observation at a much later date, when we found that Grimes (1987) does not list the species for Ghana, while in Urban *et al.* (1986) Ghana is not included in the distribution area of the species. Similarly, Hayman *et al.* (1986) indicate a southern limit to the West African range of Cream-coloured Courser somewhat north of Ghana. Elgood *et al.* (1994) report it in northern Nigeria.

This, therefore, appears to be the first record of Cream-coloured Courser in Ghana. However, the migratory habits of the species, particularly Mediterranean populations, make such an occurrence relatively unsurprising.

We should like to thank Guy Manners for his inspiring bird-watching support in Syria and for critically reading the manuscript.

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Received 23 August 1998
Revised 16 January 1999

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First records of Xavier's Greenbul *Phyllastrephus xavieri* in Nigeria

On 13 December 1997, while walking along an old logging track in Cross River National Park, Oban Division, Nigeria (5°47′N, 8°26′E) our attention was drawn by nasal calls coming from members of a mixed bird party, at a height of about 10–15 m. Two birds responded immediately to playback by approaching and calling excitedly.

They were bulbuls and differed strikingly in size: whereas the larger bird appeared to be close in size to Golden Bulbul *Calyptocichla serina*, the second was noticeably smaller and similar in size and appearance to Icterine Greenbul *Phyllastrephus icterinus*. Their upperparts were uniformly olive-green, their underparts drab yellowish washed olive-green on the breast and flanks, with the pale throat contrasting with the breast. The tail was olive-green, only slightly washed with rufous. Differences with *P. icterinus*, which also occurred at the site, included the larger size of one individual and the less rufous tail (noticeable when the birds came into a more well-lit spot). These characters pointed to Xavier's Greenbul *P. xavieri*. Although Dowsett-Lemaire (1997) found the bill to be conspicuously longer in *P. xavieri* than in *P. icterinus* and considered this the best field character, apart from voice, to distinguish between them, we failed to find this a striking feature; perhaps it requires more experience to be useful as a field mark. The greenish tail came as a surprise to RD, who had recently observed both species in Makokou, Gabon, and had not noticed any significant difference in tail colour. Brosset & Erard (1986), however, state that Xavier's indeed has less rufous rectrices, noticeable when both are seen together. The difference in voice was most significant. Calls included a short nasal "kwah, kwah, kwah,... kwahkwah..." and a more drawn-out, squeaky "kwehhh" and "kehh". Both calls were uttered in shorter or longer series of either similar or combined notes ("kwah-kehh") and were quite different from the "fast, nasal chatter, slowing down at the end" (Dowsett-Lemaire & Dowsett 1991), typical of *P. icterinus*. The tape-recording proved identical to the recording of what is erroneously presented as *P. icterinus* by Chappuis (1975) but which has recently been shown to be of *P. xavieri* (Dowsett-Lemaire 1997). Vocalisations of *P. icterinus* can be found at the end of Chappuis's (1975) second sequence of *P. albigularis*. About 1 km further into the forest another pair was encountered, also in a mixed flock.

This record appears to be the first documented for Nigeria (Elgood *et al.* 1994). The presence of the species in the area is not surprising, however, considering its occurrence in the same forest block, in Korup National Park on the other side of the nearby border with Cameroon, where it is uncommon in primary and secondary forest (Rodewald *et al.* 1994). The species had already been observed in SE Nigeria, in Oban near the Ebe River, on 9–12 April 1988, and near Awai, on 13–15 April 1988, by F. Dowsett-Lemaire and R.J. Dowsett (*in litt.*), but their reliance on Chappuis's (1975) recording led to the birds being misidentified as *P. icterinus*. As presently known, Cross River N.P. thus holds the westernmost population of the species.

The visit to Cross River N.P. was part of a programme of field surveys conducted for the Important Bird Areas in Nigeria Project of the Nigerian Conservation Foundation, co-ordinated by Dr A.U. Ezealor. The Royal Society for the Protection of Birds and BirdLife International sponsored the project. We thank the management of Cross River N.P. for permission to work in the park, Joseph Ntui, station officer Oban Division, for logistical help, and Abdulmalik L. Abubakar and Harry H. Junior for

assistance in the field. F. Dowsett-Lemaire and R.J. Dowsett are thanked for their unpublished records of *P. xavieri* and L.D.C. Fishpool for comments on the manuscript.

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Received 20 July 1998

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First documented records of Green-throated Sunbird *Nectarinia rubescens* for Nigeria, with a discussion of the distinctive race *crossensis*

On the evening of 4 July 1995, MTEH observed a sunbird perched on a treetop in the middle of the village of Buru in Taraba State, Nigeria (7°1′N 10°53′E). Buru is situated in an area of relict forest and derived savanna whose annual precipitation (2563 mm at Abong, 15 km west of Buru: Bawden & Tuley 1966) is due to orographic rainfall generated by the Mambilla Plateau, a few kilometres to the east. On its southern flank, the village abuts directly onto the forest; in other directions it is surrounded by derived savanna. Though the sunbird was over 50 m away, a 30 x 80 telescope permitted adequate views in the last rays of sunlight. In its warm, chocolate-brown coloration it closely resembled a male Scarlet-chested Sunbird *Nectarinia senegalensis* or Buff-throated Sunbird *N. adelberti*. Like *N. senegalensis*, it had an

iridescent emerald-green forehead, but unlike that bird its throat and breast were the same brown as the rest of the body. The only other distinction from *N. senegalensis* noted was that this bird appeared a little more compact in shape, and may have been slightly smaller. The overall colour and the lack of contrast between the throat and breast and the rest of the body eliminate all species except Green-throated Sunbird *N. rubescens*: it was a male of the subspecies *crossensis*, which lacks the green throat of the nominate race (Mackworth-Praed & Grant 1973).

On 26 October 1996 JCB saw a sunbird in a tree of 3–4 m height, in a small patch of sub-montane woodland at *c.* 900 m elevation at Anape, 6 km west of Obudu Cattle Ranch Hotel, Cross River State (6°26′N 9°23′E). When seen initially from both below and above it appeared uniformly dark and was first considered a Copper Sunbird *N. cuprea*. However, as it moved down in the tree and into sunlight, a metallic green forehead and crown became apparent. A thin moustachial stripe running from the gape to below the eye was also noted, and was considered to be of a more turquoise-green coloration than the green of the head. Upper- and underparts were a uniformly dark chocolate-brown. The bird had a noticeably upright posture and was larger than a nearby male Preuss's Sunbird *N. preussi*. These features, combined with the lack of any green on the throat and breast, were indicative of *N. r. crossensis*. The bird was observed for *c.* 30 s before it moved into other trees further down the hillside.

A third sighting of *N. r. crossensis* was obtained still further west, in the Afi River Forest Reserve (6°19′N 8°59′E) near Buanchor, by RD and the Nigerian Important Bird Areas team, on 7 December 1997. The bird was feeding in a large flowering tree in the company of other sunbirds, including Green *Anthreptes rectirostris*, Blue-headed *N. cyanolaema*, Johanna's *N. johannae* (one male) and Buff-throated *N. adelberti* (two males).

There appear to be very few published records of *N. r. crossensis*, which was formerly known only from a small area of adjacent western Cameroon. The first adult male was collected just west of Bamenda (5°55′N 10°10′E), on 26 May 1948 (Serle 1950); the second at Mamfe (5°45′N 9°20′E), on 10 March 1953, together with a female that appeared not to differ from the female *N. r. rubescens* (Serle 1963). We have been unable to find any other literature records from western Cameroon referring explicitly to *crossensis*. The limits of this race's range remain unknown. The nominate form is found to the south at Mundemba (Rodewald *et al.* 1994, A.A. Green *in litt.*), Kumba (Serle 1953, 1965) , Mt Kupe and the Bakossi Mts (R.J. Dowsett & F. Dowsett-Lemaire *in litt.*) and, to the east, at Kounden (Louette 1981) and Bamale (Serle 1963). There is a sight record (race unknown) from Baro (Green & Rodewald 1996), 60 km south of Mamfe and 50 km north-east of Mundemba.

Green (1990) reported sighting several Green-throated Sunbirds at the Kam River, Gashaka-Gumti Game Reserve (now NP), in February 1988 (no subspecies mentioned), although this record was omitted by Elgood *et al.* (1994). Our three

records confirm its presence in Nigeria, apparently at the north-western edge of its range.

The validity of *crossensis* as a separate race was considered unproven by White (1965) and Eisentraut (1973), presumably because of the limited number of specimens. Louette (1981) first suggested that *crossensis* might be a hybrid between *N. rubescens* and *N. adelberti*, but later accepted it as valid (Louette 1982). The observation of *N. adelberti* in the same tree at Afi River is therefore interesting, although it does not necessarily invalidate Louette's (1982) opinion that they are a typical allospecies pair. Indeed, at Afi River, both possibly reach the extreme limits of their respective ranges, and at least *N. adelberti* is known to make seasonal movements (Grimes 1987, Elgood *et al.* 1994). Although the glossy forehead suggests otherwise, the possibility of *crossensis* being either an eclipse plumage, or derived from one, can not, as yet, be entirely ruled out. Eclipse plumages are indeed known to be very variable in some other sunbirds (Skead 1967). In view of the above, the precise delimitation of the ranges of *N. r. crossensis, N. r. rubescens* and *N. adelberti*, and their relations, behaviour and vocalisations would be worthy of further research.

RD's visit to Afi Forest Reserve was part of a programme of field surveys conducted for the Important Bird Areas in Nigeria Project of the Nigerian Conservation Foundation, co-ordinated by Dr. A.U. Ezealor. The Royal Society for the Protection of Birds and BirdLife International sponsored the project. We thank A.A. Green and P. Rodewald for their notes on *N. rubescens* in Nigeria and Cameroon, M. Louette (Royal Museum for Central Africa) for providing stimulating discussion and relevant literature, and R.J. Dowsett, F. Dowsett-Lemaire, L.D.C. Fishpool and A. Tye for comments on the manuscript.

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Received 22 September 1998
Revised 23 January 1999

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Corrigenda

An annotated check-list of birds occurring at the Parc National des Oiseaux du Djoudj in Senegal, 1984–1994 (Rodwell, S.P. *et al.*, *Malimbus* 18: 74–111)

We should like to apologize to P. Triplet and P. Yésou for accidentally omitting their names from the acknowledgments to this paper.

S.P. Rodwell, A. Sauvage, S.J.R. Rumsey, A. Bräunlich

Observation d'une parade collective de *Cypsiurus parvus* (Sala, A., 1997, *Malimbus* 20: 126–127)

Le nom scientifique du Martinet des palmiers n'est pas *Cypsiurus parvulus*, comme il est écrit dans l'article, mais *C. parvus*. Le nom scientifique du palmier n'est pas *Elais*, mais *Elaeis*.

Letters — Lettres

Bird ringing recoveries from Guinea-Bissau

Hazevoet (1996) has usefully drawn attention to the fact that Frade & Bacelar (1959) published a list of the passerines known from Guinea-Bissau, in addition to that on non-passerines (Frade & Bacelar 1955). I had not encountered the former publication, and hence the list I presented for the country (Dowsett 1993) needs amendment. But Hazevoet also writes, concerning my list of the birds of Guinea-Bissau: "his unreferenced data on ringing recoveries are not included, as they appear to contain many inaccuracies". This is a strange comment, as Hazevoet at no time asked to see the ringing recovery data that I have available for that country (a fact he has confirmed *in litt.* 1996). Moreover, it is quite wrong, for there are definite ringing recoveries for all the species concerned, a good many of them published. For example, Sandwich Tern *Sterna sandvicensis* was not included by me "on the basis of unpublished ringing recoveries": there are no fewer than 19 recoveries from the British Isles alone (Mead & Clark 1993). Details for other species included by Dowsett (1993) from Guinea-Bissau on the basis of ringing recoveries alone have been re-examined, and all are correct. The limited nature of Hazevoet's own list of birds observed in Guinea-Bissau shows how important all sources of data are for such a country.

Information from the Tauraco database is freely available on request.

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Received 26 March 1997

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Response to Dowsett

The main reason I did not include ringing recoveries listed by Dowsett (1993) was that they did not concern "new" species, except for Garden Warbler *Sylvia borin*, which I included in Appendix 2, with a reference to Dowsett *et al.* (1988). I felt that it was not important to include the others because they were already covered by publications other than Dowsett (1993).

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Received 26 March 1997
Revised 4 November 1998

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Reviews — Revues

Echassiers, Canards et Limicoles de l'Ouest Africain. Par O. Girard, 1998. 136 pp. Castel Éditions, Château d'Olonne. ISBN 2-910399-45-1, broché, FFr70. Disponible de l'O.N.C., Service documentation, Saint-Benoist, F-78610 Auffargis, France (frais de port FFr15).

Il s'agit essentiellement d'un manuel destiné à ceux qui s'occupent à quelque titre que ce soit des zones humides (baguage, dénombrements, protection) et des oiseaux qui s'y rapportent. En une trentaine de pages est rassemblé l'essentiel des méthodes de comptage (détaillées avec des exemples concrets), les moyens pratiqués, le baguage et une liste des centres européens avec leur adresse. Je n'ai cependant pas trouvé de chapitre sur les moyens de capture. L'importance des zones humides et leur gestion font également l'objet d'un chapitre. Le reste de l'ouvrage, 96 pages, est consacré à la description des espèces susceptibles de fréquenter les lieux humides. Considérant que ce petit guide sera le seul à être emporté sur le terrain, l'auteur a pris un soin particulier à décrire les espèces prêtant à confusion. C'est ainsi que les limicoles d'identification délicate, surtout sous le plumage d'hiver qu'ils portent habituellement en Afrique, sont l'objet d'un soin particulier. Toutes les espèces sont représentées en couleurs et une flèche souligne le caractère à rechercher; elles sont l'oeuvre de J. Chevallier et S. Nicolle. Elles sont toutes bonnes, voire très bonnes, et il faut en souligner la qualité pour un ouvrage de ce format. Les noms des espèces sont donnés en français, anglais et portugais.

Ce manuel était, dit l'auteur technicien de l'ONC, réclamé depuis longtemps dans l'Ouest africain. Nous le conseillons sans réserve à tous ceux qui "pratiquent" la sauvagine et pourquoi pas aux chasseurs un peu curieux.

Gérard J. Morel

The Bird Collectors. By B. Mearns & R. Mearns, 1998. xviii + 472 pp., many monochrome illustrations. Academic Press, London. ISBN 0-12-487440-1, hardback, £29.95.

If you "turn pale at the mere thought of killing birds", then consider: "Anyone who drives a car, uses products of the petro-chemical industries, owns a cat, has glass in the windows of their home, buys paper, or consumes electricity will be responsible for killing birds....Remember...that dead birds in museums are the only casualties that can be used to help the living." This eloquent justification of scientific collecting begins this book. Chapters 1 and 17 put scientific collecting in its fuller context: it is

insignificant in comparison with other killing for sport, food, vermin control and decoration, and with population reductions caused by habitat loss. A clear argument is set out that scientific collecting has, even in the past, had very little impact on bird populations, including extinctions.

The book goes on to consider the people who made the collections on which ornithology relies, many of whom suffered severe privations in the course of their work, and all too commonly met their deaths in the cause of their science. Most of the book groups biographies according to the type of person the collector was (traders, artists, government officers, medics, missionaries *etc.* The style of presentation sometimes seems a little stilted, especially in the introductions to each section, where continuity is often lacking; this improves in the later sections, where the relative contributions of the various actors to their aims becomes clearer, especially in the chapter on conservation. The biographies are generally good as brief introductions to some of the major players (but tantalisingly brief in many cases), and put faces and backgrounds to many familiar names; references are provided to longer biographies where they exist. Each chapter contains a lot of background information, such as on collecting standards, and the role of museums, dealers and rich private collectors. There are some fascinating journal extracts, including from participants in the "worst journey in the world", and exciting (and sobering) travelogues.

One interesting and recurring observation is the sensitivity of many of the collectors: so many wrote of their distaste for killing, although they were willing to overcome it in the cause of science. As Pat Hall notes, "In the final assessment it is understanding rather than sentimentality that will do most for the conservation of creatures other than ourselves." The final chapter is a summary of the need for collections and their many uses, without which much of natural history and zoology would be impossible. These needs and uses are so many that it takes 14 pages simply to summarize them, including their many benefits to conservation, a classic example being the proof of eggshell thinning correlated with pesticide use.

There is a useful appendix listing the biggest museum collections, with information on their holdings. This is followed by a list of biographical sources by subject person, plus a full bibliography. A lot of research has gone into this book, and the authors obviously enjoyed the search for information entailed. They reflect the feelings of many ornithologists in today's time of reduced funding for museums and systematic research, and misplaced concern for animal rights, when they quote V. Remsen: "Unless specimens continue to be collected, the current decades will be viewed as a dark age of scientific history, the time when scientists were unable to make permanent records of biodiversity because of opposition to scientific collecting."

Alan Tye

Birds of Liberia. By W. Gatter, 1998. 320 pp., 4 col. plates, 107 photographs, maps figures. Pica Press, Mountfield. ISBN 1-873403-63-1, hardback, £40.

Liberia is unlikely to be on many people's list of top visiting priorities. It is hot and humid, and memories of the recent civil wars and attendant atrocities are still in people's minds. It has been virtually unknown ornithologically, except for work on Mt Nimba by Forbes-Watson and others (*The Birds of Mt Nimba, Liberia.* Colston & Curry-Lindahl, 1986, British Museum (Natural History), London). Now Wulf Gatter, who has spent some 15 years as a forester in Liberia, gives us the present work, beautifully produced by Pica Press.

The book's central section consists of the species accounts, each with a brief text in three sections (status, habits and ecology, annual cycle), accompanied for most residents and some migrants by a map. Maps are omitted for a few, rarely recorded, species. The 70-page introduction covers topography, climate, vegetation, seasonality, migration and ecology. As befits a forester, there is a comparative survey of the different forest types as found today as well as in the past. Liberia was once almost totally forested, with practically none of the natural tree savanna that is found in its neighbours. Gatter presents a gloomy picture of accelerating deforestation, with maps showing progressive forest fragmentation, even though, as recently as 1985, 50% of the country was still covered by high forest. By 1987, all high forest except Sapo National Park (disappointingly, not mapped) had been leased for logging, and "forestry" regressed to pure exploitation, continuing even during the 1990–6 war. Even following the extensive fragmentation, many open-country birds common in Sierra Leone are still either absent or extremely rare in Liberia.

On migration, Gatter has already written several papers, which are summarized here. Birds migrating roughly north–south around the western edge of the Sahara must, when they reach Liberia, turn due east if they are to continue overland. Many open-country migrants, particularly warblers, must concentrate, in Liberia, in very small areas, mostly in the mountains, unlike in Sierra Leone, where they spread more evenly right across the tree savanna.

Large sections of the introduction and appendices are devoted to niche occupation, including detailed new data on use of vegetation strata and branch sizes. Although this analysis reveals interesting new insights on habitat use, such detailed, original material might have reached a more appropriate audience through papers in scientific journals, rather than in this book.

The four plates are beautifully painted by Martin Woodcock and depict 29 species. It is not clear how these were chosen, as might also be said of the 56 colour photographs of birds, which range from good to adequate in quality (although the habitat photographs are admirable). I have my doubts about Plate 68, purportedly of *Phyllastrephus baumanni*, which is possibly the most misidentified species in Africa (L.D.C. Fishpool pers. comm.); unless the lighting is extremely distorting, the bird seems more likely to have been *P. albigularis*. This is worrying: once one finds an

apparent error, one inevitably wonders about other records. I also doubt the value of one appendix, where population estimates for the country are given for a number of species (with no reasons given for the selection made). How can one reliably decide that there are at least 4 million pairs of *Andropadus virens* and 1 million *A. latirostris*?

The author readily quotes others' findings and there is a good, though not totally complete, bibliography, but the vast majority of the records are his own: an impressive performance. Anyone interested in the Upper Guinea forest avifauna should read this book. Several species reach their known western limit in Liberia, and this book will be a yardstick against which to judge new finds for many years to come.

Guide des Oiseaux de São Tomé et Príncipe. By P. Christy & W.V. Clarke, 1998. 144 pp., 32 col. plates, two maps. ECOFAC, São Tomé. Hardback, no price given.

This book is a proper field identification manual, far more useful for this purpose than the recent work of R. de Naurois (1994: reviewed *Malimbus* 18: 63–64). However, although more up to date than Naurois, it is far less well referenced as a source of information on the status of the birds of the islands. One of its major shortcomings is the complete lack of any references, and of any information on the source and reliability of new records; many "new" species, especially seabirds, are included but the evidence presented is not strong for many of them, or at least they are not properly documented (observers, descriptions, conditions *etc.*).

An introduction, with site descriptions, is included in Portuguese, English and French, and bird names are given in all three languages, but the rest of the book is in French. The reason for this choice of language is obvious, in that the main author is French and the ECOFAC project is dominated by francophones, but it seems a pity that it was not issued in either Portuguese (which would be much more useful for the local population and many tourists) or English (probably the most widely known language among potential users of the book from outside the islands).

Not all species included are illustrated (106 of 143), which is a pity, especially for such difficult groups as the petrels; one would need to take another book for reliable seabird identification. But the descriptions are quite good. The plates have a distinctive style that can be somewhat distracting, but they are quite accurate representations, not as stylized as usual in field guides. The colours in many are much too bright and the iridescence very poorly represented by bright single colours, especially in the pigeons, sunbirds and starlings. An additional minor gripe is that the order of species on a plate is often upside down with reference to the order of the accompanying texts. Strangely, in the texts, the notes referring to a group (*e.g.* storm

petrels) are included within the account for the first species of the group, which is a little confusing.

There are few comments on the general biogeography and evolution of the islands' birds, but the claim is made that *all* open-country species have been introduced to the islands by man and that there was no open habitat before the arrival of man. This point is still controversial, and can never really be substantiated.

These criticisms, however, should not seriously detract from the book's use by francophone birdwatchers, and it is indispensable as a field guide.

Alan Tye

Shrikes. A guide to the shrikes of the world. By N. Lefranc & T. Worfolk, 1997. 192 pp., 16 col. plates, numerous maps and line drawings. Pica Press, Mountfield. ISBN 1-873403-47-X, hardback, £25.

This is much more than a field guide, more like a monograph. In its almost 200 pages of small print, it deals with shrikes in only the most limited sense: the genera *Lanius*, *Corvinella* and *Eurocephalus*, a total of only 31 spp., with species accounts ranging from less than one (*L. marwitzi*) to nine pages (*L. excubitor*). This permits a full review of the biology of the group. The book begins with a balanced discussion of shrike systematics, followed by introductory sections for each genus, covering morphology, distribution, habitat, behaviour and population dynamics. This review contains a lot of detail for *Lanius*, but is completed in less than a page each for the other two genera, reflecting their size (two species each) and lack of knowledge of their biology. Just over a third of the species treated occur in West Africa: eight residents and another three in winter.

The author of the texts is French, but the English is mostly good, with only occasional oddities and ambiguities. One error is that the section on "Style and layout" (pp. 41–43) was obviously intended to come before the first chapter (p. 11). The book is a little temperate-zone biased; the generalizations, especially in the section on population dynamics, are largely based on temperate species and may not be justified for tropical species. For example, it is not recognized that the life span of Palaearctic species might not reflect that of tropical species, and that mortality in tropical species can be extremely low after reaching adulthood. However, the lower breeding success of tropical species is noted.

The plates are beautiful and useful: perfect for identification (although nobody would actually buy this book for identification alone), nicely arranged, accurate and attractive, with many plumages and races shown. The distribution maps are very clearly done, with the maximum scale possible on each one, by avoiding the use of a few standard base maps (on which a bird's distribution might be a small part of the

total area shown) as is so common in bird books. The bibliography is not complete, but includes most of the key works.

In summary, this is one of the best guides to a bird taxonomic group to appear in recent years, and finds a clear niche as a semi-technical but readable monograph. It avoids being merely a not-very-useful field guide to a world-wide group of birds, which no-one would actually want for that purpose, as are so many similar books.

Alan Tye

Society Notices — Informations de la Société

General Meeting of W.A.O.S., 6–7 June 1998

The latest general meeting of the Society was held in France at Beuzeville, a market town in Normandy. It was based at the Cochon d'Or hotel, where the 17 participants who had travelled variously from Belgium, Benin, France, Germany and the U.K. were welcomed by the Mayor.

A field trip was arranged for Saturday morning, when a visit was paid to the Hode Marsh, a conservation area on the north bank of the Seine Estuary, led by members of the Groupe Ornithologique Normand and Claude Chappuis, who used playback to attract into view a variety of marshland birds. The picnic was eaten in the reserve, on a scarcely used path and, as at command, a group of five White Storks *Ciconia ciconia* flew overhead during the meal. A second field trip, to the Forest of Brotonne was made on the Sunday, led by Dr Chappuis, whose careful preparations ensured that we enjoyed excellent views of Black Woodpecker *Dryocopus martius* and Middle Spotted Woodpecker *Dendrocopus medius*.

The Consultative Meeting took place on the afternoon of Saturday 6th.

Financial report

Bob Sharland presented the Revenue Account for the year ended 31 Dec 1997, as published in *Malimbus* 20: 68. He drew attention to the reduction of £1157 in the cost of printing in 1997, obtained by employing a new printing firm. A Research Grant of £500 had been paid. The accumulated funds at 31 Dec 1997 were £4268.

The President said that an additional rate of payment of subscriptions had been initiated instead of an overall increase in the subscription. The additional supporting membership rate was available for those wishing to offer further support. Of the 24 members who pay in FFr, 44% paid the supporting rate, an encouraging result. The Treasurer said that he intended to draw the attention of all other members to the supporting membership and ask them to review their bankers' orders. The Treasurer outlined the budget for 1998. Sales of back numbers were not known but he expected a deficit of £180 over the year if no research grants were made.

Michel Louette said that a grant from the Frank Chapman Fund of New York to his student Kizungu Byamana was dependent on the receipt of the grant from W.A.O.S. He asked if a written statement of the agreed W.A.O.S. grant could be given in order to secure the Chapman grant. The President agreed to supply this.

Next meeting

Clive Barlow had proposed that the next meeting be held in The Gambia in November 2000. Members were told that the next Pan-African Ornithological Congress would be held in Uganda in June, July or August 2000 (the arrangement to hold it in Tunisia having been cancelled). In the discussion, members thought it

preferable to hold the next W.A.O.S. meeting in West Africa, perhaps in The Gambia in November 1999, and it was proposed to enquire in *Malimbus* whether members would be interested in attending on either of those dates. It was suggested that participants from Senegal National Parks would attend, augmenting the number of African participants.

Other business

Michel Louette said that several ornithological societies were already well represented on the Internet and that W.A.O.S. should consider taking this step. The need to find a person to create a web site was recognized.

The question of W.A.O.S. representation at the International Ornithological Congress in Durban, in August 1998, was raised ; as Council members would not be present at the I.O.C., M. Louette and C. Chappuis were asked to organize an informal meeting and take a poster.

On Saturday after dinner, Gérard Debout, President of the G.O.N., made a presentation of the work of creating and conserving the wetland area visited earlier in the day. The marshland of the Seine Estuary had been increasingly threatened by the development of the port and petrochemical complex of Le Havre but action by the G.O.N. had resulted in the introduction of a statutory conservation order for the area.

Jacques Boco Adjakpa, researcher at Benin University and recipient of a grant from W.A.O.S., gave a presentation on his main work, with Abdim's Stork *Ciconia abdimii*. It nests in large trees (not, as in Mali, on mosques), after returning from winter quarters in southern Africa (laying from the first half of April until 2 July). Formerly protected by the local populace, it is now hunted and eaten by newcomers, who do not know or respect these customs. Further, pesticides reduce its food supply or poison it directly. All juveniles were marked. This intra-African migrant seems to have much in common with the White Stork.

Michel Louette, professor at the Royal Museum, Tervuren, spoke about the origins of the West African avifauna. He considered the geological and climatic features and the human and plant populations across the region, and their effect on the distribution of birds in West Africa.

We are grateful to Dr Marie-Yvonne Morel, Dr C. Chappuis and F. Morel for the excellent arrangements made for this meeting, not least for the picnics provided on the two field excursions. It was a most interesting and enjoyable meeting.

Amberley Moore & G.J. Morel

Assemblée Consultative de la S.O.O.A., 6–7 juin 1998

L'Assemblée Consultative de la S.O.O.A. eut lieu en France à Beuzeville, petit bourg de Normandie, à partir de l'Auberge du Cochon d'Or, où 17 participants, qui étaient

venus aussi bien de Belgique, du Bénin, de France, d'Allemagne que de Grande-Bretagne, furent accueillis par le maire.

Tout le samedi matin fut réservé à l'exploration du marais du Hode, vaste roselière de l'estuaire de la Seine. Cette visite fut guidée et facilitée par la coopération de François Morel (du Groupe Ornitologique Normand, GONm) et de Claude Chappuis, qui utilisa largement et avec quelle maîtrise la technique de la repasse pour attirer à bonne distance toute une variété d'espèces de marais. Le pique-nique eut lieu sur un chemin à peine fréquenté et, comme sur commande, cinq Cigognes blanches *Ciconia ciconia* vinrent nous survoler durant le repas. Une deuxième excursion eut lieu le dimanche matin en forêt de Brotonne, dirigée par C. Chappuis, avant la clôture de la réunion. Grâce à une minutieuse préparation, Claude, après plusieurs essais de repasse, nous obtint d'excellentes observations du Pic mar *Dendrocopus medius* et du Pic noir *Dryocopus martius*.

La Réunion Consultative eut lieu l'après-midi du samedi 6.

Rapport financier

Bob Sharland présenta le budget pour l'année achevée au 31 décembre 1997 et publié dans *Malimbus* 20: 68. Bob attira l'attention sur la réduction du coût de l'impression de *Malimbus* en 1997, obtenu en s'adressant à un nouvel imprimeur. Une bourse de recherches de £500 avait été versée. Les fonds cumulés au 31 décembre 1997 étaient de £4268.

Le Président dit alors qu'un système mixte de paiement des abonnements avait été appliqué avec succès. Au lieu de l'augmentation générale, ceux qui peuvent payer davantage le font (abonnement de soutien) tandis que les autres demeurent libres de payer à l'ancien tarif. Ainsi, sur 24 membres qui payèrent en FF, 44% payèrent l'abonnement de soutien, ce qui est très encourageant. Le Trésorier déclara qu'il attirerait l'attention de tous les membres sur cet abonnement de soutien en demandant à leur banque de revoir leurs instructions. Le Trésorier donna les principales orientations pour 1999. Le produit de la vente des anciens numéros n'est pas encore connu mais il s'attend à un déficit de £180 pour l'année si aucune bourse n'est accordée.

Michel Louette dit qu'une bourse du Frank Chapman Fund de New-York, serait versée à son étudiant Kizungu Byamana, s'il recevait l'assurance de la S.O.O.A. de recevoir sa bourse. Il demanda si une assurance écrite de la S.O.O.A. pouvait être donnée afin d'obtenir la bourse du Chapman Fund. Le Président proposa de donner cette garantie.

Prochaine Réunion Bisannuelle

Clive Barlow avait proposé que la prochaine Réunion Bisannuelle ait lieu en Gambie en novembre 2000. Les membres furent informés que le prochain Congrès Pan-Africain d'Ornithologie aurait lieu en Ouganda en juin, juillet ou août 2000 (les accords pour le tenir en Tunisie ont été annulés). Il ressortit de la discussion que l'on préférait la prochaine réunion S.O.O.A. dans l'Ouest Africain, peut-être en Gambie en novembre 1999; il fut proposé de faire un sondage dans le journal pour connaître

la date préférée. On suggéra que les participants viendraient des Parcs Nationaux du Sénégal, augmentant le nombre de participants.

Autres questions

Michel Louette ajouta que plusieurs sociétés ornithologiques étaient déjà présentes sur Internet et que S.O.O.A. devrait réfléchir à cette question. Il fut reconnu qu'il fallait d'abord trouver la personne pour créer le site.

La question de la représentation de la Société au Congrès International d'Ornithologie à Durban en août 1998 fut soulevée; en l'absence de membres du Conseil, il fut demandé à M. Louette et à C. Chappuis d'y tenir une réunion informelle et d'y placer une affichette.

Le samedi après dîner, Gérard Debout, Président du GONm, fit une présentation du travail accompli pour conserver la zone visitée le matin. La zone de marais de l'estuaire de la Seine était progressivement convoitée et menacée par l'extension du port du Havre. Ce n'est que par une action tenace, qui mobilisa jusqu'à la Cour Européenne, que la France dut honorer ses engagements de protéger ses zones humides importantes; un statut de réserve a enfin pu être obtenu.

Jacques Boco Adjakpa, chercheur à l'université du Bénin, et boursier de la Société, fit un exposé sur son sujet principal, la Cigogne d'Abdim *Ciconia abdimii.* Elle niche sur de grands arbres (et non sur les mosquées, comme au Mali), au retour de ses quartiers d'hiver en Afrique australe (ponte de la première moitié d'avril jusqu'au 2 juillet). Jadis protégée par les populations locales, elle est maintenant chassée et consommée par de nouveaux venus, ignorants des coutumes. S'ajoute à cela l'action des pesticides qui réduisent la nourriture ou intoxiquent directement l'oiseau. Le marquage de tous les jeunes a été réalisé. Ce migrateur intra-africain a décidément beaucoup en commun avec la Cigogne blanche.

Michel Louette, professeur au Musée Royal de Tervuren, et tourné vers l'Afrique centrale, fit un exposé sur les origines de l'avifaune ouest-africaine. Il examina les facteurs géologiques et humains et les populations humaines et de plantes à travers la région et leurs effets sur la distribution des oiseaux dans l'Ouest africain.

Nous sommes reconnaissants à Marie-Yvonne Morel, à C. Chappuis et à F. Morel pour l'excellente préparation de cette réunion, sans oublier les pique-niques des deux excursions. C'était une excellent réunion.

Amberley Moore & G.J. Morel

Next Consultative Meeting of the Society

As the next Pan-African Ornithological Congress is now to be held in Uganda about June–August 2000, it is suggsted that the next Consultative Meeting of W.A.O.S. should be held in West Africa, possibly in The Gambia in 1999. A further meeting may be held at the P.A.O.C. the following year. It would be helpful if members would register with the President (1 route de Sallenelles, 14860 Bréville-les-Monts, France; email gmorel@mail.cpod.fr; tel/fax (0)231 787250) their interest in attending, giving their preference of dates (see questionnaire enclosed with this issue).

Prochaine Réunion Consultative de la Société

Comme le prochain Congrès Pan-Africain d'Ornithologie doit avoir lieu en Ouganda en juin–août 2000, on a suggéré que la prochaine Réunion Consultative de la S.O.O.A. se tienne dans l'Ouest africain, peut-être en Gambie en 1999. Une autre réunion, peut-être moins importante, pourrait se tenir durant le C.P.A.O. l'année suivante. Le Conseil apprécierait que les membres expriment leur intérêt pour cette réunion, en indiquant le date qu'ils préfèrent au Président (1 route de Sallenelles, 14860 Bréville-les-Monts, France; email gmorel@mail.cpod.fr; fax/téléphone (0)231 787250); voir feuille volante avec cette livraison.

Obituary: John Hamel Elgood 1909–1998

John Elgood was born at Dulwich on 16 June 1909. He was educated at Whitgift Middle School and St Catherine's College, Cambridge. He taught at Regent Street Polytechnic and was from there recruited for the new University of Ibadan. His early interest was marine biology but he soon realised the ornithological potential of Ibadan and was leading bird walks and lecturing on birds. He had a pact with Ronald Keay (at that time Chief Conservator of Forests) that he would teach Ronald birds in exchange for instruction on flora.

He saw a need for a small guide on birds and in 1960 brought out his Birds of the West African Town and Garden. This stimulated interest in birds and in 1964 the Nigerian Ornithologists' Society was formed with John as Secretary, Hilary Fry as Editor of the Bulletin and myself as Treasurer. John remained as Secretary and we produced regular Bulletins until 1989, when the society metamorphosed into the West African Ornithological Society and John was appointed Vice-President.

John found and described a new species of *Malimbus* (*ibadanensis*), some of the work being done in his own garden. He produced a checklist *The Birds of Nigeria* in 1964 (British Ornithologists' Union, London) and when this went out of print he organized a team to produce a second edition in 1994 (BOU, Tring). The first book

printed by Ibadan University Press was *Animal Classification* by Joe Webb and John Elgood and in 1964 John produced *Certificate Biology for Tropical Schools*.

John and his wife Peggy toured frequently in Nigeria and stayed with us in Kano many times. In 1962 he went with a team to Bornu to investigate the *Quelea* problem. He often told the story of how in an expedition after a certain bird he got the bird but lost his trousers in the process. He had a great sense of humour and was very popular with his students and kept up with some of them (by now Professors themselves) for many years.

John returned to England in 1965 and taught at Goldsmiths' College and the American University in Sussex. He was asked back to Nigeria and did a spell at Ahmadu Bello University (Zaria) and Lagos University. He helped with Examinations in Rhodesia twice and taught for six months in Papua New Guinea. He came out to stay with me in Kano again in 1976 and produced a Report on the Wetlands between Hadejia and Nguru for Kano State Department of Agriculture. This led to the area being officially opened as a Wetland Reserve by Prince Bernard of the Netherlands.

John was an active member of the British Ornithologists' Union and British Ornithologists' Club serving on the Council of both Societies. He was also a frequent lecturer in the Bournemouth Science Society.

John would have thoroughly approved of his memorial service in Highcliffe Methodist Church. We entered the church to the sound of bird-song on tape (one of his daughters threatened a questionnaire at the end of the service) and the service sheet was encircled by exotic birds holding glasses of wine. We have all lost a great friend.

R.E. Sharland

West African Ornithological Society

Revenue Account for the year ended 31 December 1998

		1997
Income		
Subscriptions	£2843	£2701
Sales of back numbers	305	467
Interest	92	122
Donations	40	–
	£3280	£3290
Expenditure		
Printing and publication	£1850	£1739
Postage	612	766
Research Grant	500	500
	2962	3005
Surplus for year	318	285
	£3280	£3290

Balance Sheet as at 31 December 1998

Assets				
Building society balance	£5112		£4122	
Bank balance	336		1011	
Debtor	28		–	
		5476		5133
Liabilities				
Creditor	500		100	
Subscriptions in advance	390		765	
		890		865
		£4586		£4268
Accumulated funds				
Balance at 1 January		£4268		£3983
Surplus for year		318		285
		£4586		£4268

R.E. Sharland, Treasurer

Certified that I have verified the Society's bank accounts.

G.D. Field

Instructions to Authors

Malimbus publishes Papers, Short Notes, Reviews, News and Letters, and illustrative material covering the field of West African ornithology.

Papers and **Short Notes** cover original contributions; material published elsewhere, in whole or in part, will not normally be accepted. Short Notes are articles not exceeding 1000 words (including references) or two printed pages in length. Wherever possible, manuscripts should first have been submitted to at least one ornithologist or biologist for critical scrutiny. Manuscripts will be sent for critical review to at least one relevant authority.

Items for **News and Letters** should not exceed 1000 words.

Contributions are accepted in English or French; editorial assistance will be made available to authors whose first language is not one of these. Two copies are required, typed on one side of the paper, with double spacing and wide margins. Dot-matrix printouts will only be accepted if they are of "near-letter" quality. Authors should not send a diskette copy with their initial submission, but are requested to indicate whether they can do so if their paper is accepted. Diskettes will be returned to authors. Consult the editor for further details, *e.g.* for acceptable word processing programs.

Conventions regarding tabular material, numbers, metric units, references, *etc.* may be found in this issue and should be adhered to carefully. Note particularly the following: dates should be in the form 2 Feb 1990 but months standing alone in text may be written in full; times of day are written 6h45, 17h32; coordinates are written in the form 7°46′N, 16°4′E; numbers up to ten are written in full, except when followed by abbreviated units (*e.g.* 6 m), numbers from 11 upwards are written in figures except at the beginning of a sentence. All references mentioned in the article, and only such, must be entered in the bibliography.

Avifaunal articles must contain a map or gazetteer, including all localities mentioned. They should include brief notes on climate, topography, vegetation, and conditions or unusual events prior to or during the study (*e.g.* late rains *etc.*). **Species lists** should include only significant information; full lists are justified only for areas previously unstudied or unvisited for many years. Otherwise, include only species for which the study provides new information on range, period of residence, breeding *etc.* For each species, indicate migratory status, period of residence (as shown by the study), range extensions, an assessment of abundance (*Malimbus* 17: 36) and dated breeding records. Where appropriate, set data in context by brief comparison with an authoritative regional checklist. Lengthy species lists should be in tabular form (*e.g.* *Malimbus* 12: 39–51, 1: 22–28, or 1: 49–54) or of the textual format of recent issues (e.g. *Malimbus* 12: 19–24, 12: 61–86, 13: 49–66, 16: 10–29). The **taxonomic sequence** and **scientific names** (and preferably also **vernacular names**) should follow Dowsett & Forbes-Watson (1993, *Checklist of Birds of the Afrotropical and Malagasy Regions*, Tauraco Press, Liège) or *The Birds of Africa* (Brown *et al.* 1982, Urban *et al.* 1986, 1997, Fry *et al.* 1988, Keith *et al.* 1992, Academic Press, London), unless reasons for departure from these authorities are stated. A more complete **guide for authors** of avifaunal papers, including the preferred abundance scale, appeared in *Malimbus* 17: 35–39. A copy may be obtained from the Editor, who will be happy to advise on the presentation of specific studies.

Figures should be prepared as for final reproduction, allowing for 20–50% reduction, using indian ink on good quality white paper or heavy tracing, and adhesive transfer lettering as appropriate. Diagrams produced by computer programs other than specialized graphics packages, and by printers other than laser printers, are rarely of acceptable quality. When designing Figures, pay attention to the page-shape of *Malimbus*.

All Papers (but not Short Notes) should include a **Summary**, not exceeding 5% of the paper's length. The Summary should include brief reference to major findings of the paper and not simply review what was done. Summaries will be published in both English and French and will be translated as appropriate by the Editorial Board.

Ten **offprints** of Papers (but not of Short Notes) will be sent to single or senior authors, *gratis*. Offprints will not be stapled, bound, or covered; they are merely cut from copies of the journal.

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Journal of the West African Ornithological Society
Revue de la Société d'Ornithologie de l'Ouest Africain

VOLUME 21 Number 2
ISSN 0331-3689

September 1999

West African Ornithological Society
Société d'Ornithologie de l'Ouest Africain

La correspondance doit être adressée comme suit:
— au Rédacteur en Chef (CDRS, Casilla 17-01-3891, Quito, Ecuador) pour les publications dans *Malimbus*, y compris éventuellement des photos ou des dessins au trait;
— au Trésorier (1 Fisher's Heron, East Mills, Fordingbridge, Hampshire, SP6 2JR, U.K.) pour les abonnements, les questions financières et les numéros anciens;
— au Secrétaire Générale (Zoological Gardens, Chester CH2 1LH, U.K.) pour les demandes des Bourses de Recherches de la Société;
— au Président (1 Route de Sallenelles, 14860 Bréville-les-Monts, France; e-mail gmorel@mail.cpod.fr) pour les questions d'intérêt général.

La Société tire son origine de la "Nigerian Ornithologists' Society", fondée en 1964. Son but est de promouvoir l'intérêt scientifique pour les oiseaux de l'Ouest africain et de faire avancer l'ornithologie de ces régions principalement au moyen de sa revue *Malimbus* (anciennement *Bulletin of the Nigerian Ornithologists' Society*).

Les demandes d'adhésion sont les bienvenues. Les cotisations annuelles sont de £10 pour les Membres Ordinaires et de £25 pour les Sociétés (les cotisations peuvent être payées en £ sterling au Trésorier ou en francs français au Président). Les Membres Ordinaires reçoivent *Malimbus* par courrier ordinaire et les Sociétés par courrier aérien, gratuitement. Un supplément est exigé des Membres Ordinaires pour le courrier aérien (demander au Trésorier le tarif).

Anciens Numéros: Les Volumes 11–14 (1975–78) du *Bulletin of the Nigerian Ornithologists' Society* (du même format que *Malimbus*) sont disponibles à £ 2 par numéro (£4 par volume) ou £15 l'ensemble. Les Volumes 1–9 de *Malimbus* sont disponibles à £3 par numéro (£6 par volume) et, à partir du Vol. 10, à £5 par numéro (£10 par volume). On peut acheter la série complète des Vols 1–21 de *Malimbus* au prix spécial de £150. Frais de port et emballage sont gratuits. Veuillez joindre le paiement à votre commande et l'adresser au Trésorier.

Bourses de Recherches de la S.O.O.A.: Les conditions à remplir pour les candidatures se trouvent dans *Malimbus* 15: 103–106 et peuvent être obtenues auprès du Secrétaire Générale (voir adresse ci-dessus).

La Spatule blanche *Platalea leucorodia* hivernant dans le delta du Fleuve Sénégal

par Patrick Triplet[1] & Pierre Yésou[2]

[1] Réserve naturelle de la baie de Somme (SMACOPI), 1 place de l'Amiral Courbet, 80100 Abbeville, France (email: triplet@dyadel.net)
[2] Office National de la Chasse (Ministère de l'Aménagement du Territoire et de l'Environnement), 53 rue Russeil, 44000 Nantes, France (email: p.yesou@onc.gouv.fr)

Reçu 12 mars 1998; revu 1 mars 1999

Résumé

L'hivernage de la Spatule blanche *Platalea leucorodia* est connu dans le delta du Sénégal depuis les années 1950, en relative abondance, même si le dénombrement de ces oiseaux a rarement été exhaustif. Une attention particulière a été portée à l'espèce dans les années 1990, montrant que cette région est de toute première importance pour les Spatules blanches des colonies ouest-européennes (effectif maximum recensé: 2852 oiseaux en janvier 1999). Les mentions d'oiseaux attribuables à la sous-espèce *balsaci*, qui niche au Banc d'Arguin en Mauritanie, sont rares en hiver dans le delta.

Summary

It has been known since the 1950s that the Spoonbill *Platalea leucorodia* regularly overwinters in the Senegal delta in fair numbers, although censuses have rarely been complete. Particular attention was paid to the species in the 1990s, showing that the area is of prime importance for the west-European breeding population (maximum count of 2852 birds in January 1999). Records of the subspecies *balsaci*, which breeds on Banc d'Arguin, Mauritania, are rare in winter in the delta.

L'hivernage de la Spatule blanche est connu dans le delta du Sénégal depuis les prospections pionnières de Naurois (1969) et Morel & Roux (1966, 1973) dans les années 1950–60. Des données chiffrées sont disponibles à partir de 1972 (Morel & Roux 1973): les dénombrements de 1972 à 1990 ont été édités par Pérennou (1991), des compléments étant fournis par Dupuy & Fournier (1981) et Poorter (1982), et par A. Sauvage (*in litt.*). Au cours de cette période, la couverture n'a été uniforme ni dans

l'espace ni dans le temps. Ainsi, les informations publiées se limitent souvent à un effectif total pour le delta, sans distinction des différents sites ni précision sur le degré d'exhaustivité de la prospection. Par ailleurs, il n'y a aucune donnée de 1977 à 1979, en 1982, ni de 1984 à 1987. Depuis 1989, les agents de l'Office National de la Chasse ont recensé cette espèce lors des dénombrements annuels d'oiseaux d'eau de la mi-janvier et ont enregistré leurs observations site par site.

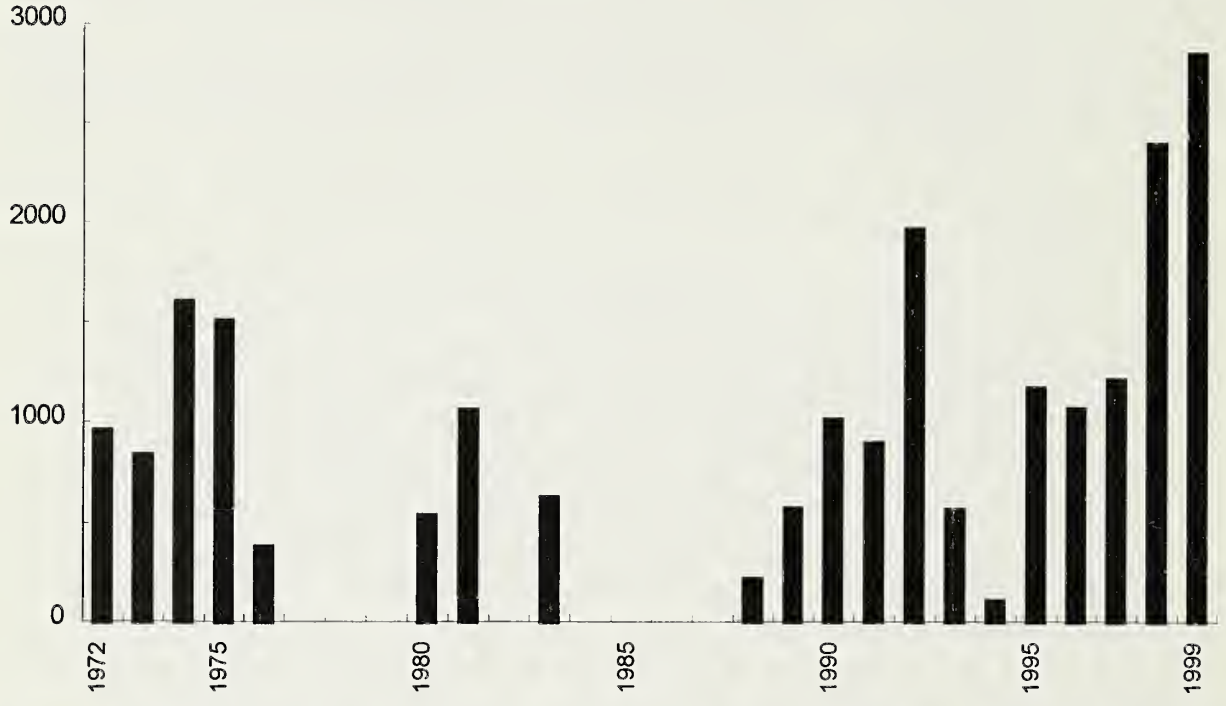

Figure 1. Evolution des effectifs de *Spatalea leucorodia* dénombrés en janvier dans le delta du fleuve Sénégal, 1972–99. D'après Dupuy & Fournier 1981, Poorter 1982, Pérennou 1991, Girard *et al.* 1991, 1992, Schricke *et al.* 1989, 1991, 1998, Triplet *et al.* 1995, 1997, Triplet & Yésou 1994, Trolliet *et al.* 1993, Yésou *et al.* 1996, Altenburg, van der Kamp, Meininger, Hötker et Dietrich *fide* A. Sauvage *in litt.*, B. ould Messaoud et V. Schricke (comm. pers.).

Les effectifs recensés dans le delta (Fig. 1) sont affectés de très importantes variations qui peuvent en partie s'expliquer par la couverture géographique variable selon les années, et parfois très incomplète, du moins jusqu'en 1994. De 1995 à 1999, la couverture intégrale des zones humides du delta a montré la difficulté d'y recenser précisément les Spatules blanches, espèce très mobile et relativement dispersée. Dans le delta, ces oiseaux fréquentent essentiellement les lagunes littorales et plans d'eau des dépressions arrière-dunaires, du sud de Saint-Louis-du-Sénégal au Chott-Boul en Mauritanie, ainsi que les parcs nationaux du Djoudj (Sénégal) et du Diawling (Mauritanie) et le site sénégalais de N'Digue dans la vallée du Djeuss. Le N'Diael, où s'observait jusqu'à une centaine d'oiseaux en novembre 1958 (Morel & Roux 1966), est maintenant très asséché (Triplet & Yésou 1997) et n'accueille l'espèce que de

façon très occasionnelle.

Dans une minorité de cas, au Djoudj et à N'Digue en particulier, les Spatules peuvent être disséminées en petits groupes sur des mares aux rives bordées d'écrans; leur observation est alors difficile, ce qui peut être source de sous-estimations. Mais les sites fréquentés par ces oiseaux sont généralement des paysages ouverts, ce qui facilite leur dénombrement (il reste toutefois difficile de différencier Spatule blanche et Spatule d'Afrique *Platalea alba* lors d'observations à grande distance, ce qui peut biaiser certaines estimations). La principale difficulté vient de leur extrême mobilité, les mêmes oiseaux pouvant visiter plusieurs sites à bref intervalle, voire dans la même journée: or le recensement d'une région telle que le delta du Sénégal (plus de 50000 ha de zones humides) s'étale toujours sur plusieurs jours. Aussi des oiseaux peuvent être comptés deux fois ou, à l'inverse, échapper à l'observateur.

Dans ce contexte, l'effectif très élevé de 1965 oiseaux en 1992 est peut-être sous-estimé, car cette année-là il n'y a pas eu de dénombrement sur les lagunes de Saint-Louis, ni en Mauritanie. De même, l'effectif très bas de 1994 tient peut-être à une prospection incomplète en Mauritanie et sur les lagunes de Saint-Louis. L'année 1996 pose un autre problème difficile à résoudre, un même effectif (829 oiseaux) ayant été noté à 24 heures d'intervalle de part et d'autre du fleuve. Certains oiseaux ont vraisemblablement été comptés deux fois, mais toutes les spatules ne se sont pas dépla-cées d'une rive à l'autre contrairement à ce que suggère la similitude des chiffres et l'effectif total reste incertain. Ces précautions d'interprétation étant posées, les effectifs recensés en janvier lors des récentes couvertures complètes du delta ont été de 1170 oiseaux en 1995, 1892 en 1996, 1209 en 1997, 2400 en 1998 (dont 1951 dénombrées simultanément le 15 janvier sur les parcs nationaux du Djoudj et du Diawling, et leurs abords immédiats) et 2852 en 1999 (dont 1996 le 13 janvier sur le P.N. du Diawling).

Morel & Roux (1966, 1973) et Naurois (1969) indiquaient que des oiseaux de la sous-espèce *P. l. balsaci*, endémique du Banc d'Arguin en Mauritanie, pouvaient atteindre la région du fleuve. Cette sous-espèce se distingue en particulier par sa plus petite taille et par la couleur uniforme du bec sans pointe jaunâtre chez les adultes, la détermination des jeunes étant plus délicate (Cramp & Simmons 1977, Otto Overdijk, comm. pers.), et quelques reprises d'oiseaux bagués confirment son occurrence passée jusqu'à Saint-Louis et Richard-Toll (Morel & Roux 1966). Toutefois, Poorter (1982) estimait que cette sous-espèce représentait moins de 5 % des effectifs hivernant dans le delta, et une récente synthèse souligne que sa présence reste à confirmer sur la rive mauritanienne (Messaoud *et al.* 1998). L'un de nous (PT) a porté une attention particulière aux groupes de spatules en janvier 1998, mais n'a observé aucun individu de cette sous-espèce (446 oiseaux déterminés sub-spécifiquement sur un total de 1326 dénombrés). En 1999, la recherche effectuée par O. Overdijk et PT n'a pas fourni la preuve de la présence de cette sous-espèce en janvier.

Poorter (1982), Court & Aguilera (1997) et O. Overdijk (comm. pers.) ont en fait montré que les Spatules observées au Sénégal proviennent des Pays-Bas et d'Espagne

(plus de 200 contrôles effectués principalement sur la réserve de Guembeul et au Parc National du Djoudj). De nombreux contrôles d'oiseaux français ont également été réalisés ces dernières années (obs. pers., O. Overdijk comm. pers.). Les spatules hivernant dans le delta du Sénégal sont bien, dans leur quasi-totalité, des *P. l. leucorodia* originaires des colonies de reproduction ouest-européennes.

En conclusion, cette synthèse confirme l'importance du delta du Sénégal comme site d'hivernage des spatules ouest européennes. Les effectifs de cette population, en augmentation, s'élève à 5100–5200 oiseaux (Overdijk sous presse, comm. pers.) qui hivernent de façon disséminée de la France à l'Afrique de l'Ouest. Près de 50 % de cet effectif hivernerait donc dans le delta du fleuve Sénégal et 30–40 %, parfois jusqu'à 50 % selon les années, sur banc d'Arguin (Overdijk sous presse). Le delta du Sénégal apparaît comme une des deux zones les plus importantes de l'aire d'hivernage de cette population ouest-européenne. Au sein du delta, plusieurs sites (Parcs Nationaux, lagunes de Saint-Louis) sont favorables au stationnement prolongé d'effectifs conséquents et se prêtent à une étude détaillée des modalités d'hivernage (occupation de l'espace, exigences écologiques) qui compléterait utilement les connaissances sur l'écologie et le statut numérique de l'espèce.

Remerciements

Aux lecteurs dont les commentaires ont permis d'enrichir une première version de ce texte, à Brahim ould Messaoud, et à nos collègues Jean-Pierre Lafond, Gilles Leray, Jean-Yves Mondain-Monval et Vincent Schricke pour leurs informations inédites concernant janvier 1999. Otto Overdijk, coordinateur du réseau européen "Spatule", a fourni de nombreux renseignements, a amélioré le texte et a contribué à l'évaluation des effectifs de 1999.

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

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Received 12 October 1998; revised 14 May 1999

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*.

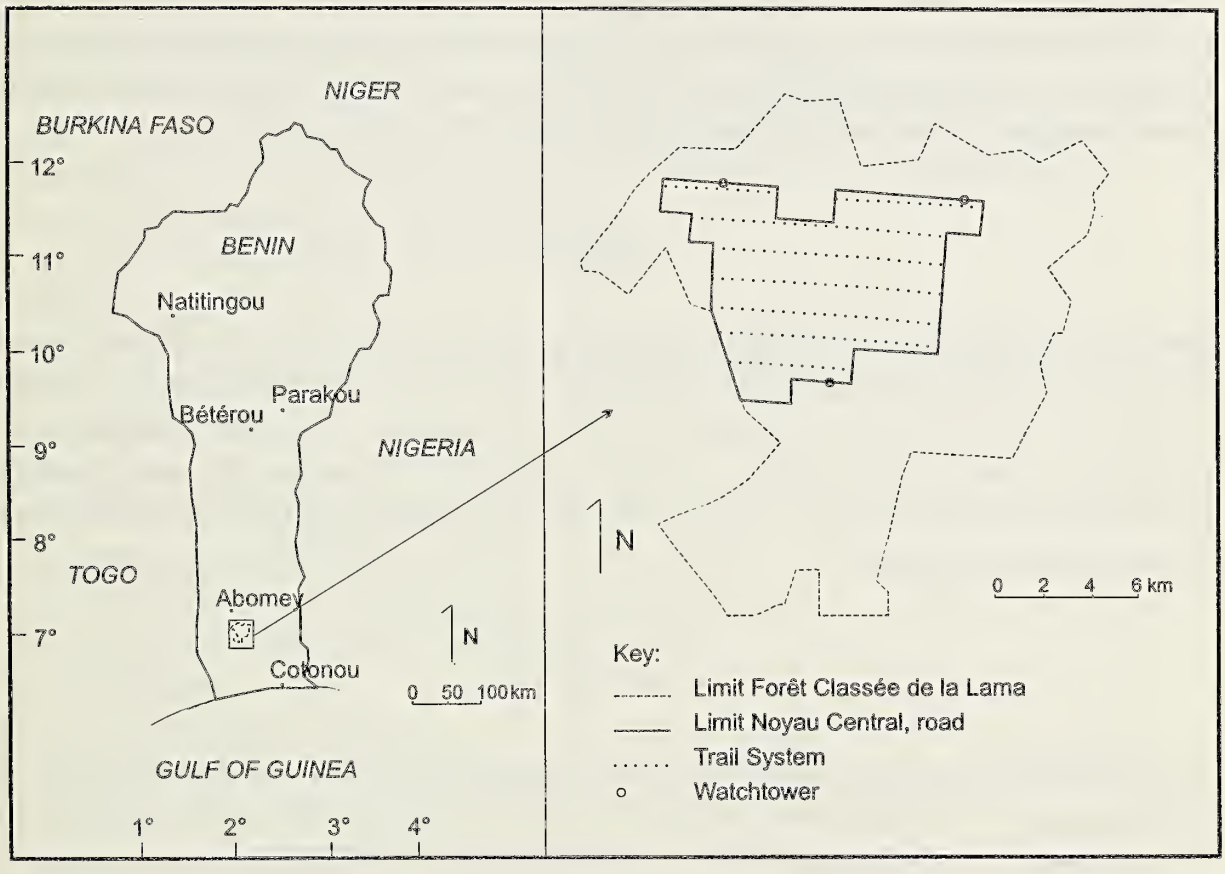

Figure 1. The location of the Lama Forest and other places mentioned in the text.

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
C: Common	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-eyed 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

Halcyon 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-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.
Pycnonotus 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 mist-netted. 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.

Quelea 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 non-forest 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.

Acknowledgments

The Kreditanstalt für Wiederaufbau (KfW) and the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) initiated and supported this project. We thank Michel Louette for helping with literature, Roland Hilbert, Ron Demey, R.A. Cheke and Patrick Claffey for their comments on the manuscript and for identifying birds from tape recordings. Brice Sinsin, Maarten Van den Akker, Jacques Adjakpa and Patient Coubeou gave other useful information.

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Preliminary check-list of the birds of the Bossematié area, Ivory Coast

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Received 11 March 1999; revised 8 July 1999

Summary

A species list is given of the previously undescribed bird fauna of the Bossematié area, SE Ivory Coast, which consists mainly of heavily logged forest and surrounding farmland. During 13 months of fieldwork between April 1995 and August 1997, 235 species were identified, including five species of conservation concern: Green-tailed Bristlebill *Bleda eximia* (Vulnerable), the Near-Threatened species Brown-cheeked Hornbill *Ceratogymna cylindricus*, Yellow-casqued Wattled Hornbill *C. elata* and Rufous-winged Illadopsis *Illadopsis rufescens*, and the restricted-range species Sharpe's Apalis *Apalis sharpii*. White-breasted Guineafowl *Agelastes meleagrides*, previously occurring in the forest, seems to have become extinct. Marsh Owl *Asio capensis* was recorded for the first time in Ivory Coast.

Résumé

On donne ici une liste de l'avifaune encore non décrite de la région de Bossematié, SE de la Côte d'Ivoire, qui consiste surtout en forêt fortement exploitée et en terrains de cultures avoisinants. Au cours des 13 mois de travail de terrain entre avril 1995 et août 1997, 235 espèces furent identifiées, dont cinq aux risques d'extinction inquiétants: le Bulbul à queue verte *Bleda eximia* (Vulnérable), le Calao à joues brunes *Ceratogymana cylindricus* espèce Quasi-menacée, le Calao à casque jaune *C. elata* et l'Akalat à ailes rousses *Illadopsis rufescens*, et l'espèce à distribution circonscrite l'Apalis de Sharpe *Apalis sharpii*. La Pintade à poitrine blanche *Agelastes melagrides*, que l'on rencontrait naguère dans la forêt, semble avoir disparu. Le Hibou du Cap *Asio capensis* fut observé pour la première fois en Côte d'Ivoire.

Introduction

Timber exploitation and the continuing conversion of forest into farmland have led in the last 20 years to a dramatic decrease of forest cover in Ivory Coast. Recent activities by the government aim to stop uncontrolled exploitation on public land and include it in controlled land-use planning and management. In eastern Ivory Coast seven forest areas have been re-classified as state forests (Forêts Classées) and are now the subject of a rehabilitation programme of SODEFOR (Société de Développement des Forêts) in co-operation with the German aid agency GTZ. Faunistically, the best studied of these is the Bossematié Forest. In the present paper we present current knowledge about its avifauna and compare the results with known bird distribution in Ivory Coast (Thiollay 1985a,b, Demey & Fishpool 1991, 1994, Gartshore *et al.* 1995), Ghana (Grimes 1987) and Liberia (Gatter 1998). Our data from the moist semi-deciduous forest zone may fill in a north-south data gap, as most studies on Ivory Coast's forest avifauna have been undertaken in wet forests or savanna. Nevertheless, it has to be remembered that the original species composition and abundance of forest species have been altered in the area due to intensive logging and forest fragmentation.

The Bossematié Forest and surrounding area

Bossematié Forest forms part of the proposed trans-national Bia-Bossematié network area, which contains the six areas in eastern Ivory Coast and western Ghana, where the African Forest Elephant *Loxodonta africana cyclotis* still occurs (Parren & de Graaf 1995). The 22,200 ha forest is located 40 km south of Abengourou (6°35′–6°20′N and 3°35′–3°20′W). To the north, a 6-km strip of cultivated land separates the Bossematié from the neighbouring Forêt Classée de la Beki. To the east it is bordered by the Abengourou-Bettié road, to the south by the Comoé River and to the west by the small Bossematié River (Fig. 1). Several villages are situated in its immediate vicinity and the forest block is totally surrounded by farmland.

The area has an altitude of 140–240 m and is slightly hilly, with humid valleys, dry ridges, no permanent water but several small streams in the rainy season. It receives an average annual rainfall of 1400 mm and belongs to the moist semi-deciduous forest zone (Hall & Swaine 1976). Characteristic tree species are *Triplochiton scleroxylon* and *Celtis spp.* in the north, and *Khaya ivorensis* and *Piptadeniastrum africanum* in the south. The Bossematié has been selectively logged five or six times between the early 1960s and 1990, when timber exploitation stopped. Existing banana and cocoa plantations were abandoned with the beginning of the project in 1990. What is left is a forest with a canopy cover of not more than 40% and extremely patchy vegetation. The valleys have a very open character and differ from the hills in having an understorey that is largely dominated by the

agressive introduced herb *Chromolaena odorata*, and a less well developed midstorey. However, the drier hills are also characterized by a dense understorey under an open midstorey and canopy; many clearings contribute to the open character.

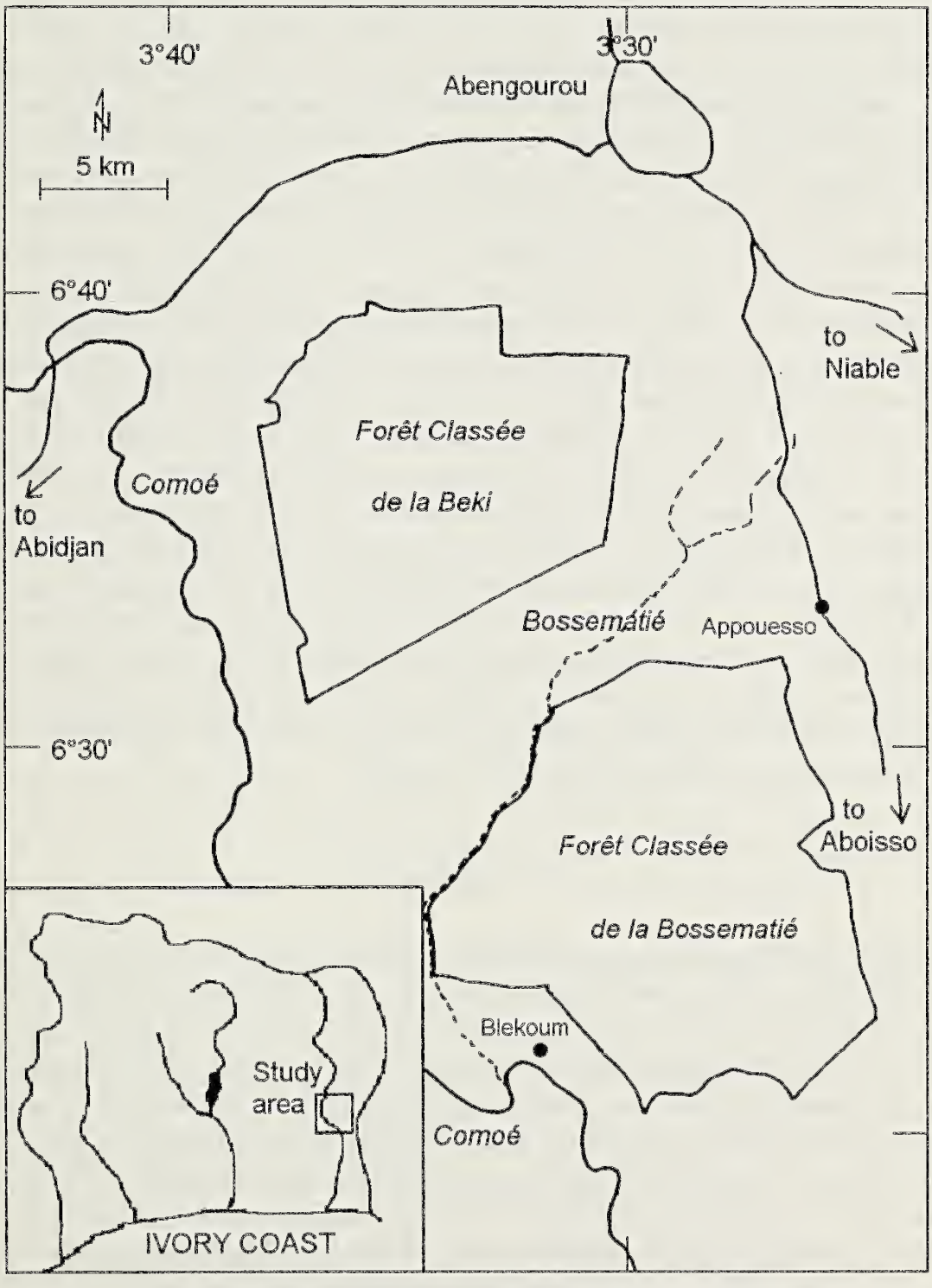

Figure 1. Ivory Coast, Bossematié area. Observations made in the Forêt Classée de la Beki are not included in this paper.

Poaching was reduced in the first years of the project, but has since increased again and is still high. In addition to the Forest Elephant, the mammal fauna includes Chimpanzee *Pan troglodytes verus*. About 300 butterfly species have been found and some 500 are expected to occur (Larsen unpubl., Dall'Asta & Fermon unpubl.).

Since 1990, the following management activities have been begun: establishment of plantations of *Triplochiton scleroxylon* and *Terminalia* spp. in former cocoa plantations and deforested areas (1076 ha), enrichment planting of potential crop trees in very degraded areas (2034 ha), and the free cutting of selected trees to reduce liana cover and minimize competition from trees of secondary interest (9522 ha). Three strict biological reserves have been established within the forest borders, containing one third of the total forest area (7404 ha). The planned management activities will be conducted until 2014. Controlled timber exploitation has been proposed for 2005–2014 on *c.* 4515 ha with an intensity of 1.3 trees per ha (SODEFOR 1994). In order to monitor possible effects of management activities, a programme using 30 bird and 20 mammal species as biological indicators was started in 1992. The animals' densities are assessed from 16 permanent 2-km transects inside the forest. Fieldwork is carried out by teams recruited from villagers around the forest, mainly experienced hunters. For more background information see Waitkuwait 1992, Mühlenberg *et al.* 1995.

The area surrounding the Forêt Classée is largely dominated by cocoa and coffee plantations. Small patches of logged forest exist, with the understorey slightly regenerated, as well as overgrown former plantations, but their size is not significant and their surface is declining due to the continuing planting of cocoa and coffee. Several small ponds are used for pisciculture and there is a large water reservoir near Abengourou. There are also many ricefields, which are used as occasional resting places by waterbirds. Fishing, hunting and farming activities prevent these wetlands from being suitable as breeding sites for waterbirds.

Methods

Ornithological fieldwork was carried out between Apr 1995 and Aug 1997 (181 days). Of these, 52 days were in the dry season (Dec 1995 to Mar 1996, Dec 1996) and 129 in the rainy months (Apr–Jul 1995, Sep–Oct 1996, Jun–Aug 1997). The number of observation days in the Bossematié Forest was 161, while observations in the surrounding farmland were only made during 38 days (including days with visits in both habitats). Field work between Apr and Jul 1995 was carried out mainly along 16 permanent 2-km transects, which are used in the Bossematié forest for biological monitoring (see Waitkuwait 1992). A 110 ha plot with a 100 x 100 m grid of footpaths, established in the northern part of the forest, has been surveyed six times from Jun to Aug 1997. An additional mark-recapture study on understorey birds was carried out on this plot using three mist-netting phases (Feb–Mar 1996, Sep–Oct 1996 and Jul–Aug 1997), which produced 1282 captures of 746 individuals. In addition,

mist-netting has been done in a small forest patch of *c.* 4 ha, *c.* 5 km from the Forêt Classée, in Jun 1995 (56 captures).

Results

In total, 235 bird species were recorded. One species, *Asio capensis* (English names in systematic list, below), seems to be recorded for the first time in Ivory Coast. In the Bossematié Forest 158 species were identified, of which 109 (70%) were observed only within the forest borders. In the surrounding farmland 122 species were counted.

In the heavily logged Forêt Classée many of the "primary forest species" (*sensu* Thiollay 1985b) were present. Five forest species are classified as species of conservation concern or restricted-range species (Collar *et al.* 1994, Stattersfield *et al.* 1998). These are *Bleda eximia* (Vulnerable) and the Near-Threatened *Ceratogymna cylindricus*, *C. elata* and *Illadopsis rufescens*. The restricted range species *Apalis sharpii* was also found. However, several of the characteristic forest species were rare or uncommon and it is questionable whether the conditions in the remaining forest are suitable for their survival. *Agelastes meleagrides* (Vulnerable), whose former presence was reported by locals, now seems to be completely absent, although it still occurs *c.* 30 km south of the Bossematié area, in the less exploited Mabi Forest (pers. obs.).The populations of some of the forest birds, especially the *Ceratogymna* hornbills, are very small and their situation must be considered as critical. On the other hand, several species that are uncommon in undisturbed forest seem to profit from the secondary character of the Forêt Classée, *e.g. Francolinus ahantensis, Tockus semifasciatus, Gymnobucco peli, Pogoniulus scolopaceus* and *Trachyphonus purpuratus*. In the understorey, *Nectarinia olivacea, Andropadus latirostris*, *Bleda canicapilla* and *Alethe diademata* are the most dominant species in mistnet samples, followed by *Hylia prasina, Phyllastrephus albigularis* and *Andropadus virens*. Abundant also are *Chrysococcyx cupreus* and *Dicrurus adsimilis*, regularly seen in mixed bird flocks.

The 122 species recorded in the surrounding farmland represent a completely different avifauna. The most common birds include ubiquitous species such as *Pycnonotus barbatus* or *Corvus albus*, and forest edge species such as *Cisticola lateralis* and several estrildine finches. No *Ceratogymna* hornbills and only a few Pycnonotidae were recorded in the farmland. Of the forest understorey avifauna, only a few species remain common in dense farmbush, for example *Andropadus virens* and *Francolinus ahantensis*. Some forest species, such as *Bleda canicapilla* or *Andropadus latirostris* can be found in small remnant forest patches in the farmed area, but most of the 48 forest species that were recorded outside the forest were less common in farmland. Although most of the time was spent inside the Bossematié Forest and many forest species present in farmland may have been missed, the species loss that we observed may be ecologically significant. Kofron & Chapman (1995), in

a Liberian study, also found that 70% of the species present in virgin forest could not be found in surrounding farmland.

Systematic list

Nomenclature follows Brown *et al.* (1982), Urban *et al.* (1986), Fry *et al.* (1988), Keith *et al.(* 1992), Urban *et al.* (1997) and Dowsett & Forbes-Watson (1993). In assessment of abundance, we follow the suggestions of Morel & Tye (1995):

Very abundant (VA)	>100 may be seen or heard in suitable habitat per day
Abundant (A)	11–100 may be seen or heard in suitable habitat per day
Common (C)	1–10 may be seen or heard in suitable habitat per day
Frequent (F)	often seen but not every day
Uncommon (U)	several records per year
Rare (R)	one record per several years (resident species)
Vagrant (V)	one record per several years (non-residents)

Other abbreviations: BF, recorded inside the Bossematié forest; NF, recorded in areas surrounding the Bossematié forest.

Phalacrocoracidae

Phalacrocorax africanus Long-tailed Cormorant. Four, NF, 18 Jun 1995.

Anhingidae

Anhinga rufa African Darter. One, NF, Feb 1996.

Ardeidae

Ardeola ralloides Squacco Heron. Five, NF, 18 Jun 1995, One, NF, 14 Mar 1996.
Bubulcus ibis Cattle Egret. C, NF.
Butorides striatus Green Heron. F, NF.
Egretta garzetta Little Egret. U, NF.
E. intermedia Yellow-billed Egret. F, NF.
Ardea purpurea Purple Heron. R, NF
A. cinerea Grey Heron. F, NF.

Scopidae

Scopus umbretta Hamerkop. One, NF, 9 Mar 1996.

Acciptridae

Pandion haliaetus Osprey. One, NF, 25 Dec 1995.
Aviceda cuculoides African Cuckoo Falcon. F, BF.
Pernis apivorus Honey Buzzard. One, NF, Mar 1996.
Elanus caeruleus Black-shouldered Kite. R, NF, 18 Jun 1995.
Milvus migrans Black Kite. C, NF.
Gypohierax angolensis Palm-nut Vulture. C, NF; C, BF.
Necrosyrtes monachus Hooded Vulture. C, NF.
Circaetus cinerascens Smaller Banded Snake-Eagle. One, NF, 2 Jun 1995; one, BF, 6 Feb 1996.
Polyboroides typus Harrier Hawk. C, NF; C, BF.

Accipiter tachiro African Goshawk. C, NF, C, BF.
A. badius Shikra. One, NF, 10 Apr 1995.
A. erythropus Red-thighed Sparrowhawk. F, BF.
A. melanoleucos Black Sparrowhawk. U, BF.
Urotriorchis macrourus Long-tailed Hawk. F, BF.
Aquila wahlbergi Wahlberg's Eagle. One, BF, 7 Feb 1996.
Stephanoaetus coronatus Crowned Eagle. F, BF.
Hieraaetus ayresii Ayres's Hawk Eagle. One, BF, 19 Aug 1997.

Falconidae

Falco ardosiaceus Grey Kestrel. One, NF, 7 Feb 1996.
F. biarmicus Lanner Falcon. C, NF; Two juveniles, 21 Mar 1996.
F. tinnunculus Common Kestrel. One, NF, 10 Apr 1995.

Phasianidae

Guttera pucherani Crested Guineafowl. C, BF.
Francolinus lathami Latham's Forest Francolin. C, BF.
F. ahantensis Ahanta Francolin. C, BF; C, NF.
F. bicalcaratus Double-spurred Francolin. U, BF; F, NF.

Rallidae

Himantornis haematopus Nkulengu Rail. F, BF.
Sarothrura pulchra White-spotted Flufftail. C, BF; F, NF.
Amaurornis flavirostris Black Crake. C, NF.
Crex egregia African Crake. Two, NF, 2 Aug 1997.

Jacanidae

Actophilornis africana African Jacana. C, NF.

Glareolidae

Glareola nuchalis Rock Pratincole. F, NF.

Charadriidae

Tringa ochropus Green Sandpiper. Two, NF, 25 Dec 1995.
T. glareola Wood Sandpiper. One, NF, 14 Mar 1996.
Actitis hypoleucos Common Sandpiper. Two, NF, 25 Dec 1995 and 16 Mar 1996.

Columbidae

Treron calva African Green Pigeon. A, BF; A, NF.
Turtur brehmeri Blue-headed Wood Dove. F, BF.
T. tympanistria Tambourine Dove. C, BF; F, NF.
T. afer Blue-spotted Wood Dove. F, BF; C, NF.
Oena capensis Namaqua Dove. One, NF, Feb 1996.
Columba iriditorques Western Bronze-naped Pigeon. C, BF.
C. unicincta Afep Pigeon. F, BF.
Streptopelia semitorquata Red-eyed Dove. C, BF; C, NF.
S. senegalensis Laughing Dove. C, NF.

Psittacidae

Psittacus e. erithacus Grey Parrot. F, BF.

Poicephalus gulielmi Red-fronted Parrot. C, BF, with flocks up to 15. One sighting of ten over-flying birds, NF. Rare and local in Ivory Coast (Thiollay 1985a, Demey & Fishpool 1994, Gartshore et al. 1995).
Poicephalus senegalus Senegal Parrot. One, NF, 8 Jun 1997.

Musophagidae

Corythaeola cristata Great Blue Turaco. C, BF.
Tauraco macrorhynchus Yellow-billed Turaco. C, BF; R, NF.
Crinifer piscator Western Grey Plantain-eater. F, NF.

Cuculidae

Oxylophus levaillantii African Striped Cuckoo. One, NF, 7 Feb 1996.
Cuculus solitarius Red-chested Cuckoo. F, BF.
C. clamosus Black Cuckoo. F, BF.
Cercococcyx mechowi Dusky Long-tailed Cuckoo. One, BF, 13 May 1995.
C. olivinus Olive Long-tailed Cuckoo. F, BF.
Chrysococcyx Emerald Cuckoo. C, BF; F, NF.
C. klaas Klaas's Cuckoo. C, BF; C, NF.
C. caprius Diederik Cuckoo. C, NF.
Ceuthmochares aereus Yellowbill. F, BF.
Centropus leucogaster Black-throated Coucal. C, BF; U, NF.
C. senegalensis Senegal Coucal. F, BF; C, NF.

Tytonidae

Tyto alba Barn Owl. C, NF.

Strigidae

Bubo poensis Fraser's Eagle Owl. A captive immature was photographed in Abengourou, 7 Jun 1997. Calling *Bubo* owls commonly heard inside Bossematié Forest were probably this species. Common in Yapo Forest (Demey & Fishpool 1994). Said to be well adapted to logged forest in Liberia (Gatter 1998).
Glaucidium tephronotum Red-chested Owlet. Tape-recorded song, 2 May 1995, confirmed as this species by C. Chappuis (*in litt.*). Previously recorded in Tai, Yapo and a few other forest areas (Thiollay 1985a, Demey & Fishpool 1994, Gartshore *et al.* 1995).
Strix woodfordii African Wood Owl. C, BF; F, NF. An immature, 7. Jun 1997.
Otus icterorhynchus Sandy Scops Owl. One, BF, 21 Jun 1997, observed flying off after being mobbed by several small birds. Recognised from size and sandy, unmarked plumage. We were familiar with this species from a mist-netted individual in the Nimba area in Jun 1997 (Yaokokore-Beibro & Waltert unpubl.). A drawn-out whistle, emitted by us after our observation, again caused mobbing by *Macrosphenus kempi* and *Malimbus nitens*. Previously known from very few locations (Thiollay 1985a, Demey & Fishpool 1994).
Asio capensis Marsh Owl. One roosting in a tree in a park-like area near ricefields in the vicinity of Abengourou, 8 June 1997. It was being mobbed by several *Pycnonotus barbatus*. It was a pale brown owl, size and general appearance of an *Asio*, with dark eyes and no visible ear tufts, which sat in an almost horizontal position while staring

at the observer. When approached, it flew off low, showing pale buff patches on the primaries. The wings appeared longer than in *A. flammeus*. First record for Ivory Coast. In West Africa, resident in grassy valleys and swamps in arid regions, *e.g.* in Senegambia, Mali, Benin, Burkina Faso, Nigeria and Niger (Fry *et al.* 1992). Not recorded in Ghana or Liberia (Grimes 1987, Gatter 1998), but reported as far south as Lagos, Nigeria (Elgood *et al.* 1994).

Caprimulgidae

Caprimulgus inornatus Plain Nightjar. One, NF, 18 Jan 1996.
Macrodipteryx longipennis Standard-winged Nightjar. U, NF.

Apodidae

Telacanthura melanopygia Black Spinetail. Four, BF, 16 Jul 1997.
T. ussheri Mottled Spinetail. Ten, BF, 14 Jun 1997.
Neafrapus cassini Cassin's Spinetail. Two, NF, 12 Jun 1997.
Cypsiurus parvus African Palm Swift. C, NF.
Apus pallidus Pallid Swift. Fifteen, NF, 14 Mar 1996.
A. affinis Little Swift. C, NF.

Trogonidae

Apaloderma narina Narina's Trogon. F, BF.

Alcedinidae

Halcyon badia Chocolate-backed Kingfisher. F, BF.
H. malimbica Blue-breasted Kingfisher. One, BF, 17 Jun 1995.
H. senegalensis Woodland Kingfisher. C, BF; C, NF.
Ceyx lecontei Dwarf Kingfisher. One, BF, 12 Sep 1996.
C. picta Pygmy Kingfisher. F, NF.
Corythornis cristata Malachite Kingfisher. One, NF, 2 May 1995.
Alcedo quadribrachys Shining Blue Kingfisher. One, NF, 18 Jun 1995.

Meropidae

Merops muelleri Blue-headed Bee-eater. Three observations in the southern part of the Bossematié Forest. Known from Tai and Yapo (Thiollay 1985a, Demey & Fishpool 1994, Gartshore *et al.* 1995).
M. gularis Black Bee-eater. F, BF; U, NF.
M. pusillus Little Bee-eater. F, NF.
M. albicollis White-throated Bee-eater. F, NF.

Coracidae

Eurystomus gularis Blue-throated Roller. C, BF.

Phoeniculidae

Phoeniculus castaneiceps Forest Wood-Hoopoe. F, BF.
P. bollei White-headed Wood-Hoopoe. F, BF.

Bucerotidae

Tockus albocristatus White-crested Hornbill. C, BF; U, NF.
T. hartlaubi Black Dwarf Hornbill. F, BF.
T. camurus Red-billed Dwarf Hornbill. F, BF.

T. fasciatus African Pied Hornbill. A, BF; A, NF.
Ceratogymna fistulator Piping Hornbill. F, BF; U, NF.
C. subcylindricus Black-and-white-casqued Hornbill. Only two observations, BF: Ten, 6 Jan and four, 7 Feb 1996. The dry season occurrence in the Bossematié area strongly suggests seasonal movements.
C. cylindricus Brown-cheeked Hornbill. F, BF. A pair with one young, 9 Feb 1996. A group of six, 16 Mar 1996. All other groups comprised only 2–3 birds. As in Ghana (Grimes 1987), the local population has declined seriously (reported by hunters). Near-threatened (Collar *et al.* 1994).
C. atrata Black-casqued Wattled Hornbill. Three observations, BF: a flock of eight, 11 Apr 1995; two, 21 Dec 1995; a single male, 9 Feb 1996. The main distribution may be wet evergreen rain forest, (see Thiollay 1985a), but according to locals, it was previously much more common in the area. Contrary to the situation in the Bossematié area, this species is more numerous than *C. elata* in Bia National Park (Grimes 1987). This may suggest that *atrata* may be more vulnerable than *elata*.
C. elata Yellow-casqued Wattled Hornbill. F, BF. Groups of up to ten. A juvenile in company of nine adults de-barking branches of a tall tree, 17 Jun 1997. The higher abundance of this species in comparison to C. *atrata* is in accordance with J.-M. Thiollay (*in litt.*), who considers it more a species of gallery forest and more adaptable to secondary habitats. Near-threatened (Collar *et al.* 1994).

Capitonidae

Gymnobucco peli Bristle-nosed Barbet. C, BF; F, NF.
G. calvus Naked-faced Barbet. F, BF; C, NF.
Pogoniulus scolopaceus Speckled Tinkerbird. C, BF; C, NF.
P. atroflavus Red-rumped Tinkerbird. F, BF.
P. subsulphureus Yellow-throated Tinkerbird. C, BF; F, NF.
P. bilineatus Yellow-rumped Tinkerbird. F, BF; F, NF.
Tricholaema hirsuta Hairy-breasted Barbet. C, BF; U, NF.
Lybius vieilloti Vieillot's Barbet. U, NF.
Trachyphonus purpuratus Yellow-billed Barbet. C, BF.

Indicatoridae

Indicator exilis Least Honeyguide. An adult in fresh plumage mist-netted, BF, 21 Feb 1996. Identification confirmed on the basis of photographs by M. Louette and R. Demey. Forest edge and galleries in Ivory Coast (Thiollay 1985a). Rare resident in Ghana (Grimes 1987); locally not uncommon in Liberia, where recorded along logging roads (Gatter 1998).
I. conirostris Thick-billed Honeyguide. Recorded once, BF, 11 Aug 1997, perching quietly in a tree in a clearing near a colony of *Gymnobucco peli*, considered to be its principal host in Ghana (Grimes 1987). Recorded in Tai and Yapo (Demey & Fishpool 1994, Gartshore et al. 1995).

Picidae

Campethera nivosa Buff-spotted Woodpecker. C, BF.

Dendropicos gabonensis Gabon Woodpecker. F, BF.
D. pyrrhogaster Fire-bellied Woodpecker. C, BF.

Eurylaimidae

Smithornis rufolateralis Rufous-sided Broadbill. F, BF.

Pittidae

Pitta angolensis African Pitta. A displaying individual, BF, 27 Dec 1995, seen well while perching on a low tree. It produced a purring noise with its wings and emitted repeatedly the curious froglike call. Uncommon in Ivory Coast (Thiollay 1985a, Gartshore *et al.* 1995).

Hirundinidae

Hirundo abyssinica Lesser Striped Swallow. A, NF.
H. nigrita White-throated Blue Swallow. U, NF.
H. daurica Red-rumped Swallow. Two, NF, 21 Jun 1997.
H. aethiopica Ethiopian Swallow. C in villages Apr–Oct. Mud-collecting individuals, 21 Jun 1997. Considered very local in Ivory Coast and Ghana (Thiollay 1985a, Grimes 1987), but our records confirm continuing westward range-extension (see Grimes 1987, Demey & Fishpool 1991).
H. rustica Barn Swallow. F, BF; F, NF.
H. semirufa Rufous-chested Swallow. C, NF.

Motacillidae

Motacilla flava thunbergi Yellow Wagtail. One, NF, 14 Mar 1996.
M. aguimp African Pied Wagtail. F, NF.
Anthus leucophrys Plain-backed Pipit. U, NF.

Campephagidae

Coracina pectoralis White-breasted Cukoo-Shrike. Two chasing each other in a tree in farmland, 10 Jun 1995. Seems to be the third record in Ivory Coast south of 8°N (Thiollay 1985a, Demey & Fishpool 1991). Southernmost record in western Ghana seems to be Bole (9°3′N) (Grimes 1987).
C. azurea Blue Cuckoo-Shrike. F, BF.

Pycnonotidae

Andropadus virens Little Greenbul. A, BF; A; NF.
A. gracilis Little Grey Greenbul. F, BF.
A. ansorgei Ansorge's Greenbul. F, BF.
A. curvirostris Plain Greenbul. C, BF.
A. gracilirostris Slender-billed Greenbul. C, BF.
A. latirostris Yellow-whiskered Greenbul. A, BF; F, NF.
Calyptocichla serina Golden Bulbul. U, BF.
Baeopogon indicator Honeyguide Bulbul. C, BF.
Ixonotus guttatus Spotted Bulbul. U, BF.
Chlorocichla simplex Simple Greenbul. F, NF.
Thescelocichla leucopleura Swamp Palm Bulbul. F, BF; F, NF.
Phyllastrephus icterinus Icterine Greenbul. U, BF.

P. albigularis White-throated Greenbul. C, BF; U, NF.
Bleda syndactyla Red-tailed Bristlebill. C, BF.
B. eximia Green-tailed Bristlebill. F, BF. Seven mist-netted. Primary moult 10 Feb 1996, 12 Sep 1996 and 12 Aug 1997. A female with large brood patch, 29 Jul 1997. The stomach of a male with enlarged testes, killed in a mist-net by an *Accipiter tachiro*, 27 Sep 1996, contained remains of two caterpillars, *c.* five diplopods and one spider. Vulnerable (Collar *et al.* 1994). Rarely observed in Ivory Coast, mainly in wet evergreen forest (Thiollay 1985a, Demey & Fishpool 1994, Gartshore *et al.* 1995).
B. canicapilla Grey-headed Bristlebill. A, BF; U, NF.
Criniger barbatus Western bearded Bulbul. F, BF.
C. calurus Red-tailed Bulbul. C, BF.
Pycnonotus barbatus Common Bulbul. C, BF; A, NF.

Turdidae

Stiphrornis erythrothorax Forest Robin. F, BF.
Alethe diademata Fire-crested Alethe. C, BF.
Neocossyphus poensis White-tailed Ant-Thrush. F, BF.
N. finschii Finsch's Flycatcher-Thrush. F, BF.

Sylviidae

Cisticola lateralis Whistling Cisticola. A, NF.
Prinia subflava Tawny-flanked Prinia. F, NF.
Apalis sharpii Sharpe's Apalis. C, BF; most often encountered in mixed flocks. Rarely seen, but song regularly heard. *A. nigriceps* has not been recorded. Both species are common in Yapo (Demey and Fishpool 1994).
Camaroptera brachyura Bleating Warbler. U, BF; C, NF.
C. superciliaris Yellow-browed Camaroptera. C, BF; F, NF.
C. chloronata Olive-green Camaroptera. C, BF.
Macrosphenus kempi Kemp's Longbill. C, BF.
M. concolor Grey Longbill. C, BF.
Eremomela badiceps Rufous-crowned Eremomela. F, BF.
Sylvietta virens Green Crombec. C, BF; C, NF.
Hyliota violacea Violet-backed Hyliota. U, BF.
Hylia prasina Green Hylia. C, BF; F, NF.

Muscicapidae

Fraseria ocreata Fraser's Forest Flycatcher. C, BF.
Muscicapa striata Spotted Flycatcher. One, NF, 9 Mar 1996.
M. caerulescens Ashy Flycatcher. Observed twice along a road, BF, 8 and 20 Aug 1997. Not uncommon in forest clearings at the northern edge of the forest zone (Thiollay 1985a), but observed in Tai as well (Gartshore *et al.* 1995).
M. epulata Little Grey Flycatcher. Two observations and eight mist-netted, BF. Individuals with large brood patches, 19 Feb 1996 and 11 Aug 1997. An immature with spots on secondary coverts, 20 Mar 1996. Identification confirmed from photographs, by M. Louette. Field characters included: grey feet, lower mandible black

with whitish base, feathers of forehead and crown with blackish centres, washed-out greyish streaks on the flanks. A captured male sang when handled. Song, similar to *Stiphrornis erythrothorax*, a thin *dee-dee-didi-dee-di*, answered by a second bird (the female?) with a soft *huit*. Few records in Ivory Coast (Thiollay 1985a, Demey & Fishpool 1991, 1994, Gartshore *et al.* 1995). Uncommon in Ghana and Liberia (Grimes 1987, Gatter 1998) and said to occur mainly in primary forest (Gatter 1998). Demey & Fishpool (1994) observed the bird in midstorey, whereas Gatter (1998) and Gartshore *et al.* (1995) recorded it in canopy. However, our mist-net records suggest, that the species visits undergrowth as well, as suggested by Grimes (1987).

M. ussheri Ussher's Flycatcher. F, BF; F, NF.

Monarchidae

Erythrocercus mccallii Chestnut-capped Flycatcher. C, BF.

Trochocercus nitens Blue-headed Crested Flycatcher. C, BF.

Terpsiphone rufiventer Red-bellied Paradise-Flycatcher. C, BF; F, NF.

Platysteiridae

Bias musicus Black-and-white Flycatcher. One, NF, 10 Jun 1995.

Dyaphorophyia castanea Chestnut Wattle-eye. C, BF.

D. blissetti Red-cheeked Wattle-eye. A pair mist-netted, NF, 3 May 1995.

Timaliidae

Illadopsis fulvescens Brown Illadopsis. C, BF.

I. rufipennis Pale-breasted Illadopsis. F, BF.

I. cleaveri Blackcap Illadopsis. F, BF.

I. rufescens Rufous-winged Illadopsis. Song recorded at three locations, only inside the forest. An immature bird with yellowish gape-edges mist-netted, 28 Jul 1997. Near-threatened (Collar & Stuart 1985, Collar *et al.* 1994), and known from very few localities in Ivory Coast (Thiollay 1985, Demey & Fishpool 1991, 1994, Gartshore *et al.* 1995).

Remizidae

Pholidornis rushiae Tit-hylia. One observation of five individuals perching together in a low tree, NF, 10 Jun 1995. Few localities in Thiollay (1985). Recorded in canopy (Gartshore *et al.* 1995), observed in degraded habitats (Demey & Fishpool 1991, 1994).

Paridae

Parus funereus Dusky Tit. Five records of singing individuals, of which one seen, 4 Aug 1997, *c.* 25 m up in an isolated tree above degraded understorey, BF. Not recorded in Yapo (Demey & Fishpool 1994); generally rare and local (Thiollay 1985a, Grimes 1987, Gatter 1998, Gartshore et al. 1995).

Nectariniidae

Anthreptes fraseri Fraser's Sunbird. C, BF.

A. rectirostris Yellow-chinned Sunbird. One, BF, 9 Aug 1997.

A. collaris Collared Sunbird. C, BF.

Nectarinia seimundi Little Green Sunbird. U, BF.

N. olivacea Olive Sunbird. A, BF; F, NF.
N. adelberti Buff-throated Sunbird. F, BF.
N. senegalensis Scarlet-breasted Sunbird. One, NF, 20 Jul 1997.
N. coccinigaster Splendid Sunbird. U, NF.
N. venusta Yellow-bellied Sunbird. One, BF, 11 Dec 1996.
N. cyanolaema Blue-throated Sunbird. U, BF.
N. chloropygia Olive-bellied Sunbird. C, BF; F, NF.

Zosteropidae

Zosterops senegalensis Yellow White-eye. F, NF.

Oriolidae

Oriolus auratus African Golden Oriole. One, BF, 12 Apr 1995.
O. brachyrhynchus Western Black-headed Oriole. F, BF.
O. nigripennis Black-winged Oriole. U, BF.

Laniidae

Lanius collaris Fiscal Shrike. A pair, NF, 21 May 1995.
L. senator Woodchat Shrike. One, NF, 4 Feb 1996.

Malaconotidae

Dryoscopus sabini Sabine's Puffback. F, BF.
Nicator chloris Western Nicator. C, BF.

Prionopidae

Prionops caniceps Northern Red-billed Helmet Shrike. F, BF.
P. plumatus Straight-crested Helmet Shrike. Five, BF, 7 May 1995.

Dicruridae

Dicrurus atripennis Shining Drongo. F, BF.
D. adsimilis Fork-tailed Drongo. C, BF.

Corvidae

Corvus albus Pied Crow. C, NF.

Sturnidae

Poeoptera lugubris Narrow-tailed Starling. A flock of *c.* 70 birds roosting in a tall tree, BF, 8 Feb 1996. Already mentioned for Abengourou by Thiollay (1985), few observations in Tai (Gartshore *et al.* 1995) and Yapo (Demey & Fishpool 1994).
Onychognathus fulgidus Forest Chestnut-winged Starling. Three records, BF. A pair occupying a nest hole in a tree at a road, 24 Mar 1996. Habitat considered to be humid savannah by Thiollay (1985), but known to occur in the forest zone in Ghana and Ivory Coast (Grimes 1987, Demey & Fishpool 1994, Gartshore et al. 1995), and in Liberia, where it profits from logging (Gatter 1998).

Passeridae

Passer griseus Grey-headed Sparrow. A, NF.

Fringillidae

Serinus mozambicus Yellow-fronted Canary. One, NF, 6 May 1995.

Ploceidae

Ploceus nigerrimus Vieillot's Black Weaver. A, NF.

P. cucullatus Village Weaver. A, NF.
P. nigricollis Spectacled Weaver. A male with nesting material, NF, 21 Jun 1997.
P. tricolor Yellow-mantled Weaver. F, BF.
P. albinucha Maxwell's Black Weaver. F, BF.
P. preussi Preuss's Weaver. One, BF, 9 Aug 1997.
Malimbus nitens Blue-billed Malimbe. C, BF; F, NF.
M. malimbicus Crested Malimbe. F, BF.
M. scutatus Red-vented Malimbe. F, BF.
M. rubricollis Red-headed Malimbe. C, BF.
Amblyospiza albifrons Thick-billed Weaver. F, BF; U, NF.

Estrildidae

Nigrita canicapilla Grey-crowned Negrofinch. C, BF.
N. bicolor Chestnut-breasted Negrofinch. C, BF.
N. fusconota White-breasted Negrofinch. F, BF.
Pyrenestes sanguineus Crimson Seed-cracker. U, BF.
Spermophaga haematina Bluebill. C, BF.
Mandingoa nitidula Green Twinspot. Three males mist-netted, BF, 28 Feb, 1 Mar and 16 Sep 1996, the last with a large brood patch. In Ivory Coast, mainly in secondary forest in the wettest parts of the forest zone (Thiollay 1985a), but recorded at northern border of Tai National Park (Gartshore *et al.* 1995).
Estrilda melpoda Orange-cheeked Waxbill. C, NF.
E. astrild Common Waxbill. U, NF.
Lonchura cucullata Bronze Mannikin. A, NF.

Viduidae

Vidua macroura Pin-tailed Widow. C, NF.

Acknowledgments

The Kreditanstalt für Wiederaufbau (KfW) and the Gesellschaft für Technische Zusammenarbeit (GTZ) supported this project. For technical help and for solving identification problems we thank M. Louette, C. Chappuis, R. Demey and L.D.C. Fishpool. J. Slowik. F. Hetzel, A. Fane, T. Kouablan helped in the field and gave valuable information on the occurrence of some birds.

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Short Notes — Notes Courtes

First record of Scaly-fronted Warbler *Spiloptila clamans* in Cameroon

On 21 December 1996, in an area of dry, open scrub *c.* 65 km north of Maroua, northern Cameroon (14°9′0′′N, 11°2′24′′E), Jürgen Lehnert drew attention to a party of six small passerines that were flitting from bush to bush. They were identified as Scaly-fronted Warblers *Spiloptila clamans* by their small size, buffy-brown backs, black and white foreheads and wing coverts, and very mobile tails with white tips and black subterminal bands. Nik Borrow, a member of the party, was familiar with this species in Senegal. This record, which has already been briefly mentioned but not fully documented by Robertson (1996) and Urban *et al.* (1997), is the first for the species in Cameroon.

I thank Nik Borrow for his valuable comments and companionship.

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Received 12 October 1998
Revised 6 May 1999

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Perrin's Bush-Shrike *Telophorus viridis*, new to Gabon

Perrin's Bush-Shrike *Telophorus viridis* is found in dense habitats, from coastal thickets and overgrown clearings to montane forests, from extreme southern coastal Congo-Brazzaville at Pointe Noire south through SW and south-central Congo-Kinshasa, NW Zambia to central Angola (Mackworth-Praed & Grant 1963, Dowsett & Forbes-Watson 1993, Dowsett-Lemaire *et al.* 1993). We saw a male of this species in April 1995 on the Bateke Plateau east of Leconi in SE Gabon. This is the first known sighting of this species for Gabon.

The bird was heard singing naturally from a dense thicket at the edge of an isolated forest patch in the grassland that covers the Plateau. We made tape recordings of its natural song, as well as calls given in response to playback of its own song. These recordings are archived at the Library of Natural Sounds, Cornell Laboratory of Ornithology.

The bird continued to sing as it was approached. In response to playback of its own song, it continued giving the same song, but it did not move and stayed low in the dense thicket. After continuing to call for 20 min., it moved to another location, still staying low in the densest part of the thicket. At this time, in response to playback, it moved to a height of 5 m in a small tree in the thicket and continued to sing from that perch for 10 min., looking around aggressively before flying back down into the dense bushes.

The individual, which was seen very well, had the top of the head to the upper tail-coverts green, with wing-coverts and edges of the flight feathers also green. The tail was black. The throat was scarlet, with a wide black breast-band and, below that, a narrower scarlet band. The belly was a paler green and the under tail-coverts bright maroon.

Many thanks to Françoise Dowsett-Lemaire, Stuart Keith, Mary LeCroy, R. Ranft, and D.A. Turner for their comments.

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Received 31 December 1998
Revised 16 January 1999

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First Nigerian record of Red-fronted Parrot *Poicephalus gulielmi*, and other notable records from SE Nigeria

During widespread field expeditions in the mangrove areas of Cross River estuary and the lowland rain forests of Oban Hills, from 1984–90, we collected information about the region's avifauna. Some of these observations refer to species that hitherto have not been recorded in SE Nigeria, and one, the Red-fronted Parrot *Poicephalus gulielmi*, is new for the country. In the following accounts, the status of these species as given by Elgood et al. (1994) is cited in brackets at the end of each account.

Anhinga rufa Darter. Seven records: a total of 21 birds at a pond (in farming area *c.* 2 km north of the periphery of Calabar), between Nov 1986 and Feb 1990, all in the months Nov–Feb. [No sightings in the last 20 years.]
Ixobrychus sturmii Dwarf Bittern. Two birds, Nov 86, near Akamkpa, *c.* 40 km north of Calabar. [In southeast recorded only at Owerri.]
Ardeola ralloides Squacco Heron. Eight records: 17 birds at pond north of Calabar (see *Anhinga rufa*), and one at a pond in forest area *c.* 10 km south of Oban. All records in the months Nov–Feb, between Jan 1986 and Feb 1990. [Unreported from southeast.]
Anastomus lamelligerus Openbill Stork. Flock of five flying south along Great Qua River near Calabar, Jan 1989. [Unrecorded in southeast.]
Nettapus auritus Pygmy Goose. Eight records: 30 birds at pond north of Calabar (see *Anhinga rufa*), between Oct 1986 and Feb 1990, all in the months Oct–Feb. [Only one record from southeast, Afikpo.]
Rynchops flavirostris African Skimmer. One flock of *c.* 300, hunting in Cross River estuary, Feb 1987. Perhaps the same population as in Rio del Rey (see Green 1996). [No recent records until Sep 1989, single bird at IITA, Ibadan.]
Poicephalus gulielmi Red-fronted Parrot. Three birds in Oban Hills near Aking, 1 Sep 1990. Before we saw these parrots we heard the characteristic screeching calls, quite different from the calls of Grey Parrots *Psittacus erithacus*, which we often heard during our frequent visits to the Oban Hills. We soon spotted the three parrots sitting quite high up in a tree canopy and identified them as *P. gulielmi* by the greenish body, the contrasting colours of the mandibles (lower black, upper pale horn), the orange-red crown, forehead and leading edge of wings. The only other large rain forest parrot in SE Nigeria and adjacent Cameroon is the Grey Parrot (Fry et al. 1988). First Nigerian record. Not unexpected, as it is known from just over the border in Cameroon, in Korup (Rodewald et al. 1994) and Rio del Rey (Thomas 1995).
Bubo poensis Fraser's Eagle Owl. In 1989 calling quite often in the evening around Palm-Oil Club, 20 km north of Calabar. Call identified using Chappuis 1978. [Few records, Bonny to Ibadan, one heard in Oban West.]
Jynx torquilla European Wryneck. One, resting on a concrete pole close to our compound in Calabar, Dec 1987. [Few southerly records.]
Fraseria cinerascens White-browed Forest Flycatcher. One along a river bank in Akampka-Nsan forest area, Jan 1988. Known from just over the border in Korup National Park, Cameroon (Rodewald et al. 1994). [Two records for southeast: Mberubu and Nindam.]
Erythrocercus mccallii Chestnut-capped Flycatcher. One, north Oban, Jan 1987. Known from just over the border in Korup National Park, Cameroon (Rodewald et al. 1994). [One record from southeast.]
Anthreptes gabonicus Brown Sunbird. One in mangrove area near Inua Abasi in the Cross River estuary, Dec 1987. A "female coloured" sunbird showing whitish underparts and grey-brown upperparts, it was identified by its white stripe above the

eye and a thicker white stripe under the eye. [Common resident in mangroves from Badagri to Port Harcourt (and probably Calabar).]
Nectarinia fuliginosa Carmelite Sunbird. One near Inua Abasi in Cross River estuary, Dec 1987. Known from just over the border in Korup National Park, Cameroon (Rodewald et al. 1994). Could only be mistaken for *N. adelberti* (relatively common in gardens around Calabar), from which it was distinguished by its metallic violet throat. [Not yet noted in extreme southeast.]

We express our sincere gratitude to R.J. Dowsett for reviewing the paper and giving very valuable advice.

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Received 26 January 1998
Revised 1 April 1999

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Réaction du Petit Cossyphe à tête blanche *Cossypha niveicapilla* au cri d'alarme de l'Ecureuil de Gambie *Heliosciurus gambianus*

La dernière semaine de juin 1998, je prospectais dans le lit complètement asséché d'un marigot, à une dizaine de kilomètres au sud de Toubakouta, dans le centre-ouest sénégalais. Il n'était tombé qu'une seule faible pluie, n'empêche que nombre de migrateurs intra-africains étaient présents. Parmi eux, un Petit Cossyphe à tête blanche *Cossypha niveicapilla*, caché au plus dense du feuillage d'un arbuste formant parasol au-dessus d'une vieille termitière, imitait avec insistance le Merle africain *Turdus pelios*, conformément à l'habitude de l'espèce. Je m'approchai à quelques mètres de lui, sans l'effaroucher, avec l'espoir de répertorier le maximum de voix pouvant être

contrefaites. Soudain, j'entendis, émis d'un arbre qui me surplombait par derrière, un cri en cascade d'un Ecureuil de Gambie *Heliosciurus gambianus*. Agrippé à un rameau, tête vers le bas, à 6 m de hauteur, le rongeur alarmait avec entêtement chaque fois que je me déplaçais. Le cossyphe a interrompu ses ritournelles, dès le premier signal, pour alarmer à son tour, en réponse manifeste à l'écureuil. Les cris évoquaient, en moins fort, ceux du Choucador à longue queue *Lamprotornis caudatus* et durèrent jusqu'à ce que, las d'attendre en vain, je renonce à l'écoute, au bout d'une dizaine de minutes.

La compréhension des cris d'alarme d'un oiseau par un mammifère, ou réciproquement, a au moins été rapportée pour le Calao à huppe blanche *Tockus albocristatus*, qui prévient les singes de l'approche d'un danger (Fry *et al.* 1988), et pour les indicateurs *Indicator*, qui guident le Ratel *Mellivora capensis* vers une ruche.

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Reçu 2 décembre 1998

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Observation de la Bernache cravant *Branta bernicla* au Sénégal

Les 20 et 21 février 1997, YR observa et photographia deux Bernaches cravants au cap Skirring, à l'extrémité sud du pays, à la frontière de la Guinée portugaise. Les deux clichés permettent sans aucun doute possible, non seulement d'authentifier l'identification mais de préciser la race de ces deux bernaches: la partie antérieure des oiseaux est sombre et les désigne comme appartenant à la race *bernicla* qui niche en Russie septentrionale et en Sibérie orientale et hiverne sur tout le littoral de la Manche et de l'Atlantique. Ces deux sujets se tenaient à faible distance de la plage et venaient se nourrir sur le sable.

La présence de cette espèce est rare et accidentelle au Maroc (Brown *et al.* 1982); elle n'a été trouvée ni en Sénégambie (Barlow & Wacher 1997), ni au Mali (Lamarche 1980), ni au Niger (Giraudoux *et al* 1986). En Mauritanie, Trotignon (1980, par erreur 1978 *in* Lamarche 1988) relate l'observation de cette espèce dans la baie de l'Etoile le 27 décembre 1978, la seule observation en Mauritanie (B. Lamarche com. pers). La présence de ces bernaches à cette latitude est donc tout à fait exceptionnelle.

Nous remercions G. Jarry (Centre de Recherches sur la Biologie des Populations d'Oiseaux, Muséum National d'Histoire Naturelle, Paris) de nous avoir communiqué

l'unique observation de J. Trotignon ainsi que ses commentaires sur l'absence de données pour la Mauritanie.

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Reçu 22 avril 1999
Revu 9 juin 1999

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First observations on the territorial song and display of the Kupe Bush Shrike *Malaconotus kupeensis*

The Kupe Bush Shrike *Malaconotus kupeensis* was discovered on Mt Kupe in western Cameroon in 1949 (Serle 1951) and, given the exiguity of its range, is considered Critically Endangered (Collar *et al.* 1994). Its presence was, however, recently confirmed from the nearby Bakossi Mts, where the area of suitable forest is about eight times that on Kupe (Dowsett-Lemaire & Dowsett 1998). Despite the increase in ornithological activity on Kupe in the 1990s associated with the Mt Kupe Forest Project, only 20–30 ornithologists have seen the bird and almost nothing is known of its biology and behaviour. Two types of vocalization have been described: a series of three whistles (noted by the collector, Serle 1951) and a quiet, "continuous insect-like grating" (Bowden & Andrews 1994). The whistles are clearly detached and ascend in pitch, they also sound somewhat out of tune (I. Faucher pers. comm.). This type of call seems to be given very rarely: S.M. Andrews and P. Hayman, who studied the bird for several months on Kupe in 1990, heard it only a couple of times (S.M. Andrews pers. comm.). I. Faucher heard one individual whistle persistently for two days near Edib (Bakossi) in late Mar 1998, but the bird had shut up by the time I visited the area about 12 days later.

On 9 Apr 1998 I saw a Kupe Bush Shrike in a mixed bird party in primary forest in the Bakossi Mts, along the path from Edib to Messaka (4°57′N, 9°39′E) at 1150–1200 m. The bird was followed on and off from 10h30 to 13h00, when heavy rain interrupted the observation. The party consisted of noisy groups of White-throated Mountain Babbler *Kupeornis gilberti* and Grey-headed Greenbul *Phyllastrephus poliocephalus*, with also Elliot's Woodpecker *Mesopicos elliotii*, Xavier's Greenbul *P. xavieri*, Black-capped Woodland Warbler *Phylloscopus herberti*, Green Hylia *Hylia prasina*, Buff-throated Apalis *Apalis rufogularis*, Yellow-bellied Wattle-eye *Dyaphorophyia concreta*, Red-bellied Paradise Flycatcher *Terpsiphone rufiventer*, Pink-footed Puffback *Dryoscopus angolensis* and Dark-backed Weaver *Ploceus bicolor*. The Kupe Bush Shrike (apparently a male, with thin black line between throat and breast, and bright yellow vent, as described by S.M. Andrews pers. comm. and unpubl.) joined the party shortly after it started to get going, flying into the middle of it in the mid-stratum and starting to call immediately, a loud, babbler-like short introductory chatter (*thec-thec, kh-kh-kh*) followed by 3–4 *tchrraa-tchrraa-tchrraa*, repeated at the rate of two *tchrraa* per s. Several of these spontaneous songs were tape-recorded and one then played back: the bird responded by flying over the observer noisily snapping its wings like a big puffback *Dryoscopus* sp.. It then sang again several times, at first starting to sing just before landing and later more leisurely, when feeding in the mid-stratum. In reaction to playback, the introductory chatter was faster and the series of *tchrraa* longer and louder, up to 21 in a row. After 10 min. of silence, a brief tape playback was answered in the same manner, then the bird sang intermittently while moving up the escarpment with the party. Tape playback was tried again at 11h20 with similar results, after which the party started to dissolve away from the path. The bush shrike was lost, but after 40 min. of silence, tape playback again brought the bird overhead, wing-beating and calling. When R.J. Dowsett joined me at 13h00, the procedure was repeated once more, bringing the bird back from some distance away on the hill in less than 10 s. It flew noisily overhead and sang a faster series of 25 *tchrraa* (three per s) and another of 29 notes. At all times the bird was difficult to see as it moved in dense foliage in the mid-stratum (usually above 10 m). A territorial meaning of this type of song is suggested from the reactions to playback, as already suspected when R.J. Dowsett and I heard two birds call repeatedly to each other (this same vocalization) on Kupe (950 m, 31 Mar 1997) for more than 10 min. Those two were hidden in thick vegetation just above 10 m high and were about 20 m apart. Eventually one bird (which was never seen) stopped and the other emerged from the thicket, called a few more times (it was also apparently a male) before starting to look for food. More recently, in Mar 1999, N. Borrow (pers. comm.) was able to call up a Kupe Bush Shrike at Kupe by playing a copy of my tape: it responded with similar vocalizations.

It is odd that such loud vocalizations had not been reported previously for this species, whereas the quiet, insect-like gratings mentioned by Bowden & Andrews (1994) were never heard by me in some 3 h of direct observation. Another noteworthy

aspect of Kupe Bush Shrike behaviour is the wing-beats of angry birds (produced in series of 4–6), as it is possible this has never been recorded previously in a *Malaconotus* shrike, whereas it is frequently seen in *Dryoscopus* species of the same family. I have never managed to provoke a wing-beat display during prolonged playback experiments with Green-breasted Bush Shrike *M. gladiator*, Fiery-breasted Bush Shrike *M. cruentus* nor Many-coloured Bush Shrike *M. multicolor*. Harris & Arnott (1988), report a "wing-fripping" display in Grey-headed Bush Shrike *M. blanchoti*: but this is a different type of wing-noise (more fluttery; T. Harris pers. comm.) given apparently as a courtship display.

The field trip to Bakossi was in part supported by WWF-Cameroon. I thank S.M. Andrews, C.G.R. Bowden, T. Gullick, P. Hayman and T. Harris for having read a draft of the note, and L.D.C. Fishpool and the editor for their constructive comments.

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Received 28 October 1998
Revised 1 June 1999

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New tape recordings of three West African birds

Based on observations in Comoé National Park, Ivory Coast, we describe here some calls of three common bird species, which are apparently unknown or have never been recorded before, and comment on their possible function. We present sonograms and oscillograms of these calls and measurements of the most important acoustic features.

***Ardea goliath* Goliath Heron.** A "song" of a Goliath Heron was recorded on 3 Apr 1996. It contained one deep *krooo* call followed by 5–7 deep grunts (total duration 3.2 ± 0.3 s, n=2, Fig. 1). The *krooo* calls had an average (n=2) of 219±18 ms and a

dominant frequency of 517±0 Hz, whereas grunts (n=12) had an average duration of 110±14 ms and a dominant frequency of 380±25 Hz. Intervals between grunts averaged 185±39 ms (n=10). The call was a courtship display, a heron in upright position stretched itself slowly upwards; at the maximum stretched position, with the tip of the bill pointing upwards, it gave the *krooo* call, then slowly crouched. After about 1.5 seconds, when the bird had moved its head to about body level with the neck kinked, it gave a repeated series of grunts. This song was only heard at the beginning of the rainy season in March and April. It was audible mainly in the early morning hours, sometimes at night. Although described by Urban *et al.* (1982) it seems that the song of this species has never been tape recorded.

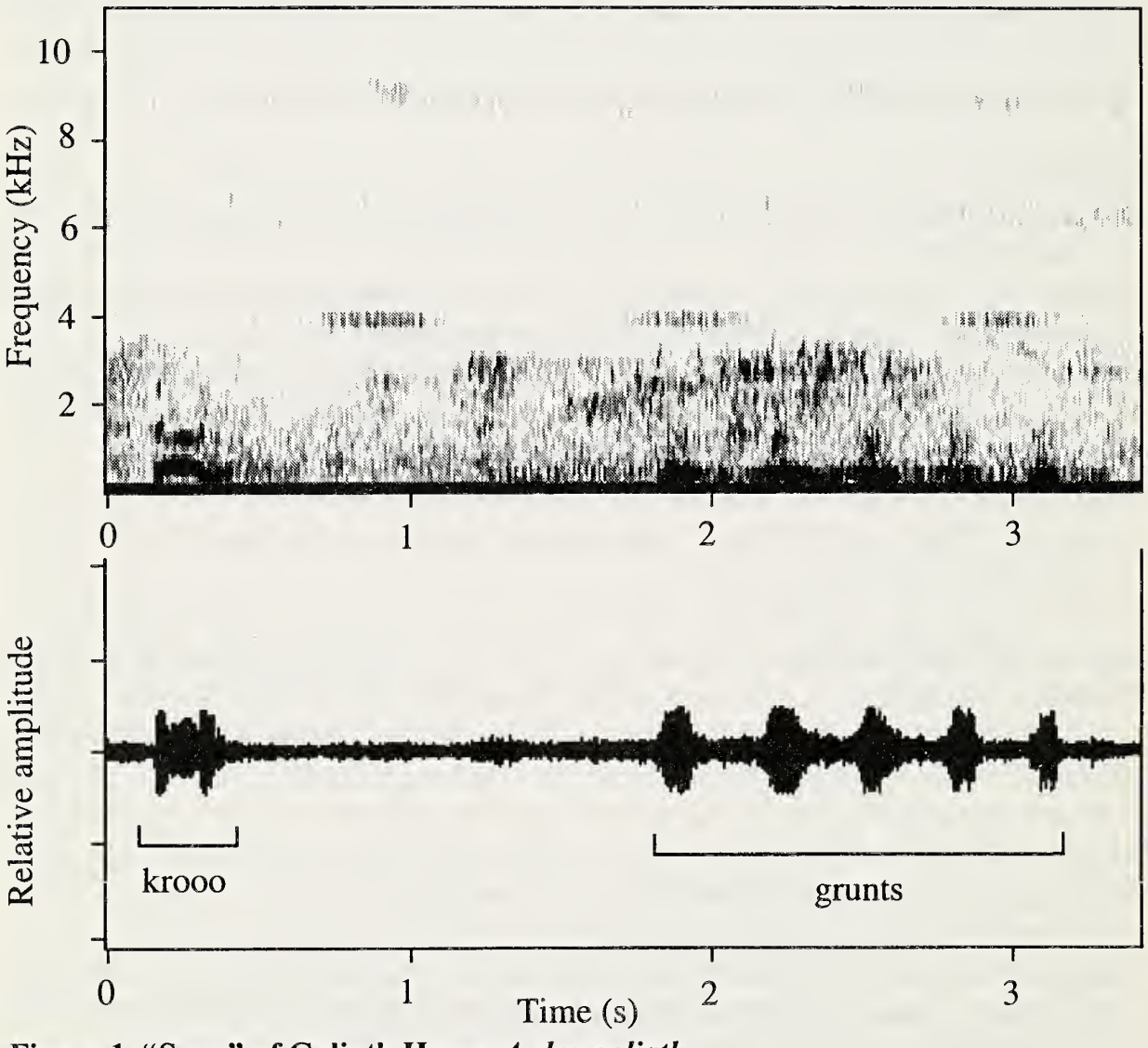

Figure 1. "Song" of Goliath Heron *Ardea goliath*.

***Cuculus solitarius* Red-chested Cuckoo.** Calls of an immature Red-chested Cuckoo were recorded on 10 Oct 1995. The bird was seen calling at a height of 2.5–3 m on the lower branches of a tree in a densely vegetated area of the riparian forest near the Comoé River. While calling it remained motionless. It was identified by its size and

dark appearance, with dark upperparts and throat, and black and white barring on breast and belly. The call is an insect-like buzz, repeated monotonously for several minutes (Fig. 2). The calls (n=5) had an average duration of 306±26 ms and a dominant frequency of 6.34±0.21 KHz; they were slightly downward frequency modulated by on average 412±169 Hz. No calls of immature birds have previously been recorded (Irwin 1988, C. Chappuis, pers. comm., A. Priori pers. comm.; K.-H. Frommolt pers comm., P. Duck pers. comm.).

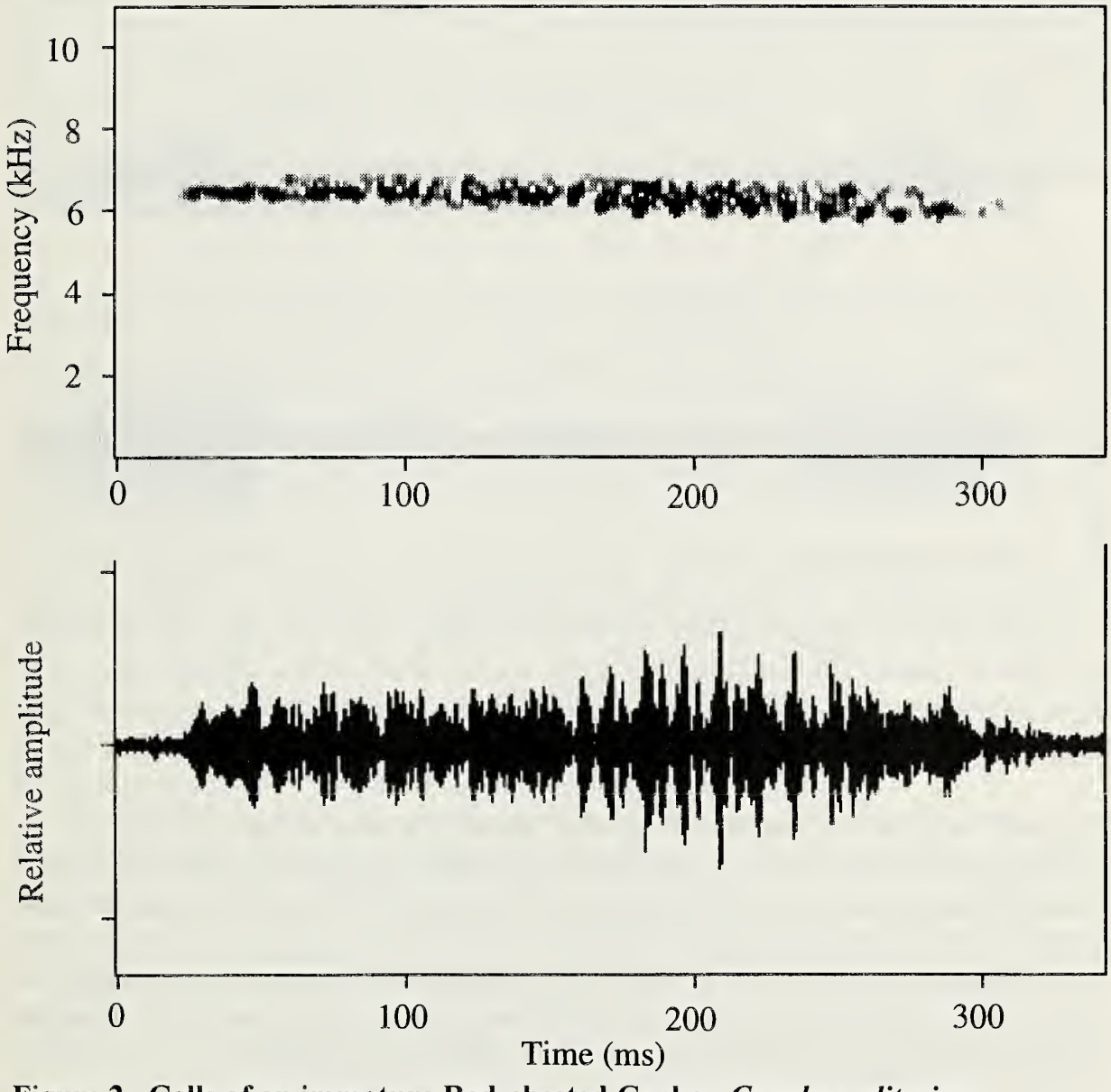

Figure 2. Calls of an immature Red-chested Cuckoo *Cuculus solitarius*.

***Cossypha niveicapilla* Snowy-crowned Robin-Chat.** The alarm call of a Snowy-crowned Robin-Chat was recorded on 18 Nov 1995. The call (Fig. 3) is a repeated *churr*. It is pulsative, with an average (n=5) of 27±5 pulses/call, an average duration of 616 ±146 ms and an average dominant frequency of 1.89±0.11 KHz. A description of what appears to be this call is given by Oatley *et al.* (1992): "Alarm note a guttural,

ratchet-like churr, ... heard especially at dusk". We heard this call almost exclusively at dusk, for a relatively short time; often several birds called at the same time. One bird gave this call when it was taken out of a mist net.

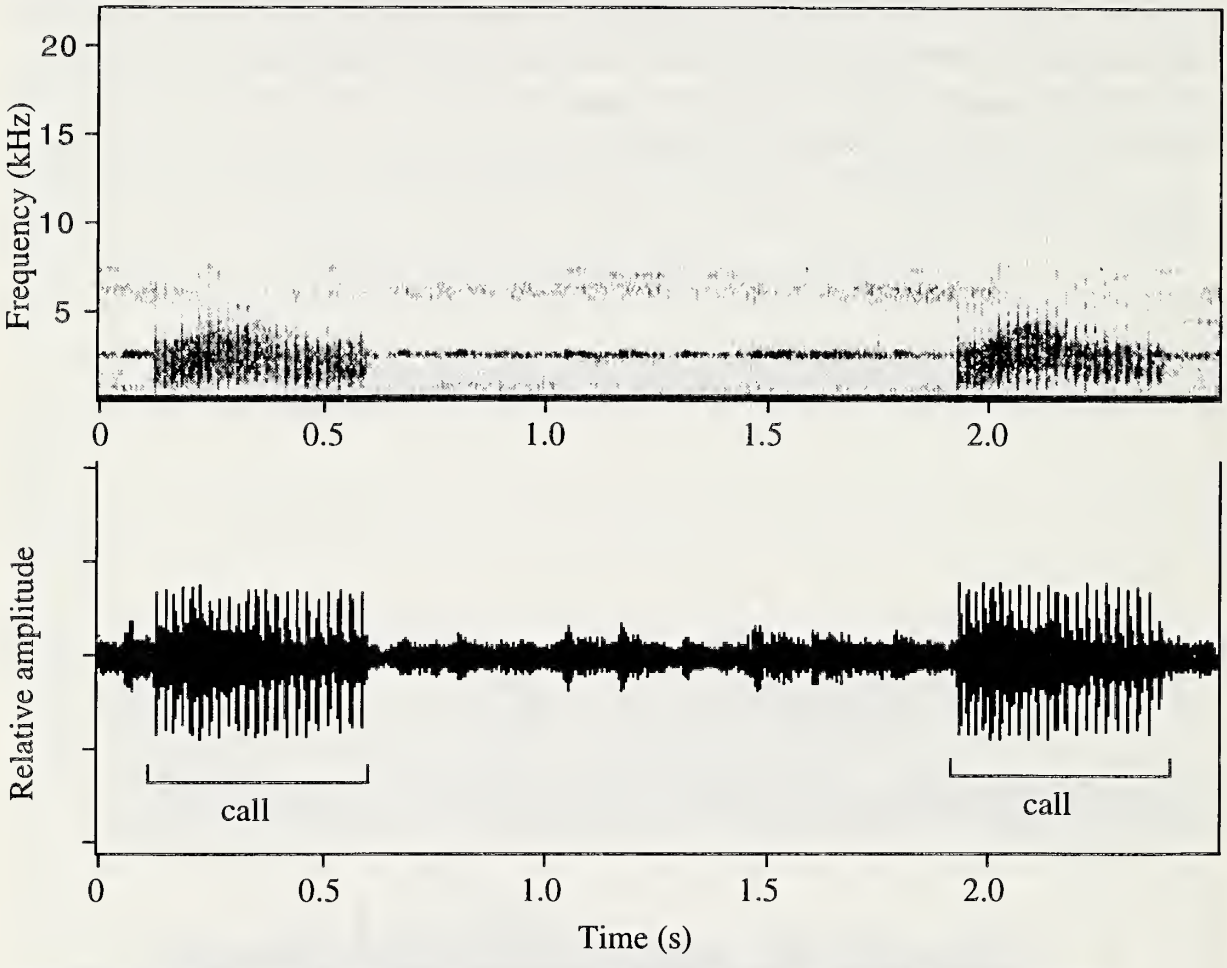

Figure 3. Alarm call of Snowy-crowned Robin-Chat *Cossypha niveicapilla*.

We wish to thank C. Chappuis, P. Duck (National Sound Archive, London), K.-H. Frommolt (Tierstimmenarchiv, Humboldt-Universität, Berlin), A. Priori (Library of Natural Sounds) and A.J. van Zyl (Transvaal Museum of Natural History) for their useful information, the Ministère des Eaux et Forêts in Ivory Coast for permission to work in Comoé National Park, and K.E. Linsenmair for allowing us to use the infrastructure of the field camp of the University of Würzburg, Germany. F. Bairlein and P.H. Becker gave useful comments on early drafts of this paper.

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Received 17 July 1998
Revised 21 May 1999

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A southern record of Cinnamon-breasted Rock Bunting *Emberiza tahapisi* in Lamto, Ivory Coast

The Cinnamon-breasted Rock Bunting *Emberiza tahapisi* ranges in West Africa from Senegal to Nigeria and the Central African Republic. It has a strong affinity to rocky ground but is also found in any kind of open habitat, especially on dry patches where it feeds mainly on seeds (Mackworth-Praed & Grant 1973). In Ivory Coast it was reported by Thiollay (1985) from Korhogo (9°22′N) and Niangbo (8°49′N); additionally Demey & Fishpool (1991) observed it in Comoé National Parc (between 8°30′N and 9°30′N).

During a stay in Lamto (6°13′N) one Cinnamon-breasted Rock Bunting was observed on 2 Dec 1998. It was identified by its black and white striped head, and reddish-brown body with dark streaks on the back. When the bird was discovered by VS it was foraging on the road; after a while it flew into a tree where it was lost. When returning together with FG after about 15 min., the bird was observed again at almost exactly the same place on the road and we watched it for some minutes again before it took off.

This is probably the first observation of the species in Lamto; no record has been published so far (Thiollay 1970, 1971) and it was not observed there by L.D.C. Fishpool (pers. comm.). It is also the southernmost record for the Ivory Coast, which means a range extension of more than 2° latitude. In other West African Countries like Guinea (Walsh 1987), Ghana (Grimes 1987) and Togo (Cheke & Walsh 1996), all localities where the species is recorded lie well north of the latitude of Lamto. In Liberia it is recorded as rare by Gatter (1988, 1998), who gives no locality. The only country where it is recorded in comparable latitudes is Nigeria (Elgood *et al.* 1994), with records at 7°50′ (Kabba), 7°30′ (Mambilla), 6°38′ (Obudu) and 6°20′ (Enugu). Records from coastal cities that lie further south than Lamto include Lagos, Burutu and Port Harcourt; however, it is speculated that these might be escapes because the species is a popular cage bird there (Elgood *et al.* 1994). As this is not the case in Ivory Coast, the observed bird in Lamto could be the southernmost record of the species in West Africa.

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Received 7 February 1999
Revised 19 May 1999

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Corrigenda

Composition et évolution saisonnière d'un peuplement d'oiseaux au nord du Burkina Faso (nord-Yatenga). (G. Balança & M.N. de Visscher 1997, *Malimbus* 19: 68–94)

Le nom scientifique du Ganga à ventre châtain n'est pas *Pterocles senegallus*, comme il est écrit dans l'Annexe de cet article (p. 89, ligne 8), mais *P. exustus*, et la mention de "*Pterocles senegallus*" p. 80, lignes 2–3 du bas, doit être attribuée à *P. exustus*. De même p. 80, lignes 3–4 du bas, il faut lire "*Eremopteryx*" et non "*Eremopterix*".

Je remercie M. Babacar Ndao d'avoir attiré mon attention sur ces inexactitudes.

Alan Tye

Book review: The Birds of Liberia (1999, *Malimbus* 21: 66–67)

I should like to apologize to G.D. Field for the unfortunate omission of his name as the author of this review.

Alan Tye

News & Letters — Nouvelles & Lettres

Request for information: ringed Fire-crowned Alethe *Alethe diademata*

I have failed to find anyone who has details of a ringed adult male *Alethe diademata*, which I controlled on 17 Apr 1999, at Lobéké, SE Cameroon. The ring unfortunately bears no address, just the number 1779. It is similar to others I have controlled in SW Cameroon, which had been used by the team working under Prof. Tom Smith. But he has told me it is not one of their birds, and that the series is not theirs. Approaches to several people who might have ringed it originally (including WWF, WCS and San Francisco University workers in Cameroon and neighbouring countries) have drawn a blank. Surely someone can claim to have ringed this bird? I would much appreciate banding data in due course, in particular exact locality and coordinates of ringing site.

R.J. Dowsett
12 rue des Lavandes, Ganges F-34190, France (e-mail: dowsett@aol.com)

Reviews — Revues

The Birds of Africa, vol. 5. Ed. by E.K. Urban, C.H. Fry & S. Keith, 1997. 669 pp., 32 col. plates. Academic Press, London. ISBN 0-12-137305-3. £99.

This volume covers those thrushes not already dealt with, all warblers, including cisticolas, and the various species loosely called flycatchers: not many families but amounting to an extremely heavy tome. A major improvement in this volume is that breeding ranges are shown in red on the maps.

Naturally, anyone seriously interested in African birds should own this book. Regional guides continue to proliferate and are essential for short trips, but only when all species of a genus are gathered together can one see the full picture. Take the cisticolas, that most challenging of genera to the newcomer to Africa; 43 species are described here and more are being discovered all the time. Among others, two Tanzanian species are still officially undescribed and not mentioned here (one wonders why — they have been known for over ten years, have English names and are easy to find and identify by sight and voice in their flood-plain environment). Much classification recently has turned on acoustics: *Cisticola dorsti* of N Nigeria, Cameroon and Chad is known only from breeding males, when they sing and can be distinguished from *C. ruficeps*; females and non-breeders are undescribed. Similarly, *Prinia fluviatilis* would be dismissed as *P. subflava* were it not for its voice and, as is now known, its waterside habitat.

In taxonomy, *Birds of Africa* generally belongs to the lumping school, with occasional innovative exceptions: interesting examples here are *Hyliota usambarae* split from *H. australis* and *Cisticola cinnamomeus* from *C. brunnescens*. Much depends on an author's whim. Several forms once afforded species rank might justifiably be resurrected, *e.g.* the Cameroon montane *Cisticola discolor* split from E African *C. chubbi* and *C. emini* from southern *C. aberrans* (where they approach in Tanzania, each is instantly recognizable by voice). The wattle-eye *Diaphorophyia blissetti* is often split into three, with the wholly black-headed *chalybaea* intervening between two red-cheeked forms. Incidentally, why change the old name of "Blissett's" Wattle-eye to "Red-cheeked" when you include a form without red cheeks?

Martin Woodcock's plates are always justly praised and most of these abundantly live up to his meticulous standards with, for example, admirable depictions of the look-alike *Acrocephalus* spp. and a splendid series of races of the *Turdus olivaceus/pelios* complex. But I fear that something has gone wrong with the cisticolas. I don't think he had enough guidance from the authors, and at times the jizz has eluded him. When recently I saw *C. angusticauda* for the first time, with one glance at the plate in *Birds of Kenya and Northern Tanzania* (Zimmerman, D.A., Turner, D.A. & Pearson, D.J. 1996, Helm, London) I exclaimed "That's it!"; I could

not have done that with *Birds of Africa*. *C. dorsti* differs morphologically from *C. ruficeps* virtually only on the under tail-coverts and tail; should not the authors have insisted on a plate showing the underside of the species?

Lastly a local grumble: although *The Conservation of the Birds of Gola Forest, Sierra Leone* (Allport, G., Ausden, M., Hayman, P.V., Robertson, P. & Wood, P. 1989, ICBP, Cambridge) is mentioned in the bibliography, curiously little account of it has been taken. *Hyliota violacea*, *Muscicapa olivascens*, *M. epulata* and *Myioparus griseigularis* are all documented there (as I can corroborate myself) yet all are ignored here. These omissions could be important: ornithologists are unlikely to be able to visit eastern Sierra Leone in the foreseeable future and by then the Gola Forest may have ceased to exist.

The enormous value of this work is incontrovertible and, if I have mentioned certain weaknesses, this is because the better the book, the higher the standards by which it should be judged.

G.D. Field

Etude Initiale. La Réserve Naturelle Nationale de l'Aïr et du Ténéré (Niger). Ed. by F. Giazzi, 1996. 678 pp., 52 plates, numerous figures and tables. IUCN, Gland. ISBN 2-8317-0249-6. Paperback, £17.50.

This new, comprehensive study, of a recently-established (1988) reserve, comes nearly 50 years after a volume in the famous IFAN series (1950, Contribution à l'étude de l'Aïr. *Mém. Inst. fr. Afr. noire* 10), which covered much the same area but with a rather different emphasis. The IFAN studies had a more biological and anthropological focus, whereas this new work aims to study the effect of man on the environment and assist in the formulation of a management plan. The chapters of the present book include studies of rainfall, hydrology, aquifers, geomorphology, erosion processes, vegetation, animals, archaeology, human history, anthropology, human population, economic activities, tourism, and the institutional and legal bases for conservation.

The book contains a wealth of fascinating detail. The rainfall studies clarify the relatively wet period in the Sahel from 1920 to 1965, before and after which the climate was drier, at least up to 1990, which seems to be the cut-off date for most of the studies included in the volume. The research, as well as development of the reserve, was curtailed by political unrest shortly thereafter. The vegetation chapters (by Pierre Poilecot) include a thorough biogeographic analysis, discussing the various habitat types and vegetation zones with their characteristic species, endemics and geographic affinities. There is an excellent set of floristic appendices.

The faunal chapters, also by Poilecot, are less satisfying. Only birds and large mammals are included, in marked contrast to the typically comprehensive IFAN studies, from which this book claims lineage. It seems that most of the research carried out during the project was devoted to the large mammals, the Ostrich *Struthio camelus* and the Nubian Bustard *Neotis nuba*. Perhaps the most disappointing aspect of the whole volume is the lack of information on other animals, and the poor quality (or at least poor presentation) of the bird work. Appendix 54 of Chapter 4 presents a bird list by habitat, but with no indication of how the information was obtained, whether from previous publications or new survey work, and if the latter, by whom. The statistical presentation is not especially rigorous: the multiplicity of appendices on the Nubian Bustard and Ostrich include many (*e.g.* 55) that could have been better presented as a few numbers in one sentence of text; several others (*e.g.* 60–64 on Ostrich group size) show nothing significant and could be replaced by a simple statement that no significant variation was observed.

The book suffers throughout from poor cross-referencing. The appendices, which contain much valuable information, are not numbered consecutively as a whole but by chapter, which makes it not very straightforward to find the right one. The huge bibliography is confusingly split into two sections, with no indication of this at the beginning, so that one can gain the impression that many references have been mistakenly omitted. In fact some, including some of the most important, indeed are omitted: Magin 1990a and 1990b are represented in the bibliography only by one "Magin 1990"; Dragesco-Joffé 1993 is (perhaps) represented there, but by *two* references to "Dragesco" 1993 (no a or b); Newby 1990 (one of the most frequently-cited references in the bird chapters and throughout the book) is omitted entirely. The bibliography is also full of typographical errors; for instance various volumes of *The Birds of Africa* are listed as: "Urban E.K., Hylari Fry C., Stuart K. 1986", "Brown H.L. ... 1982", "Urban K.E. ...".

These faults detract from what is otherwise an extremely useful work. If one accepts the change of focus from those wonderful earlier IFAN volumes (while perhaps lamenting it), then the studies included in the present volume seem to achieve their stated aim. At the relatively low price, the book is a bargain, but hopefully IUCN will improve editorial standards in similar publications in the future: essential if they are to achieve the same reputation as those old IFAN studies.

Alan Tye

Society Notices — Informations de la Société

Notice nécrologique: John Hamel Elgood 1909–1998 (translation of obituary that appeared in *Malimbus* 21: 74–75)

John Elgood est né à Dulwich le 16 juin 1909. Il fit ses études à Whitgift Middle School et à St Catherine College de Cambridge. Il enseigna à Regent Street Polytechnic et c'est de là qu'il fut recruté pour la nouvelle université d'Ibadan. Il s'intéressa d'abord à la biologie marine mais réalisa bientôt l'intérêt de l'ornithologie et organisa des sorties sur les oiseaux et des conférences sur ce thème. Il conclut une sorte de pacte avec Ronald Keay (à l'époque Chief Conservator of Forests) aux termes duquel il lui apprendrait les oiseaux en échange de leçons sur les plantes.

Il sentit le besoin d'un petit manuel sur les oiseaux et en 1960 publia ses *Birds of the West African Town and Garden*. Cela suscita l'intérêt pour les oiseaux et en 1964 naquit la Nigerian Ornithologists' Society avec John comme Secrétaire, Hilary Fry comme Rédacteur du Bulletin et moi-même comme Trésorier. John demeura à ce poste et nous avons édité le bulletin régulièrement jusqu'en 1989 quand la société se métamorphosa en Société d'Ornithologie de l'Ouest Africain et John en fut nommé Vice-Président.

John découvrit et décrivit une nouvelle espèce de *Malimbus* (*ibadanensis*), une partie de la recherche étant d'ailleurs faite dans son propre jardin. Il publia une liste *The Birds of Nigeria* en 1964 (British Ornithologists' Union, London) et quand le tirage fut épuisé il réunit une équipe pour sortir une seconde édition en 1994 (BOU, Tring). Le premier livre imprimé par Ibadan University Press fut *Animal Classification* de Joe Webb et John Elgood et en 1964 John publia *Certificate Biology for Tropical Schools.*

John et sa femme Peggy faisaient des tournées fréquentes au Nigeria et séjournèrent souvent chez nous à Kano. En 1962 il alla avec une équipe au Bornou étudier le problème *Quelea*. Il aimait raconter comment, au cours d'une expédition pour trouver un certain oiseau, il avait bien eu l'oiseau mais y avait laissé son pantalon. Il avait un immense sens de l'humour et était très populaire parmi ses étudiants; il garda longtemps des relations avec quelques-uns d'entre eux (maintenant eux-mêmes professeurs).

John rentra en Angleterre en 1965 et enseigna à Goldsmiths' College et à l'American University au Sussex. On le réclama au Nigeria et il resta quelque temps à l'université Ahmadou Bello (Zaria) et à l'université de Lagos. A deux reprises il apporta son concours pour des examens en Rhodésie et enseigna six mois en Papouasie Nouvelle-Guinée. Il en revint pour venir chez moi à Kano en 1976 et rédigea un rapport sur les zones humides situées entre Hadejia et Nguru pour le

Département de l'Agriculture de l'État de Kano. Cela aboutit à l'inauguration officielle comme Réserve de Zone humide par le Prince Bernhard des Pays-Bas.

John était un membre actif de la British Ornithologists' Union et du British Ornithologists' Club où il servit dans les Conseils des deux sociétés. Il était aussi un conférencier habituel de la Bournemouth Science Society.

John aurait totalement approuvé le service funèbre de la Highcliffe Methodist Church. C'est au son de chants d'oiseaux enregistrés (une de ses filles nous menaça d'un questionnaire à la fin de l'office) que nous sommes entrés au temple et le feuillet liturgique était bordé d'oiseaux exotiques tenant un verre de vin. Nous avons tous perdu un grand ami.

R.E. Sharland

Obituary: Roy Parker

Roy Parker died peacefully on New Year's Day 1999, after a long fight with cancer. Long-time members will remember the days in the 1960s, when *Malimbus* was the pink-covered, foolscap, stencilled *Bull. Niger. Orn. Soc.*, which would probably have collapsed if Roy had not kept it going. I wonder if there is a full set anywhere! Roy's enthusiasm and persuasiveness — "Surely you've got *something* for the next issue?" — kept the journal, and thereby perhaps the Society, alive in the early post-independence days and through the Nigerian civil war. In 1967 he met my wife and me from the Apapa and was the first to show us Africa as we drove to Ibadan via egg butties at — where was that place? — seeing bulbuls and vultures for the first time. Then again, when we were to move to Merseyside in 1973, it was Roy, who came from Upton on the Wirral and was home on leave, who gave us a guided tour that eventually led to our setting up house beside the mud over which I look now. Roy is mourned by so many close family and friends that it is clear he had interests in more than just birds. His Scouse wit had an answer for any occasion, defused any aggravation, and deflated any pomposity. It's a long time now since we last met, in Nairobi, but Roy will long be remembered.

Dick Ashford

Instructions aux Auteurs

Malimbus publie des Articles, des Notes Courtes, des Revues de Livres, des Informations, des Nouvelles & Lettres et des illustrations traitant de l'ornithologie ouest-africaine. Les **Articles** et les **Notes Courtes** doivent être des apports originaux; ceux déjà publiés ailleurs, en partie ou en totalité, seront normalement refusés. Les Notes Courtes sont des articles de moins de 1000 mots (références comprises) ou de deux pages imprimées. Autant que possible, les manuscrits auront été auparavant soumis au moins à un ornithologue ou biologiste pour un examen minutieux. Les manuscrits seront envoyés pour critique à au moins un lecteur compétent. Les textes des **Nouvelles & Lettres** ne devraient dépasser 1000 mots.

Les textes sont acceptés en anglais et en français; la Rédaction pourra aider les auteurs dont la langue maternelle n'est pas l'une de celles-ci. Les textes soumis seront tapés en deux exemplaires, d'un seul côté de la page, double interligne et avec larges marges. Les tirages sur imprimante matricielle ne seront acceptés que s'ils ont la "qualité-courrier". Les articles soumis par courrier électronique ne seront pas acceptés. Les auteurs ne doivent pas envoyer un double de leur disquette en même temps que l'article qu'ils soumettent, mais sont priés d'indiquer s'ils peuvent le faire dans le cas où leur article serait accepté. Les disquettes seront retournées aux auteurs. Consultez l'Editeur pour des détails supplémentaires, c'est-à-dire les programmes de texte compatibles.

Les **conventions** concernant les tableaux, les chiffres, le système métrique, les références, *etc.* peuvent être trouvées dans ce numéro et doivent être soigneusement suivies. Notez en particulier que les dates s'abrègeront comme 2 fév 1990 mais dans un texte pourront s'écrire en entier; que les heures s'écriront comme 6h45, 17h00; que les coordonnées s'écriront comme 7°46′N, 16°4′W; que les nombres jusqu'à dix s'écriront en entier, excepté devant une unité de mesure (p. ex. 6 m), que les nombres à partir de 11 s'écriront en chiffres sauf au début d'une phrase. Toute **référence** citée dans l'article, et aucune autre, doit figurer dans la bibliographie.

Les articles d'avifaune doivent comprendre une carte ou une liste des localités citées. Ils devraient donner quelques détails sur le climat, la topographie, la végétation et l'environnement (y compris les événements inhabituels) avant ou durant l'étude (p. ex. pluies tardives, *etc.*). Les **listes d'espèces** ne devraient contenir que des données importantes: les listes complètes ne sont justifiées que pour les régions encore non étudiées ou délaissées pendant longtemps. Autrement, ne citer que les espèces sur lesquelles l'étude fournit de nouveaux faits sur la répartition, la période de séjour, la reproduction, *etc.* Pour chaque espèce, indiquer le statut migratoire, la période de séjour (telle qu'elle ressort de l'étude), l'extension de l'aire, une estimation d'abondance (*Malimbus* 17: 38) et les données datées sur la reproduction. Eventuellement, replacez les faits dans le contexte en les comparant brièvement avec une liste régionale de référence. Les longues listes d'espèces devraient être sous forme de tableaux (p. ex. *Malimbus* 12: 39–51, 1: 22–28, ou 1: 49–54) ou sous forme de texte des derniers numéros (p. ex. *Malimbus* 12: 19–24, 12: 61–86, 13: 49–66, 16: 10–29). La **séquence taxonomique** et les **noms scientifiques** (et de préférence aussi les **noms vernaculaires**) devraient suivre Dowsett & Forbes-Watson (1993, *Checklist of Birds of the Afrotropical and Malagasy Regions*, Tauraco Press, Liège) ou **The Birds of Africa** (Brown *et al.* 1982, Urban *et al.*1986, 1997, Fry *et al.* 1988, Keith *et al.* 1992, Academic Press, London), à moins de donner les raisons de s'écarter de ces auteurs. Un **guide plus complet aux auteurs** d'articles sur l'avifaune, comprenant une notation d'abondance des espèces la plus conseillée, est publié dans *Malimbus* 17: 35–39. On peut en obtenir une copie de la Rédaction, qui se fera aussi un plaisir d'offrir ses conseils sur la présentation de ce genre d'études.

Les **figures** doivent être préparées pour une reproduction directe, permettant une réduction de 20–50%; on se servira d'encre de chine sur papier blanc de bonne qualité ou calque épais et de caractères Letraset (ou équivalent) selon le cas. Les diagrammes obtenus par programmes informatisés autres que logiciels graphiques et sur imprimantes autres que laser sont rarement de qualité acceptable. Pour le dessin des Figures, tenir compte du format de *Malimbus*.

Tous les Articles (mais non les Notes Courtes) comporteront un **Résumé**, n'excédant pas 5% de la longeur totale. Le Résumé mentionnera brièvement les principaux résultats et conclusions de l'Article et ne sera pas un simple compte rendu du travail. Les résumés seront publiés à la fois en anglais et en français et seront traduits au mieux par la Rédaction.

Dix **tirés-à-part** des Articles (mais non des Notes courtes) seront envoyés gratis à l'auteur ou à l'auteur principal. Les tirés-à-part ne seront ni agrafés, ni reliés ou recouverts; ce sont de simples extraits de la revue.

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Société d'Ornithologie de l'Ouest Africain

Membership List, 1 January 2000

West African Ornithological Society
Société d'Ornithologie de l'Ouest Africain

Membership List, 1 January 2000

Would members please check their entries and notify any mistakes or changes to the Treasurer and Membership Secretary, R.E. Sharland, 1 Fisher's Heron, East Mills, Fordingbridge, Hants SP6 2JR, U.K.

Members are invited to send their e-mail addresses, which will, on request, be included in future editions of this list.

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MALIMBUS

Journal of the West African Ornithological Society
Revue de la Société d'Ornithologie de l'Ouest Africain

VOLUME 22 Number 1 March 2000
ISSN 0331-3689

West African Ornithological Society
Société d'Ornithologie de l'Ouest Africain

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The birds of the Parc National du Haut Niger, Guinea

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Received 20 March 1998; revised 16 October 1999

Summary

A large woodland in central Guinea-Conakry was surveyed for birds during the dry season in winter 1996–7, as part of an investigation for a new national park. Abundance, habitat use and monthly presence within the park are given for 300 bird species, including 17 new to the Guinea list.

Résumé

Une grand étendue de terrain boisé au centre de la Guinée-Conakry a été explorée pour les oiseaux pendant la saison sèche de l'hiver 1996–7, dans le cadre d'une recherche pour un nouveau parc national. L'abondance, l'utilisation de l'habitat et la présence mensuelle dans le parc sont données pour 300 espèces, y compris 17 nouvelles pour la liste de Guinée.

Introduction

Up to now, studies on birds in Guinea have been carried out only in the west along the coast, around Conakry and the Fouta Djalon (Richards 1982, Demey 1995), and in the east along the border of Sierra Leone and Liberia, especially Mt Nimba and the Ziama forest (Morel & Morel 1988). The central part of the country, mainly formed by the Upper Niger basin, has never been surveyed, except for some brief observations by Walsh (1987) visiting Kouroussa and Beyla in the northeast. As in many other parts of Africa with savanna woodland, tsetses, blackflies and mosquitoes have prevented intensive land use.

The new National Park of Haut Niger, established in April 1997 and linked to the Forêt classée de la Mafou, protects one of the last untouched primary woodlands of the West African Guinea savanna belt and covers 600,000 ha.

Methods

This study was part of an inventory of the flora and fauna for the Park and covered the five months of the dry season from late November 1996 to April 1997. The aim of

the study was to produce a bird list for the Park. To achieve this goal the following techniques were used. First the available literature was studied. Field observations at regular intervals covered similar routes in each study site, including the Park headquarters at Sidakoro (10°17′N, 10°28′W), at Somoria (10°30′N, 10°28′W), Serekoroba (10°25′N, 10°7′W) and Kouroussa (10°41′N, 9°54′W). Also all casual observations along roads were included. At the end of each day all birds seen during the day were listed on record forms by study site. Mist-netting was carried out at least once a month, with 5–15 mist nets placed in different habitats.

Checking the hunting bags of hunters at some villages in the Park added a few large species. Usually once a week the markets at Mansiramouribaya, Foya and Njako were checked for birds and small mammals hunted during the last week. The hunters agreed to keep the heads for identification. Guineafowl were the most common birds, but many others also turned up.

Catching birds for export in Guinea is a well-organised business. Especially in autumn often a few thousand birds a day leave Conakry. Most birds caught are granivores, but parrots, tauracos, starlings, pigeons and a few larger species are also on the export lists. Around Sidakoro two bird-catchers were operating. At that time in the dry season they were looking for finches. All other birds they caught were of no use for them, and it was arranged to take them over for this study. This enlarged the list of passerines and added some migrants to the ringing totals.

Habitats, vegetation and bird communities

The Park was planned to protect the large, almost untouched woodland of the Forêt classée de la Mafou. However, several other small habitats are included, forming a mosaic with the following proportional areas: savanna woodland 88.1%; agriculture 4.7%; bowals (short grass patches on laterite pans) 3.2%; bowl forest (small patches of forest usually in depressions) 2.8%; gallery forests (mainly along the large rivers Niger and Mafou) 1.2%. During this study all these habitats were surveyed.

Most of these habitats undergo dramatic changes during the year. In the rainy season, with an average annual rainfall of 1500 mm falling mainly between May and August, the vegetation is luxuriant green and probably insects are plenty. In the dry season, with about 6 months completely without rain, many trees lose their leaves, the grass and small rivers dry up. On the other hand there are plenty of seeds, some trees flower or even produce new leaves. The most drastic change takes place in the second half of the dry season, when almost all of the park gets burned by bush fires. Most of the grass goes, the trees lose their leaves and the face of the Park changes completely.

Savanna woodland

The savanna woodland has a few, probably highly specialised bird species, which occur only in undisturbed primary wooded savanna. So far very little attention has

been given to this habitat. The typical primary savanna woodland species for the Park are (scientific names of all birds mentioned in the text may be found in the Appendix): Beaudouin's Snake Eagle, Wahlberg's Eagle, Forbes's Plover, White-crowned Plover, Vinaceous Dove, Red-headed Lovebird, Violet Tauraco, Wood Owl, Fiery-necked Nightjar, Striped Kingfisher, Swallow-tailed Bee-eater, Blue-bellied Roller, Vieillot's Barbet, Fine-spotted Woodpecker, Rufous-rumped Lark, Grey-rumped Swallow, White-breasted Cuckoo Shrike, Green-backed Eremomela, Red-winged Warbler, Pallid Flycatcher, Blackcap Babbler, White-winged Black Tit, Violet-backed Sunbird, African Golden Oriole, Yellow-billed Shrike, White Helmet Shrike, Purple Glossy Starling, Chestnut-crowned Sparrow-Weaver, Red-headed Weaver, White-cheeked Olive-back, Yellow-winged Pytilia, Cabanis's Bunting. Most of these species are still quite common in the Park, but it is yet not known what effects bush fires have on these birds. Bush fires on a large scale seem to be a fairly recent event.

Among the typical woodland birds are residents, African migrants and Palaearctic migrants. The residents have to cope with the seasonal changes. It seems that in the non-breeding season they move around, because ringed birds were hardly ever controlled at the same site again. Especially among the small passerines, some species move around in mixed parties. Resident birds are expected to be strongly effected by bush fires, because their habitat changes completely within hours, but on the other hand they could benefit from their good knowledge of their home range.

Typical species of mixed bird parties found in the Park were: Golden-rumped Tinkerbird, Common Bulbul, Green-backed Eremomela, Northern Crombec, Yellow White-eye, White-winged Black Tit and Black-necked Weaver.

The African migrants spend either the dry season or the rainy season in the Park; Some come to breed like Wahlberg's Eagle, Rock Pratincole, Standard-winged Nightjar and African Golden Oriole. Others just spend the non-breeding season and moult there, like Grasshopper Buzzard and Carmine Bee-eater.

A few Palaearctic migrants spend the winter in the woodland, but in general this is the least used habitat by Palaearctic migrants in winter. Only European Bee-eater, Tree Pipit, Nightingale, Whinchat, and Pied Flycatcher winter in substantial numbers. In others, like Reed Warbler, Olivaceous Warbler, Willow Warbler and Chiffchaff, only a few individuals winter, most moving on to the forest zone or wintering further north. Most passerine migrants, whether on passage or wintering, favour secondary vegetation especially former farmland, which usually has fairly dense, green thicket mixed with open patches. The number of Palaearctic species recorded for the Park is fairly high, but some like Melodious Warbler and Wryneck are only passing visitors in autumn or spring. Others, like Cattle Egret and Night Heron, have an African population likely to occur there and are probably not from the Palaearctic.

Bowals

Bowals are covered with short grass and have some similarities with short grass plains in the soudan savanna. Birds that appear here in the dry season are mainly

African migrants including: Forbes's Plover, Denham's Bustard, Rufous-rumped Lark, Sun Lark, Plain-backed Pipit, Yellow-winged Pytilia, Orange-cheeked Waxbill, Lavander Waxbill and Black-bellied Fire-Finch. Two Palaearctic species favour this habitat in winter: Tree Pipit and Whinchat.

Bowals are often burned first and seed eating birds are then abundant for a few days. There might be some advantage of early fires to bowal specialists. The grass is short and quickly dried up, and after the fire a new low green vegetation quickly appears. This provides enough cover for the ground nesting birds and they have no risk of fire for the rest of the season.

Swamps

The main difference from bowals is in the rainy season. Swamps are usually flood plains of the larger rivers or old river beds and sometimes even have small ponds which remain throughout the year. In the dry season, most grass gets burned and they differ less from the bowals, except for the difference in soil. The most typical birds of swamps are Painted Snipe, African Jacana, Yellow-throated Longclaw, African Moustached Warbler, cisticolas, Red-winged Warbler, Yellow-mantled Whydah, Zebra Waxbill and Quail Fich. Palaearctic migrants typical for this habitat are Purple Heron, Little Egret, Snipe, Wood Sandpiper and Yellow Wagtail.

Bowl forests

Related to lowland forests, bowl forests are small forest patches in a depression and often include a small swamp, lake or spring. Large green trees, thick undergrowth and humid surface throughout the year are characteristic. The bird community here is very similar to primary lowland forest. Bowl forests are often near to villages and are slightly protected, by being ritual places. On the other hand the big trees are near to the villages and easily cut. Once the trees are gone, they are attractive for agricultural use. These little forest patches also have a very distinct population of small mammals and in the late dry season with its bush fires, when food might be most limited, are probably of great value to the regional fauna. The value of these bowl forests within the savanna ecosystem needs more research before they are gone.

Typical species are: Tambourine Dove, Little Greenbul, Grey-winged Robin-Chat, White-crowned Robin-Chat, Green Crombec, Red-faced Cisticola, Olive Sunbird, Square-tailed Drongo, White-cheeked Oliveback and Crimson Seedcracker.

River edge vegetation

Along the two big rivers Niger and Mafou is a small fringe which sometimes continues also along the larger tributaries. The green vegetation is often restricted to the river banks. As with bowl forest, they are green throughout the year and provide thick undergrowth. African species that favour this habitat include: Guinea Turaco, Blue-breasted Kingfisher, Shining Blue Kingfisher, Giant Kingfisher, Buff-spotted Woodpecker, Yellow-throated Leaflove, Oriole Warbler, White-browed Forest

Flycatcher, Cassin's Flycatcher and Brown Sunbird. There are also some Palaearctic migrants attracted by this habitat: Olivaceous Warbler, Sedge Warbler and Chiffchaff were only found here.

Rivers Niger and Mafou

These are large enough to attract a variety of waterbirds, including the Afrotropical Hamerkop, African Fish Eagle, Senegal Thick-knee, Egyptian Plover, Rock Pratincole, White-crowned Plover, African Skimmer and Pel's Fishing Owl. Purple Heron , Black Stork, Osprey, Greenshank , Green Sandpiper, Wood Sandpiper and Common Sandpiper are winter visitors from Europe. Most of the African species use the late dry season with a low water level and sandbanks for breeding; during the rainy season, when the water level is high, they seem to move down the river to Mali. But this pattern of migration is still not clear.

Farmland and farmbush

This man-made habitat is only found in the buffer zone. Around the villages are small fields, most used only for a few years until the soil is exhausted and a new plot is selected. Soon after a field is abandoned, the vegetation recovers; the stumps of the trees, which were left in the ground, grow up again. After a few years a habitat with low trees and bushes mixed with open patches attracts many birds, like Laughing Dove, Grey-backed Camaroptera, Western Black Flycatcher, Whistling Cisticola, Tawny-flanked Prinia, Red-billed Firefinch and Yellow-fronted Canary. Even though the species composition is different from primary woodland, these habitats seem to be a valuable addition to the Park. Among the migrants from Europe, Nightingale, Whinchat and Willow Warbler show a preference for this habitat.

Kouroussa region:

The small part of the Park next to Kouroussa is quite different from the rest of the Park. Fairly intensive agriculture over the last few hundred years has influenced the vegetation. The trees are much smaller and the vegetation is much more open. The area was visited in January and March and the species recorded from the Kouroussa region are presented separately in the species list. Future research should establish how marked the difference really is. Typical species recorded only in the Kouroussa region are: White-backed Vulture, Bateleur, Black-shouldered Kite, Temminck's Courser, Bronze-winged Courser and Chestnut-backed Sparrow Lark.

Birds recorded

A preliminary visit to the Park by Falk Hüttmann in December 1995 resulted in a bird list with 120 species (Hüttmann 1996) but, due to inadequate literature, about 20 % of the birds listed were wrongly identified; therefore the list was ignored in this report.

Dowsett & Dowsett-Lemaire (1993) summarised 552 bird species so far recorded from Guinea and more were added by Demey (1995). This study adds a further 17 species to the Guinea list, discussed below and marked with * in the systematic list (Appendix), which includes all species observed during the study (almost all were mist-netted or brought in by hunters), and those photographed by Udo Lange at Kouroussa.

So far, 300 species of birds are recorded for the Park, but since this study covered only the dry season, it is expected that the final bird list will total about 350 species. Considering that the Park covers just one major habitat, the numbers are surprisingly high.

The following recorded species are new to the Guinea list:

Black Stork. Up to two seen on several occasions around Somoria in the centre of the Park, in Jan.

Ovampo Sparrowhawk. Two adult birds appeared in connection with a bush fire on 14 Dec in the centre of the Park near Somoria. A wing and tail of another bird was received from hunters in Feb.

Spotted Thick-knee. One stayed for a few days on a bowal closed to Somoria, in Dec. The spotted plumage and the wing pattern separated it clearly from Senegal Thick-knee and European Thick-knee *Burhinus oedicnemus*.

Cuckoo. Occasionally seen Dec–Jan in open bush country close to villages between Sidakoro and Faranah. They were never calling. Confirmed by a tail brought in by a hunter in Jan. African Cuckoo appeared in Mar and was soon commonly seen and heard in open bush country with large trees.

Pel's Fishing Owl. U. Lange photographed this owl at the Niger near Kouroussa in Oct. In addition feathers were collected during this study at an exposed tree along the Niger near to Somoria on each visit.

Fiery-necked Nightjar. Appeared at the Park headquarters late Dec, and was soon noticed throughout the Park in tall open woodland.

Wryneck. One caught and ringed closed to Park headquarters on 8 Dec.

Grey-winged Robin-Chat. Caught and ringed at Sidakoro in low gallery vegetation along a small stream.

Red-breasted Wheatear. Two seen around a bush fire on an open bowal in Jan. The darkish red plumage and small amount of white around the tail made it clearly this species.

Chiffchaff. Commonly caught along the large rivers in the Park. A newly discovered moult pattern was described (Nikolaus in press.).

Whitethroat. Found on spring passage in the more open and dry part of the Park at Kouroussa in Mar. One was ringed.

Yellow-chested Apalis. Only seen in Jan, in bird parties at Sidakoro Park headquarters.

Gambaga Flycatcher. Seen twice at Park headquarters in Dec. This unstreaked grey flycatcher with the typical yellow base of the lower mandible was very familiar to me from other sites in E and W Africa.
Cassin's Flycatcher. At least two seen and caught in Dec and Jan at a small stream at Sidakoro. They left after the river dried up.
Tropical Boubou. Regularly seen and caught at Sidakoro. It favoured sites in the Park with tall grass within woodland.
Chestnut-crowned Sparrow-Weaver. Often hard to detect, unless its call is known. It is typical of the treetops in undisturbed tall woodland. Only present Dec–Jan.
Pale-winged Indigobird. At first, only Village Indigobird was seen and caught. But in Jan, when the catches of two bird-catchers were examined, a second type of adult male indigobird turned up. Comparing them with skins in the Bonn and Berlin museums, the second type was confirmed as *V. wilsoni*.

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Appendix: Systematic list

"Habitat" presents the usual habitat for each species, with the main ones indicated by XX. Habitats are grouped as:
For = Forest: bowl or relict forests and gallery forest species.
W = Primary woodland birds.
Bu = Bushes: species preferring low bushes, woodland edges or secondary woodland.
Gr =Grassland: mainly the bowals, but also includes tall grassland in swamps that usually dried up in the dry season.
Sw = Swamps: birds depending even in the dry season on wet swampy vegetation.
RE = River-edge: species found along the bigger rivers in the riverine vegetation. This does not include the tall gallery forest.
Riv = Birds living on the large open rivers Niger and Mafou.
K = Kouroussa.

These habitats do not correspond completely with those listed in the text, partly because of changes in those habitats during the year, which cause changes in the bird species composition in them, but mainly because the habitat types recognised by birds may be more general than those listed in the text. For example, "forest" birds may be found in bowl, relict and gallery forests, "grassland" birds may be found in bowals and dried-up swamps.

For each species found in the Park, abundance in the main habitat during this study is given. Abundance (especially for migrants) may change with season or from year to year. R = rare: species with fewer than five records during the study period. F = frequent: species that are occasionally seen, but not every day and usually in small numbers. C = common: species found easily in their typical habitat and often in larger numbers. If a species was found breeding during this study, B is added.

The study covered only late November to early April. Observations for each 10-day period are marked with X. Birds recorded only from Kouroussa area are marked with x. For U. Lange's Kouroussa observations made at a different season than covered by this study, the month is given in brackets.

	Habitat								Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
Phalacrocoracidae															
Phalacrocorax africanus Reed Cormorant					XX		XX		R		X			X	
Ardeidae															
Nycticorax nycticorax Night Heron					X	XX			F		X	XXX	XXX	XXX	XXX

	Habitat								Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
N. leuconotus White-breasted Night Heron					X	XX		X(Sep)	R						
Bubulcus ibis Cattle Egret				X	XX			X	C	X	XXX	XXX	XXX	XXX	X
Butorides striatus Green-backed Heron						X		X	F	X	XXX	XXX	XXX	XXX	X
Egretta garzetta Little Egret					XX	X	XX	X	F		XXX	XXX	XXX	XXX	
E. intermedia Yellow-billed Egret					XX	X		X	R			x			
E. alba Great White Egret					XX	X	X	X	F		XXX	XXX		xxx	
Ardea purpurea Purple Heron					XX	X		X	R			xxx		XXX	
A. cinerea Grey Heron					XX	X		X	F	X	XXX	XXX		XXX	
A. melanocephala Black-headed Heron					XX	X		X	R					xxx	
A. goliath Goliath Heron					X	XX	XX	X	R			x			
Scopidae															
Scopus umbretta Hamerkop					X	XX	XX	X	C/B	X	XXX	XXX	XXX	XXX	X
Ciconiidae															
Mycteria ibis Yellow-billed Stork					XX	X		X	R					xxx	
**Ciconia nigra* Black Stork		XX				X			R			XXX			
Threskiornithidae															
Bostrychia hagedash Hadada	X				X	XX			C	X	XXX	XXX	XXX	XXX	X
Anatidae															
Dendrocygna viduata White-faced Tree Duck					XX		XX	X(Sep)	R						
Plectropterus gambensis Knob-billed Duck					XX		X	X	R			xxx			
Pteronetta hartlaubii Hartlaub's Duck							XX		R					X	
Accipitridae															
Elanus caeruleus Black-shouldered Kite		X	XX	X				X(Sep)	R						
Milvus migrans tenebrosus Yellow-billed Kite		X	XX	XX	X		X	X	C	X	XXX	XXX	XXX	XXX	X
Haliaeetus vocifer African Fish Eagle					XX		XX	X	C/B	X	XXX	XXX	XXX	XXX	X
Gypohierax angolensis Palm-nut Vulture		XX						X	F/B		XXX	XXX	XXX	XXX	X

	Habitat								Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
Necrosyrtes monachus Hooded Vulture			XX	X				X	C	X	XXX	XXX	XXX	XXX	X
Gyps africanus White-backed Vulture		X	X					X	R			xXx		xxx	
Circaetus gallicus beaudouini Beaudouin's Snake-Eagle		X	XX						R			X			
C. cinereus Brown Snake-Eagle		XX	X						R			X			
C. cinerascens Western banded Snake-Eagle	XX	X							R	X					
Terathopius ecaudatus Bateleur		X	XX	X				X	R			xxx			
Polyboroides typus Harrier Hawk		XX	X						F		XXX	XXX	XXX	XXX	
Circus aeruginosus Marsh Harrier					XX		X	X	F		XXX			XXX	
Melierax metabates Dark-chested Goshawk		X	XX					X	R			X			
M. gabar Gabar Goshawk	X	XX	X						F		XXX	XXX			
Accipiter melanoleucus Black Goshawk		XX	X						R			X			
**A. ovampensis* Ovampo Sparrow-Hawk			XX						R		X				
A. tachiro African Goshawk	X	XX	XX						F	X	XXX	XXX		XXX	
A. badius Shikra		X	XX	X				X	C	X	XXX	XXX	XXX	XXX	X
Butastur rufipennis Grasshopper Buzzard			XX	X				X	F		XXX		XXX	XXX	
Kaupifalco monogrammicus Lizard Buzzard		X	XX					X	R			xxx			
Buteo auguralis Red-necked Buzzard		XX	X					X	C	X	XXX	XXX	XXX	XXX	X
Aquila wahlbergi Wahlberg's Eagle		XX	X	X					F				XXX	XXX	
A. rapax Tawny Eagle		X	XX	X				X(Sep)	R						
Hieraaetus spilogaster African Hawk Eagle		XX	X						R					XXX	
H. ayresii Ayres's Hawk Eagle		X	X						R			X			
Lophaetus occipitalis Long-crested Hawk Eagle		X	XX						R			X		X	
Stephanoaetus coronatus Crowned Eagle	XX	X							R			X		X	
Polemaetus bellicosus Martial Eagle		XX	X	X				X	R			xxx			
Pandion haliaetus Osprey						XX	X		R			X			

	Habitat							Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
Falconidae															
Falco ardosiaceus Grey Kestrel		X	XX					X	F			X			
F. cuvierii African Hobby			XX	X					F					XXX	
F. biarmicus Lanner			XX	X					F/B	X	XXX		XXX		
Phasianidae															
Francolinus bicalcaratus Double-spurred Francolin		XX	XX	X				X	A/B	X	XXX	XXX	XXX	XXX	X
Coturnix chinensis Blue Quail			X	XX					F	X					
Ptilopachus petrosus Stone Partridge		X	XX	X				XB	C/B	X	XXX	XXX	XXX	XXX	X
Numida meleagris Helmeted Guineafowl		X	XX					X	C	X	XXX	XXX	XXX	XXX	X
Turnicidae															
Turnix sylvatica Button Quail				X	XX	X			F					X	
Rallidae															
Amaurornis flavirostris Black Crake					X			X	C			XXX	XXX	XXX	
Gallinula chloropus Moorhen					XX	X		X	F			xxx			
Gruidae															
Balearica pavonina Black Crowned Crane				X	XX				R						
Heliornithidae															
Podica senegelensis Finfoot					X	XX		X	C		XXX	XXX	XXX		
Otididae															
Neotis denhami Denham's Bustard			X	XX					M		XXX	XXX	XXX	XXX	
Eupodotis melanogaster Black-bellied Bustard			X	XX					R				X		
Jacanidae															
Actophilornis africanus Lilytrotter					XX	X		XB	C/B			XXX		XXX	
Rostratulidae															
Rostratula benghalensis Painted Snipe					X									XXX	

	Habitat								Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
Haematopodidae															
Himantopus himantopus Black-winged Stilt					XX	X		X	R			xxx			
Burhinidae															
Burhinus senegalensis Senegal Thick-knee			X	X		XX		X	C	X	XXX	XXX	XXX	XXX	X
**B. capensis* Spotted Thick-knee									R		X				
Glareolidae															
Pluvianus aegyptius Egyptian Plover						X	XX	X	C	X	XXX	XXX	XXX	XXX	X
Rhinoptilus chalcopterus Bronze-winged Courser			X	XX				X	F					xxx	
Cursorius temminckii Temminck's Courser				X				X	R			xxx			
Glareola nuchalis Rock Pratincole					X		XX		F					XXX	
Charadriidae															
Charadrius forbesi Forbes's Plover					XX	X		X	F	X	XXX	XXX		XXX	
Vanellus senegallus Senegal Wattled Plover					XX	XX	X	X	C	X	XXX	XXX	XXX	XXX	X
V. albiceps White-crowned Plover						X	XX	X	C	X	XXX	XXX	XXX	XXX	X
Scolopacidae															
Gallinago gallinago Snipe					XX	X			R		X				
Tringa stagnatilis Marsh Sandpiper					XX	X	X		R		XXX	XXX			
T. nebularia Greenshank					X		XX		F		XXX	XXX	XXX	XXX	
T. ochropus Green Sandpiper					XX	X	X		C		XXX	XXX	XXX	XXX	
T. glareola Wood Sandpiper					XX	X	X		F		XXX			XXX	
Actitis hypoleucos Common Sandpiper					X	X	XX	X	C	X	XXX	XXX	XXX	XXX	
Laridae															
Rynchops flavirostris African Skimmer							X	X	F				XXX	XXX	X
Columbidae															
Streptopelia senegalensis Laughing Dove			XX	X				X	C	x	xxx	xxx	xxx	xxx	X
S. vinacea Vinaceous Dove		XX	XX	X				X	C	X	XXX	XXX	XXX	XXX	X

	Habitat							Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
S. semitorquata Red-eyed Dove		XX	X					X	C/B	X	XXX	XXX	XXX	XXX	X
Turtur afer Blue-spotted Wood Dove		X	XX					X	C/B	X	XXX	XXX	XXX	XXX	X
T. tympanistris Tambourine Dove	XX	X							F/B	X	XXX	XXX	XXX	XXX	X
Oena capensis Namaqua Dove			X					X	F					xxx	
Treron australis Green Pigeon		XX	X					X	C	X	XXX	XXX	XXX	XXX	X
Psittacidae															
Poicephalus senegallus Senegal Parrot		X							R					X	
Agapornis pullarius Red-headed Lovebird		X							R		X				
Psittacula krameri Rose-ringed Parakeet		X							R					X	
Musophagidae															
Tauraco persa Guinea Tauraco	XX	X							F	X	XXX	XXX	XXX	XXX	X
Musophaga violacea Violet Tauraco		X						X	C	X	XXX	XXX	XXX	XXX	X
Crinifer piscator Western Grey Plantain-eater		XX	X					X	C	X	XXX	XXX	XXX	XXX	X
Cuculidae															
Clamator glandarius Great Spotted Cuckoo		X	XX						R		X				
C. jacobinus Black and White Cuckoo		X	XX					X	F					XXX	
C. levaillantii Striped Crested Cuckoo		XX	X						R		X			XXX	
Pachycoccyx audeberti Thick-billed Cuckoo		X	XX						R			X			
Cuculus solitarius Red-chested Cuckoo	XX	X							F					X	
**C. canorus* Cuckoo		X	XX						F		XXX	XXX			
C. gularis African Cuckoo		X	XX					X	C					XXX	
Chrysococcyx cupreus Emerald Cuckoo	XX	X							R				XXX	XXX	
C. klaas Klaas's Cuckoo		X	XX						R			X			
Centropus grilli Black Coucal					XX	X			R		X				
C. senegalensis Senegal Coucal				X	XX	X		X	C	X	XXX	XXX	XXX	XXX	X

	Habitat								Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
Tytonidae															
Tyto alba Barn Owl			XX	X	X			XB	C/B	X	XXX	XXX	XXX	XXX	X
Strigidae															
Otus senegalensis African Scops Owl		X	XX	X				X	C	X	XXX	XXX	XXX	XXX	X
Bubo africanus Spotted Eagle Owl		XX	X						C	X	XXX	XXX	XXX	XXX	X
**Scotopelia peli* Pel's Fishing Owl						XX	X	X(Oct)	R			XXX	XXX		
Strix woodfordii Wood Owl		XX	X						C	X	XXX	XXX	XXX	XXX	X
Caprimulgidae															
**Caprimulgus pectoralis* Fiery-necked Nightjar		XX	X					X	C		X	XXX	XXX	XXX	X
C. climacurus Long-tailed Nightjar		XX	X	X	X			X	C	X	XXX	XXX	XXX	XXX	X
Macrodipteryx longipennis Standard-winged Nightjar		X	XX	X	X				C		X	XXX	XXX	XXX	X
Apodidae															
Telacanthura ussheri Mottled Spinetail		X						X	F		XXX	XXX		XXX	
Cypsiurus parvus Palm Swift		X	XX					X	F			XXX	XXX	XXX	
Apus pallidus Pallid Swift		X							F		XXX	XXX			
A. affinis Little Swift		X	X					X	C			xxx		XXX	
Trogonidae															
Apoloderma narina Narina's Trogon	XX	X							F		XXX	XXX			
Alcedinidae															
Alcedo quadribrachys Shining Blue Kingfisher		X			X	XX		X	A	X	XXX	XXX	XXX	XXX	X
A. cristata Malachite Kingfisher	X	XX			X	X			F			XXX	XXX	XXX	X
Ceyxs pictus Pygmy Kingfisher	X	X	X		XX	X			F		XXX	XXX	XXX		
Halcyon leucocephala Chocolate-backed Kingfisher			XX			X		X	F			XXX	XXX	XXX	
H. malimbica Blue-breasted Kingfisher		X	XX	X		X			C	X	XXX	XXX	XXX	XXX	X
H. senegalensis Woodland Kingfisher		XX	X					X(Sep)	F						
H. chelicuti Striped Kingfisher		X	XX					X	C			XXX	XXX	XXX	X

	Habitat							Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
Megaceryle maxima Giant Kingfisher						X	XX	X	C	X	XXX	XXX	XXX	XXX	X
Ceryle rudis Pied Kingfisher						X	XX	X	C	X	XXX	XXX	XXX	XXX	X
Meropidae															
Merops pusillus Little Bee-eater		X	XX	X					F		XXX	XXX	XXX	XXX	
M. hirundineus Swallow-tailed Bee-eater		XX	X						F	X	XXX	XXX	XXX	XXX	X
M. bulocki Red throated Bee-eater		X	X			XX			F/B		XXX			XXX	
M. apiaster European Bee-eater		XX	X					X	C	X	XXX	XXX	XXX	XXX	
M. nubicus Northern Carmine Bee-eater			X	X					F		X	XXX			
Coraciidae															
Coracias abyssinica Abyssinian Roller		XX	X	X				X	F			xxx		XXX	
C. naevia Purple Roller		XX	X					X	R			xxx			
C. cyanogaster Blue-bellied Roller		XX	X					X	C/B			XXX	XXX	XXX	
Eurystomus glaucurus Broad-billed Roller		XX	X					X(9)	R					XXX	
Upupidae															
Upupa epops Hoopoe			X						R						X
Phoeniculus purpureus Red-billled Wood-Hoopoe		XX	X					X	F			XXX	XXX	XXX	
P. aterrimus Black Wood-Hoopoe		XX	X						F		XXX		XXX	XXX	
Bucerotidae															
Tockus fasciatus Pied Hornbill	XX	X							F		XXX	XXX	XXX	XXX	
T. nasutus Grey Hornbill		X	XX					X	C	X	XXX	XXX	XXX	XXX	X
Bucorvus abyssinicus Abyssinian Ground Hornbill		X	XX	X					F			XXX			
Capitonidae															
Pogoniulus chrysoconus Yellow-fronted Tinkerbird		XX	X					X	F		XXX		XXX	xxx	
P. bilineatus Golden-rumpedTinkerbird	X	XX	X					X	C	X	XXX	XXX	XXX	XXX	X
Lybius vielloti Vieillot's Barbet		XX	X						C	X	XXX	XXX	XXX		
L. bidentatus Double-toothed Barbet		XX	X						F			XXX			

	Habitat								Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
L. dubius Bearded Barbet		X	XX					X	F			xxx	XXX	XXX	
Indicatoridae															
Prodotiscus insignis Spotted Honeyguide	X	X	XX						F		XXX	XXX			
Indicator indicator Greater Honeyguide		XX	X						F		XXX	XXX	XXX	XXX	X
I. minor Lesser Honeyguide		X	XX						F		XXX	XXX	XXX		
Picidae															
**Jynx torquilla* Wryneck		X	XX						R		X				
Campethera punctuligera Fine-spotted Woodpecker		XX	X					X	F	X	XXX	XXX	XXX	XXX	X
C. nivosa Buff-spotted Woodpecker		X				XX			F		XXX				
Dendropicos fuscescens Cardinal Woodpecker	X	XX	X						F	X	XXX	XXX	XXX	XXX	
Mesopicos goertae Grey Woodpecker	X	XX	X						F		XXX		XXX		
Picoides obsoletus Brown-backed Woodpecker	X	XX	X						F		XXX				
Alaudidae															
Pinarocorys erythropygia Rufous-rumped Lark				X					F		XXX	XXX			
Galerida modesta Sun Lark				X					C	X	XXX	XXX	XXX	XXX	
Eremopterix leucotis Chestnut-backed Finch-Lark			X	XX				X	R			xxx			
Hirundinidae															
Riparia riparia Sand Martin		X	XX	X	X	X		X	C		XXX	XXX		XXX	
Hirundo griseopyga Grey-rumped Swallow			X	XX				X	C	X	XXX	XXX	XXX	XXX	X
H. senegalensis Mosque Swallow		XX	X						R			XXX		XXX	
H. abyssinica Lesser Striped Swallow		X	XX	X					R			XXX			
H. daurica Red-rumped Swallow			X	XX	XX	X		X	F	X				XXX	
H. smithii Wire-tailed Swallow			X	XX	X	XX			R				XXX		
H. leucosoma Pied-winged Swallow			X	XX				X	F		XXX	XXX		XXX	
H. rustica Swallow			XX	X	XX	XX		X	C		XXX	XXX	XXX	XXX	
Delichon urbica House Martin		XX	X					X	C		XXX	XXX		XXX	

	Habitat								Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
Motacillidae															
Motacilla flava Yellow Wagtail				X	XX			X	F		XXX	XXX	XXX	XXX	
M. f. flava Blue-headed Wagtail				X	XX			X	F		XXX	XXX	XXX	XXX	
M. aguimp African Pied Wagtail						X			F		XXX	XXX		XXX	
Anthus richardi Richard's Pipit				X	XX				F			X			
A. leucophrys Plain-backed Pipit			X	XX					C	X	XXX	XXX	XXX	XXX	X
A. trivialis Tree Pipit		X	XX	X				X	C		XXX	XXX	XXX	XXX	
Macronyx croceus Yellow-throated Longclaw				X	XX			X	F			XXX		XXX	
Campephagidae															
Campephaga phoenicea Red-shouldered Cuckoo Shrike		XX	X					X(Sep)	R						
Coracina pectoralis White-breasted Cuckoo Shrike		X						X	F		XXX	XXX	XXX	XXX	
Pycnonotidae															
Andropadus virens Little Greenbul	XX	X							C	X	XXX	XXX	XXX	XXX	X
Chlorocichla flavicollis Yellow-throated Leaflove	XX	X							F	X	XXX	XXX	XXX	XXX	X
Pyrrhurus scandens Leaflove	XX	X							F		XXX	XXX	XXX		
Pygnonotus barbatus Common Bulbul		XX	XX			X		X	C	X	XXX	XXX	XXX	XXX	X
Turdidae															
Turdus pelios African Thrush	X	XX	X					X	C	X	XXX	XXX	XXX	XXX	X
Luscinia megarhynchos Nightingale		X	XX						C	X	XXX	XXX	XXX	XXX	
**Cossypha polioptera* Grey-winged Robin-Chat		X							R			XXX			
C. niveicapilla Snowy-headed Robin-Chat	X	XX	X						C	X	XXX	XXX	XXX	XXX	X
C. albicapilla White-crowned Robin-Chat	XX	X							F			XXX	XXX		
Saxicola rubetra Whinchat			X	XX	X			X	C	X	XXX	XXX	XXX	XXX	
Oenanthe oenanthe Wheatear				X					R		XXX				
**O. bottae* Red-breasted Wheatear			X	XX					R			X			
Myrmecocichla albifrons White-fronted Black Chat			X						F	X					

	Habitat								Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
Sylviidae															
Melocichla mentalis African Moustached Warbler				X					F	X	XXX	XXX	XXX	XXX	
Acrocephalus schoenobaenus Sedge Warbler					XX	X			F			XXX		XXX	
A. scirpaceus Reed Warbler			X	X	XX	X			F	X	XXX	XXX	XXX	XXX	
Hippolais pallida Olivaceous Warbler					X	XX		X	F		XXX	XXX	XXX	XXX	
H. polyglotta Melodious Warbler			X					X	F	X	XXX	XXX		XXX	
Eremomela pusilla Green-backed Eremomela		X	XX					X	C	X	XXX	XXX	XXX	XXX	X
Sylvietta virens Green Crombec	X								F			XXX			
S. brachyura Northern Crombec		XX	X						C	X	XXX	XXX	XXX	XXX	X
Phylloscopus trochilus Willow Warbler		X	XX			X		X	C	X	XXX	XXX	XXX	XXX	
**P. collybita* Chiffchaff		X	X			XX			C		XXX	XXX	XXX		
Hyliota flavigaster Yellow-bellied Hyliota	XX	X							F		XXX	XXX			
**Sylvia communis* Whitethroat			X					X	R					xxx	
Cisticola juncidis Fan-tailed Cisticola				X					F	X	XXX	XXX		XXX	
C. natalensis Croaking Cisticola			X	XX					F		XXX	XXX	XXX		
C. lateralis Whistling Cisticola			X	XX					C	X	XXX	XXX	XXX	XXX	X
C. erythrops Red-faced Cisticola	X		X	X	XX				C			XXX	XXX	XXX	X
C. cantans Singing Cisticola			XX	X					C	X	XXX	XXX	XXX	XXX	X
C. brachypterus Short-winged Cisticola	XX			X		X		X	F				XXX	XXX	
Prinia subflava Tawny-flanked Prinia		X	XX					X	C	X	XXX	XXX	XXX	XXX	X
Heliolais erytroptera Red-winged Warbler		X	XX						C	X	XXX	XXX	XXX	XXX	X
**Apalis flavida* Yellow-chested Apalis		X							F			XXX			
Camaroptera brachyura Grey-backedCamaroptera	X	XX	X					X	C	X	XXX	XXX	XXX	XXX	X
Hypergerus atriceps Oriole Warbler	X					XX			F		XXX	XXX	XXX	XXX	X
Muscicapidae															
Bradornis pallidus Pallid Flycatcher		XX	X						C	X	XXX	XXX	XXX	XXX	X

	Habitat								Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
Melaenornis edolioides Western Black Flycatcher		XX	X					X	C	X	XXX	XXX	XXX	XXX	X
Fraseria cinerascens White-browed Forest Flycatcher						X			F	X	XXX		XXX	XXX	
Ficedula hypoleuca Pied Flycatcher		XX	X					X	C	X	XXX	XXX	XXX	XXX	
**Muscicapa gambagae* Gambaga Flycatcher		XX	X						R		X				
**M. cassini* Cassin's Flycatcher						X			F		XXX	XXX			
Myioparus plumbeus Lead-coloured Flycatcher		XX	X						F		XXX	XXX		XXX	
Batis senegalensis Senegal Batis		XX	X					X	C	X	XXX	XXX	XXX	XXX	X
Platysteira cyanea Wattle-eye	X	XX	X			X			C	X	XXX	XXX	XXX	XXX	X
Elminia longicaudata Blue Flycatcher	X	XX							C	X	XXX	XXX	XXX	XXX	X
Terpsiphone rufiventer Red-belliedParadise Flycatcher	X	XX							C	X	XXX	XXX	XXX	XXX	X
Timaliidae															
Illadopsis puveli Puvel's Illadopsis		X							F	X	XXX	XXX		XXX	
Turdoides plebejus Brown Babbler		XX	X					X	F	X	XXX	XXX	XXX	xxx	
T. reinwardii Blackcap Babbler		XX	X						C		XXX	XXX	XXX	XXX	X
Paridae															
Parus leucomelas White-winged Black Tit		XX	X						C	X	XXX	XXX	XXX	XXX	X
Salpornithidae															
Salpornis spilonotus Spotted Creeper		X							F		XXX	XXX			
Nectariniidae															
Anthreptes fraseri Fraser's Sunbird		X							R					X	
A. gabonicus Brown Sunbird						X			F		XXX		XXX	XXX	
A. longuemarei Violet-backed Sunbird		X							F	X	XXX	XXX	XXX		
A. platurus Pygmy Sunbird			X						R			X			
Nectarinia olivacea Olive Sunbird	X								F			XXX			
N. verticalis Green-headed Sunbird	X	X							F		XXX	XXX	XXX		
N. senegalensis Scarlet-chested Sunbird		XX	X					X	F		XXX	XXX		xxx	

	Habitat								Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
N. venusta Yellow-bellied Sunbird	X	X	XX					X	C	X	XXX	XXX	XXX	XXX	X
N. chlorophygia Olive-bellied Sunbird									R				XXX		
N. cuprea Coppery Sunbird		X						X(Sep)	F					XXX	
N. coccinigaster Splendid Sunbird		XX	X					X	F	X	XXX	XXX	XXX	XXX	X
Zosteropidae															
Zosterops senegalensis Yellow White-eye		XX	X					X	C	X	XXX	XXX	XXX	XXX	X
Oriolidae															
Oriolus auratus African Golden Oriole		X						X	C	X	XXX	XXX	XXX	XXX	X
Laniidae															
Lanius collaris Fiscal Shrike			X		XX	X		X	F	X	XXX	XXX	XXX	XXX	X
L. senator Woodchat Shrike			X		XX			X	R			xxx			
Corvinella corvina Yellow-billed Shrike			X					X	F		XXX	XXX	XXX	XXX	X
Dryoscopus gambensis Northern Puffback		XX	X					X	C	X	XXX	XXX	XXX	XXX	X
Tchagra senegala Black-headed Tchagra		X	XX					X	F	X	XXX	XXX	XXX	XXX	X
T. minuta Blackcap Tchagra			X						R			XXX		XXX	
**Laniarius aethiopicus* Tropical Boubou		XX	X						F	X	XXX	XXX	XXX	XXX	X
L. barbatus Yellow-crowned Gonolek	X	X	XX			XX		X	F	X	XXX		XXX	XXX	X
Malaconotus sulfureopectus Sulphur-breasted Bush Shrike		X	XX					X	F	X		X			
M. blanchoti Grey-headed Bush Shrike		XX	X						R					X	
Prionops plumatus White Helmet Shrike		X						X	C	X	XXX	XXX	XXX	XXX	X
Dicruridae															
Dicrurus ludwigii Square-tailed Drongo	X	X							F			XXX	XXX		
D. adsimilis Fork-tailed Drongo		X						X	C	X	XXX	XXX	XXX	XXX	X
Corvidae															
Ptilostomus afer Piapiac		X	XX					X	C			xxx		xxx	
Corvus albus Pied Crow			X					X	F	X	XXX	XXX	XXX	XXX	X

	Habitat							Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
Sturnidae															
Lamprotornis purpureus Purple Glossy Starling		XX	X					X	F		XXX	XXX			
L. chalcurus Bronze-tailed Glossy Starling		XX	X					X	R					xxx	
L. chloropterus Lesser Blue-eared Glossy Starling		X	XX						C		XXX	XXX	XXX	XXX	X
L. caudatus Northern Long-tailed Glossy Starling		X	XX					X	F			xxx			
Cinnyricinclus leucogaster Violet-back.Starling		XX	X					X	C		XXX	XXX	XXX	XXX	X
Buphagus africanus Yellow-billed Oxpecker		X	XX	X					R		X				
Ploceidae															
Passer griseus Grey-headed Sparrow		X	XX						F	X	XXX	XXX			
Petronia dentata Bush Petronia		XX	X					X	C/B	X	XXX	XXX	XXX	XXX	X
**Plocepasser superciliosus* Chestnut-crowned Sparrow-		XX	X						F		XXX	XXX			
P. nigicollis brachypterus Black-necked Weaver		XX	X		X			X	C	X	XXX	XXX	XXX	XXX	X
P. nigerrimus Vieillot's Black Weaver		X	X			XX			F	X	XXX	XXX	XXX		
P. cucullatus Village Weaver		XX	X			X		X	C/B	X	XXX	XXX	XXX	XXX	X
P. superciliosus Compact Weaver			X	XX		X			R			XXX	XXX		
Anaplectes rubriceps Red-headed Weaver		X						X	F	X	XXX	XXX		xxx	
Quelea erythrops Red-headed Quelea		X	XX	X	XX			X	F		XXX		XXX		
Euplectes hordaceus Fire-crowned Bishop		X	XX	X				X	C	X	XXX	XXX	XXX	XXX	X
E. franciscanus Red Bishop				X				X(Sep)	F						
E. macrourus Yellow-mantled Whydah			XX		X			X	C	X	XXX	XXX	XXX	XXX	X
E. ardens Red-collared Whydah				X					F		XXX				
Estrildidae															
Nesocharis capistrata White-cheeked Oliveback	X					X			F	X	XXX	XXX	XXX		
Pytilia hypogrammica Yellow-winged Pytilia			XX	X					F		XXX				
P. phoenicoptera Red-winged Pytilia			XX	X					C	X	XXX	XXX	XXX	XXX	X
Pirenestes sanguineus Crimson Seed-Cracker	X				X				F		XXX	XXX			

	Habitat							Abund.	Month					
	For	W	Bu	Gr	Sw	RE	Riv	K		Nov	Dec	Jan	Feb	Mar	Apr
Spermophaga haematina Bluebill	X					X			F	X	XXX	XXX	XXX	XXX	X
Euschistopspiza dybowskii Dybowski's Twinspot			XX	X					F	X	XXX	XXX	XXX	XXX	X
Lagonosticta rufopicta Bar-breasted Firefinch		X	XX	X					F	X	XXX	XXX			
L. senegala Red-billed Firefinch			XX	X				X	F		XXX	XXX	XXX	XXX	X
L. rara Black-bellied Firefinch		X	XX	X				X	C	X	XXX	XXX	XXX	XXX	X
L. rubricata Blue-billed Firefinch					X	XX			F	X	XXX	XXX	XXX	XXX	X
Estrilda caerulescens Lavender Waxbill		X	XX	X				X	C	X	XXX	XXX	XXX	XXX	X
E. melpoda Orange-cheeked Waxbill			XX	X	X			X	C	X	XXX	XXX	XXX	XXX	X
E. astrild Common Waxbill			XX	X	XX			X	F					xxx	
Uraeginthus bengalus Red-cheeked Cordon-bleu		X	XX	X				X	F		XXX		XXX	xxx	
Amandava subflava Zebra Waxbill				X	XX				F					XXX	
Ortygospiza atricollis Quail Finch				X	XX				F					XXX	
Lonchura cucullata Bronze Mannikin		X	XX	X				X	C	X	XXX	XXX	XXX	XXX	X
Vidua chalybeata Village Indigobird			X	XX					F	X	XXX	XXX			
**V. wilsoni* Pale-winged Indigobird			X	XX					F			XXX			
V. macroura Pin-tailed Widow			XX	X				X(Sep)	F						
V. interjecta Uelle Paradise Widow			XX	X					F		XXX				
Fringillidae															
Serinus mozambicus Yellow-fronted Canary		XX	X					X	C	X	XXX	XXX	XXX	XXX	X
Emberizidae															
Emberiza tahapisi Cinnamon-breasted Rock Bunting			X						F					XXX	
E. cabanisi Cabanis's Bunting		XX	X						F		XXX	XXX			

Nouvelles observations de six espèces d'oiseaux au Mali

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Reçu 15 octobre 1998; revu 2 octobre 1999

Résumé

Des observations sont présentées pour trois espèces d'oiseaux nouvelles au Mali (Inséparable à tête rouge *Agapornis pullaria*, Apalis à poitrine jaune *Apalis flavida*, Martinet marbré *Apus equatorialis*) et trois espèces peu observées antérieurement (Faucon des chauves-souris *Machaerhamphus alcinus*, Martinet à croupion blanc *Apus caffer*, Martin-pêcheur à poitrine bleue *Halcyon malimbica*). Les données sur le Martin-pêcheur représentent une extension importante de l'aire de répartition.

Summary

Records from Mali are presented for three species new to the country (Red-headed Lovebird *Agapornis pullaria*, Yellow-breasted Apalis *Apalis flavida*, Mottled Swift *Apus equatorialis*) and three others with few previous records (Bat Hawk *Machaerhamphus alcinus*, White-rumped Swift *Apus caffer*, Blue-breasted Kingfisher *Halcyon malimbica*). The records of Blue-breasted Kingfisher constitute an important range extension.

Introduction

L'avifaune du sud-ouest du Mali paraît avoir été peu prospectée jusqu'à présent. La référence principale est la liste complète des oiseaux du Mali établie par Lamarche (1980). Cette liste compte peu de mentions particulières à la zone.

J'ai résidé à Bougouni au sud-ouest du pays (11°30′N, 7°30′O) de 1994 à 1996. Pendant cette période, j'ai fait une prospection intensive de la zone dans un rayon de 10 km autour de la ville, ainsi que des prospections occasionnelles ailleurs dans le sud et le centre du pays. Autour de Bougouni les efforts se sont concentrés sur les habitats associés aux fleuves et aux marigots, habitats les plus riches en oiseaux. Sur un site, la capture au filet a été pratiquée régulièrement. Quelques données biométriques ont été collectées sur les oiseaux capturés, notamment les longueurs du bec (du crâne), de l'aile, de la troisième primaire et de la queue, ainsi que des données sur la mue.

Parmi les oiseaux observés et/ou capturés à Bougouni, l'Inséparable à tête rouge *Agapornis pullaria* et l'Apalis à poitrine jaune *Apalis flavida* sont apparemment nouveaux pour le Mali. A cela s'ajoute le Martinet marbré *Apus equatorialis*, observé à la falaise de Bandiagara, à l'est du pays. Pour le Faucon des chauves-souris *Machaerhamphus alcinus*, le Martinet à croupion blanc *Apus caffer* et le Martin-chasseur à poitrine bleue *Halcyon malimbica*, il y a eu peu d'observations antérieures dans le pays. La présence régulière dans la zone de Bougouni de cette dernière espèce représente une extension importante de l'aire de répartition.

Résultats et discussion

***Machaerhamphus alcinus* Faucon des chauves-souris**

Observé régulièrement en saison des pluies de mi-août à fin septembre, quand 1–3 sujets étaient présents au crépuscule, en comportement typique de chasse des petites chauves-souris insectivores, au-dessus de la ville de Bougouni. Il y eut une observation en octobre et une en mars.

Le comportement de chasse a été étudié au cours de quatre soirées pendant une demi-heure après le coucher du soleil. Les observations correspondent bien à la description de Brown *et al.* (1982). Les oiseaux arrivent entre le coucher du soleil et 10 minutes après. La direction d'où ils viennent laisse supposer que le lieu de repos pendant la journée serait la région du fleuve, où il existe de grands arbres. La chasse commence dès l'apparition des chauves-souris, 10–15 min. après le coucher du soleil. Elle continue au moins jusqu'à 20 min. plus tard, quand la nuit empêche de continuer les observations. La chasse se fait surtout à une hauteur de 25–50 m, où les oiseaux attendent les chauves-souris qui sortent de la ville vers le nord-est. Si les chauves-souris rencontrent l'oiseau elles s'enfuient en se laissent tomber sous un angle aigu, parfois jusqu'au sol. Les Faucons les poursuivent dans leur chute, mais la plupart des captures se font à la première rencontre. La fréquence moyenne des tentatives de capture par oiseau était de 2.7 tentatives par min. avec 31% succès.

Au cours de cette période le nombre de chauves-souris diminuait, vraisemblablement à cause d'un déplacement saisonnier. A la mi-août des dizaines d'entre elles sortaient de leur lieu de repos par min., tandis qu'après le 15 sep les chauves-souris avaient presque disparu. Le nombre de chauves-souris capturées par soirée diminuait également. Après le 15 sep les oiseaux ne venaient plus chasser et il n'y avait plus que quelques observations d'oiseaux en vol.

Le Faucon des chauves-souris a été noté au Mali par Thiollay (1977) et Balança & Visscher (1993), respectivement pour le sud du Mali jusqu'à Ségou et au plateau Dogon. L'observation de Balança & Visscher (1993) en octobre correspond bien à la période où l'espèce a été observée à Bougouni. Bien que l'espèce soit généralement considérée comme sédentaire (Thiollay 1977, Brown *et al.* 1982), les données ci-dessus suggèrent pour le Mali plutôt une présence saisonnière. Dans la zone, l'espèce paraît un visiteur

régulier du milieu et de la fin de la saison des pluies, qui se déplace probablement selon la disponibilité en chauves-souris.

***Agapornis pullaria* Inséparable à tête rouge**

Observé six fois aux alentours de Bougouni, survolant la forêt galerie dégradée, en groupes de 1–3, les observations étaient concentrées au début de la saison des pluies de 1996 entre mi-avril et mi-juin. Il y eut une seule observation au mois de septembre en 1994. A part les observations à Bougouni, il y eut l'observation d'un mâle à Bamako en fév 1994, probablement un oiseau échappé de cage. Un couple a été trouvé chez un oiselier à Bougouni qui disait capturer l'espèce regulièrement à la frontière de la Côte d'Ivoire.

L'Inséparable à tête rouge n'était pas encore confirmé pour le Mali. L'espèce est mentionnée par Thiollay (1985) au nord de la Côte d'Ivoire dans la zone de Boundiali, qui fait frontière à la zone de Bougouni. L'espèce pourrait bien être un visiteur régulier dans la zone au début de la saison des pluies. Le fait que les observations se limitent en grande partie à 1996 pourrait être dû à l'inexpérience de l'observateur avec l'espèce.

***Apus caffer* Martinet à croupion blanc**

Observé trois fois: une observation de deux oiseaux à Koumantou, 80 km à l'ouest de Bougouni (11°25′N, 6°50′W), juin 1994; deux observations d'un et et de deux oiseaux à Bougouni, sep 1996. L'identification repose sur la combinaison du croupion blanc avec la queue fourchue.

Le Martinet à croupion blanc a été trouvé au Mali par Cheke & Howe (1990) à Bamako au mois de novembre. Les observations en septembre correspondent à des observations récentes dans cette période en Côte d'Ivoire (Salewski 1997) et Burkina Faso (Balança & Visscher 1997). Ceci pourrait indiquer que l'espèce visite la zone en migration. Par contre l'observation de juin concernait deux oiseaux sur un site apte à la nidification: à proximité d'Hirondelles à gorge striée *Hirundo abyssinica* construisant des nids. Mais les données disponibles ne permettent de le considérer que comme visiteur irrégulier de la zone.

***Apus aequatorialis* Martinet marbré**

Un groupe d'environ 100 oiseaux observés à la falaise de Bandiagara, près du village de Teli, le soir de 13 oct 1989. Ils visitaient des fissures dans les roches. Les oiseaux ont été identifiés par leur taille comparée à celle d'autres espèces de martinets présents (Martinet à dos blanc *A. affinis*, Martinet noir *A. apus*). Le Martinet à ventre blanc *A. melba* était exclu par l'aspect "marbré" du dessous.

Le Martinet marbré n'est pas encore mentionné pour le Mali. Balança & Visscher (1997) l'ont trouvé dans le Yatenga au Burkina Faso entre mars et juillet. Comme il n'y avait aucun milieu adéquat au nord du Burkina Faso, ils avaient suggéré la possibilité d'une colonie de nidification à la falaise de Bandiagara en territoire malien. Bien qu'il n'y ait pas de preuve que les oiseaux observés soient nicheurs, l'observation renforce la

suggestion des deux auteurs. L'observation au Mali en octobre tombe dans la période où les oiseaux étaient absents du Yatenga.

***Halcyon malimbica* Martin-chasseur à poitrine bleue**

Observé et capturé régulièrement pendant toute l'année, sauf les mois d'août et février quand le nombre de visites était faible. Les observations sont fréquentes de mars à juin, période où l'activité territoriale est la plus intense et pendant laquelle jusqu'à trois oiseaux ont été observés ensemble. L'habitat de l'espèce aux alentours de Bougouni consiste en la bande de forêt galerie dégradée le long du fleuve Baoulé et du marigot Mono. Cette bande atteint une largeur de 10 m et est constituée d'une strate d'arbustes et de lianes (*Mimosa pigra*, *Ficus capensis*), d'une strate arborée d'une hauteur de 5 m (*Mitragyna inermis*, *Isoberlinia* sp.) et de quelques grands arbres (*Daniella olivieri*). Dans ce milieu, l'espèce est observée difficilement et généralement les oiseaux étaient repérés par leur chant, surtout au moment du lever du soleil. Des comptages sur 3 km du marigot en avril et en juin ont donné une densité d'un oiseau chantant par kilomètre. En dehors des alentours de Bougouni, l'espèce était observée à Kolondiéba (11°5′N, 6°55′W), à 80 km au sud-est de Bougouni, dans un habitat similaire.

L'identification de ces oiseaux en mains malheureusement n'a pas pu donner une réponse définitive quant à la sous-espèce. La couleur de la huppe et du cou était gris foncé, avec des traces de bleu sur le cou seulement. Le bleu était nuancé de vert sur certains individus. Les données biométriques (moyenne, SD, écart, en mm) des 9 adultes sont: bec 56.1±1.0 (54.8–58.0), queue 85.0±2.8 (81.1–89.7), aile 116.4±2.8 (112.6–121.3), 3ème primaire 80.9±5.6 (73.0–87.6). La mue a été observée de septembre à décembre, la mue des plumes du corps se limite de septembre à octobre. La mue des primaires, secondaires et tertiaires a été observé jusqu'en décembre, bien qu'un individu l'eût presque achevée en fin octobre. La mue semble commencer dans deux centres au milieu des primaires et des secondaires, à partir desquels le remplacement des plumes progresse dans les deux directions.

La reproduction de l'espèce a pu être constatée par la capture en octobre d'un immature venant de quitter le nid, dont les ailes, la queue et le bec n'étaient pas encore bien développés. Un adulte capturé en septembre montrait encore quelques caractères d'un plumage immature et était probablement de deuxième année.

Le Martin-chasseur à poitrine bleue est représenté en Afrique de l'Ouest (ouest de Cameroun) par deux sous-espèces: *H. m. torquata* du sud mauritanien à la Guinée Bissau et à l'ouest du Mali, et *H. m. forbesi* de la Sierra Leone au Nigéria. Bien que les deux populations semblent être séparées par une zone où l'éspèce n'apparaît pas, en Guinée et au sud du Mali (Fry *et al.* 1988), l'espèce est mentionnée au Guinée par Walsh (1987) et par Morel & Morel (1988). Lamarche (1980) ne mentionne qu'une observation et deux captures au Mali, toutes dans l'ouest. Selon Thiollay (1985) l'espèce est rencontrée jusqu'aux galéries les plus septentrionales de la Côte d'Ivoire.

Les observations démontrent qu'il existe une population importante dans la zone de Bougouni, qui y paraît sédentaire et reproductrice. Bougouni est à cheval sur les aires de

répartition connues du nord de la Côte d'Ivoire (200 km) et de l'ouest du Mali (300 km). Bien que la sous-espèce ne soit pas connue, il est probable que cette population se rattache à celle du nord de la Côte d'Ivoire. Ceci est confirmé par l'observation de l'oiseau à Kolondiéba. En outre, le fleuve Baoulé prend sa source au nord de la Côte d'Ivoire ce qui fait que l'habitat de l'espèce s'étend pratiquement sans rupture jusqu'à Bougouni. D'un autre côté, il n'est pas exclu non plus que l'espèce soit présente dans la zone peu prospectée du nord-est de la Guinée et qu'en fait les deux aires de répartition soient contiguës.

***Apalis flavida* Apalis à poitrine jaune**

Observé quatre fois et capturé au filet trois fois, en fév, mars, mai, juin, sep et oct. L'espèce est rencontrée dans la forêt galerie dégradée le long du fleuve Baoulé et du marigot Mono. Les données biométriques (mm, g) des 3 sujets capturés le 1 oct 1995, 4 fév 1996 et le 16 mars 1996 sont: tarsus 18.0, 19.9, 19.4; bec 12.2, 13.8, 13.4; queue 44, 43, 41; aile 50.4, 54.8, 53.8; 3ème primaire 39.1, 38.2, 39.2; poids 7.3, 7.6, 8.1. L'oiseau du 16 mars était en mue du queue et des plumes du corps.

L'espèce n'est pas encore mentionnée pour le Mali. Dans les pays voisins les observations sont rares aussi: seulement une pour la Côte d'Ivoire (Thiollay 1985). Les observations à Bougouni laissent croire que l'espèce y est présente pendant toute saison, mais en nombre très faible.

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Short Notes — Notes Courtes

Birds of Waza new to Cameroon: corrigenda and addenda

In their annotated list of birds of the Waza area, northern Cameroon, Scholte *et al.* (1999) claimed 11 species for which there were no previous published records from Cameroon "mainly based on Louette (1981)". In fact, their list included 14 such species, but there are previous published records for most, some missed by Louette (1981), some of which had been listed by Dowsett (1993). We here clarify these records and give additional notes on two other species of the area.

Corrigenda

Ciconia nigra Black Stork (Dowsett 1993, based on Robertson 1992). Waza. Not claimed as new by Scholte *et al.* (1999), but the previous record mentioned by them is unpublished (Vanpraet 1977).

Platalea leucorodia European Spoonbill (new).

Phoenicopterus ruber Greater Flamingo (new). Not claimed as new by Scholte *et al.* (1999), but the previous record mentioned by them is unidentifiable as to species (Louette 1981). Contrary to those authors, Brown *et al.* (1982) did not report this species from Cameroon, but Lesser Flamingo *Phoeniconaias minor*.

Anas clypeata Shoveler (Dowsett 1993, based on Robertson 1992). Several records from the Waza and Garoua areas (see also Girard & Thal 1996), once as far south as Bamendjing (RJD & F. Dowsett-Lemaire pers. obs.).

Coturnix coturnix Common Quail. Manenguba (Serle 1950, p. 353).

Turnix sylvatica African Buttonquail. Reported from Dja (Christy 1994). Apparently it has also been seen elsewhere, but these other records remain unpublished.

Porphyrio porphyrio Purple Swamphen (Dowsett 1993, based on Sala 1991). Yaounde and Limbe (see also Manners *et al.* 1993).

Neotis nuba Nubian Bustard (new).

Eupodotis ruficrista (*savilei*) Crested (Savile's) Bustard (new).

Vanellus lugubris Senegal Plover (new). Not claimed as new by Scholte *et al.* (1999), but the previous record mentioned by them is unpublished (Vanpraet 1977).

Chlidonias hybridus Whiskered Tern. Garoua (Sørensen *et al.* 1996). There is also a recent report from Rio del Rey (R. Demey & M. Languy *in litt.*).

Apus pallidus Pallid Swift. Mt Oku (Stuart 1986, p. 127).

Anthus campestris Tawny Pipit (Dowsett 1993, based on Robertson 1992). Waza area (see also Elzen 1975).

Oenanthe isabellina Isabelline Wheatear. Waza (Sørensen *et al.* 1996).

Addenda

Egretta garzetta Little Egret. A ring was given to PS by villagers of Dawaya (close to Tikele) on 19 Jan 1996, of a bird probably trapped in a fishing net in the Logomatya water course. It had been ringed as a nestling in the lagoon of Valle Bertuzzi (44.48

N, 12.13 E) in the Po River Delta (NE Italy) on 3 June 1994 (S. Volponi *in litt.*). Elgood *et al.* (1994) reported one recovery in N Nigeria and two in S Nigeria from Little Egrets ringed in "Russia". Brown *et al.* (1982) mentioned recoveries of Yugoslav birds in Nigeria and Russian birds in Nigeria and Cameroon and concluded that Palaearctic migrants from western Europe tend to winter in western W Africa and those from eastern Europe in eastern W Africa. The Italian bird in Waza-Logone suggests a more diverse migration pattern.

Anas hottentota Hottentot Teal. One ringed at the rice scheme near L. Maga, Jan 1999 (Tiwaoun & Beladane 1999, R. Azombo pers. comm.). Mentioned by Scholte *et al.* 1999 as observed only prior to 1980; can now be moved from List 2 to List 1.

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Received 1 September 1999
Revised 9 September 1999

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Comment on species rejected from and added to the avifauna of Bioko Island (Equatorial Guinea)

Two of the species dealt with by Perez del Val *et al.* (1997) perhaps need further comment.

***Gyps africanus* White-backed Vulture.** Pérez del Val *et al.* (1997) rejected this species, suggesting that the only record, an adult female reported by Alexander (1903), was a misidentified Palm-nut Vulture *Gypohierax angolensis*. The considerable differences of shape of head and bill and of size (Brown *et al.* 1982), which would be obvious in the hand, make it hard to believe that the two could be confused. Part 3 of Alexander (1903) comprises a list of birds previously recorded on Bioko, which he did not find during his visit, and which includes Palm-nut Vulture. As Alexander was an ornithologist with wide experience of W Africa by that time, it seems unlikely that he would have mistaken the two species. Unfortunately, neither is included in the list, in the accessions register, of birds collected by Alexander and presented to the British Museum (Natural History), although the entries include other birds collected at Sipopo on the same date.

Pérez del Val *et al.* remark on the distance between Bioko and the main area of distribution of White-backed Vulture. However, there is a record of White-headed Vulture *Trigonoceps occipitalis*, which is of similar range in W Africa, coming as close to Bioko as Mt Cameroon, 60 km to the NNE (Bannerman 1953) and the possibility of a vagrant White-backed Vulture in the same area should not be discounted.

Pérez del Val *et al.* write that Palm-nut Vulture was collected by the "majority of other naturalists (Allen & Thomson 1848)", but there is no reference to Palm-nut

Vulture from Bioko in either text or appendix of Allen & Thomson (1848). The only specimen listed in the accessions register of BMNH of a Palm-nut Vulture that was probably collected during the expedition is "1847.1.18.62 *Vulture angolensis* (Lath) ♂ Racama Ango (Gray) F. Po", purchased of Fraser. The specimen no longer appears to be in the collection.

Pérez del Val (2000) and I seem to agree that this species cannot be discounted nor confirmed as a vagrant to Bioko. Pérez del Val (2000) notes that some evidence suggests that Alexander did examine a specimen. This notion is further supported by the fact that Alexander (1903) includes the species in Part 2 (p. 340) "List of species *of which specimens were obtained*, with Field Notes" (my italics), as also are *Psittacus erithacus* and *Actitis hypoleucos*.

***Vanellus albiceps* White-crowned Plover.** Rejected from the Bioko list by Pérez del Val *et al.* (1997), the type locality of this species is likely to remain in doubt. In the Appendix to Allen & Thomson (1848), its habitat is given as "River Quorra", or lower Niger. The holotype was collected by Allen, probably during the Macgregor Laird expedition to the Niger in 1832. It was presented by Gould to a meeting of the Zoological Society of London, where it was introduced as "a previously undescribed plover" and, though not entirely clear, the text suggests that it was collected "during the expedition up the Quorra" (Gould 1834). The holotype was purchased by T.C. Eyton when the ZSL collection was closed down and sold in 1855; it was purchased for BMNH in 1881 and is in the type collection at Tring, curiously enough bearing an Eyton label "Fernando Po".

Fraser (1848) noted that Allen had collected two specimens on Fernando Po, but does not say whether he is including the bird collected in 1832 or referring to others collected in 1841. If the latter, the locality will remain an enigma. It is unlikely that *V. albiceps* would have been collected in Nigeria in 1841 as, unlike the expedition of 1832, the only opportunity for collecting on the Niger was in August–October, when the river is in flood and the species is absent from southern Nigeria (Elgood *et al.* 1994). The habitats given for four of the other 45 birds listed in the appendix of Allen & Thomson (1848) are erroneous and perhaps complete reliance should not be placed on the "River Quorra" given there for the present species.

I am most grateful to the authorities of The Natural History Museum at Tring for allowing me access to the collections and to Dr Robert Prŷs-Jones and Mrs F.E. Warr for their help.

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Received 26 January 1998
Revised 19 October 1999

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Reply to Moore

***Gyps africanus* White-backed Vulture.** Moore (2000) states that we suggest "that the only record [of the species on Bioko], an adult female reported by Alexander (1903), was a misidentified Palm-nut Vulture *Gypohierax angolensis*". Our arguments were based on the supposition that Alexander did not actually collect the bird. If he did, then I agree with Moore (2000) that we should accept White-backed Vulture as vagrant on Bioko. If he did not, then it should be rejected from the Bioko list in the light of the arguments presented by Pérez del Val *et al.* (1997).

Arguments that favour the idea that Alexander collected the bird include:

1. Alexander (1903) writes "Ad. ♀", suggesting that he examined a specimen.

Arguments unfavourable to the idea include:

2. In Alexander's (1903) list for Bioko there are also other species that were recorded by him but not collected (*Corvus albus*, *Actitis hypoleucos*, *Psittacus erithacus*).
3. Alexander did not observe Palm-nut Vulture *Gypohierax angolensis*, which is common and conspicuous in Bioko (Pérez del Val *et al.* 1997).

These arguments are not definitive, and personal opinion will give more weight to some than others. At the very least, in the absence of a specimen or firmer evidence that one once existed, the record must be regarded as unconfirmed.

***Vanellus albiceps* White-crowned Plover.** We simply accepted the view of Amadon (1953) rather than that of Urban *et al.* (1986). The decision rests on whether to rely on the testimony of Allen, who collected the specimen, or Fraser, who redescribed it 16 years later. Although Moore (2000) is correct that many species collected during the Niger expeditions were wrongly attributed to locality by both Allen and Fraser, and that therefore their localities, including that of the present species, must remain in some doubt, the species cannot be regarded as having been proved to occur on Bioko.

I would like to thank Alan Tye for improving the text of this reply.

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Received 1 April 1998
Revised 19 October 1999

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Colour of the downy young and notes on breeding and food of the Grasshopper Buzzard *Butastur rufipennis* in Niger

Cheke (1995) has described the young of the Grasshopper Buzzard *Butastur rufipennis*, adding, however, that there was confusion about the colour of their down. We should like to comment on this question, and at the same time give a more complete description of the young and breeding habits of the species.

Along the road to Say, 26 km south of Niamey, Niger, there is a 6–7 km wide laterite plateau with tigerbush vegetation (13°17′N, 2°11′E). Tigerbush is a type of patterned vegetation where bands of crusted bare soil alternate with dense bands of 2–6 m high bushes. The bands run more or less parallel to the contours, each being 10–30 m wide. At around 8h00 on 16 Jul 1993, six weeks after the start of the rainy season, JB saw an adult Grasshopper Buzzard flying across the road there, with a twig in its beak. The next day, we found a Grasshopper Buzzard nest in the first line of trees, *c.* 15 m from the road. It was easy to reach, 4.5 m up in a *Combretum* tree (probably *C. nigricans*), made of branches and twigs, and lined with fresh leaves. In the nest were two white (not grey: see Cheke 1995) downy young *c.* 20 cm in length. Their ceres, gapes and claws were pale yellow, the distal halves of their beaks dark grey. They had dark brownish grey irides. One of the young was prostrate. Based on the late pin stage of their flight feathers (see below), and on comparison with the speed of development of similarly sized raptors in The Netherlands (Bijlsma 1997), we estimate their age at *c.* 11–12 days.

On 19 July at 8h00 one of the adults was on the nest. At 16h45 there was again an adult on the nest, which left when we approached. Both young were active and, to our surprise, their down was pale reddish brown. We believe this sudden change in colour of both young at the same time came from red dust in the rain that had fallen since our previous inspection. The alternative explanation, a change from white first down to pale reddish brown second down, seems unlikely. Colour changes from first to second down do occur in many raptor species, *e.g.* in the genera *Accipiter* and *Circus*, but in these taxa second down starts to develop after about seven days and takes almost ten days to develop fully (Cramp & Simmons 1980, Brown *et al.* 1982). If our young Grasshopper Buzzards were already 11–12 days old when we first saw them, and if second down develops from approximately day 7 to day 16, one would expect a pronounced change in colour from first to second down to be already visible by day 11–12. Neither would one expect a complete change in down colour to take place over a period of only two days simultaneously in two young of which one is most likely 1–2 days older than the other.

The difference pointed out by Cheke (1995), between the nestling colour mentioned by Millet-Horsin in 1921 (white) and that mentioned by the same author in 1922 (buff-grey), could perhaps also be explained by the same mechanism of colouring by dust, assuming that Millet-Horsin's young, which were in captivity, were kept out of doors. Alternatively, as Cheke supposes, Millet-Horsin may have relied on his memory for his 1922 publication, and got matters mixed up. A change in colour from white first down to buff-grey second down cannot be ruled out, although in that case our own young of 11–12 days seem rather slow: they showed no evidence of an impending change in down colour.

At the time of our second visit, when the young were approximately two weeks old, the pin feathers in their wings were showing rufous flags 6–10 mm in length. Their heads were still covered with down, and not yet bright reddish as described by Millet-Horsin (Cheke 1995). On the edge of the nest there was the skin of a hedgehog, most likely a White-bellied Hedgehog *Atelerix albiventris*. The young were seen again on 20 and 21 July. Soon thereafter they were probably taken by local youths, as the nest was found destroyed and abandoned. Local youths had been seen offering young raptors for sale on another occasion.

If we assume four weeks incubation as mentioned for the slightly larger Grey-faced Buzzard *Butastur indicus* (Hoyo *et al.* 1994), young almost two weeks old in mid-July indicate laying begun in the first week of June, around the start of the rainy season. During his 30 years in SW Niger, PS recorded six Grasshopper Buzzard nests; at least two were in isolated trees, one in a *Sterculia*, probably *S. setifolia*. One nest had only one young, three had two eggs or young. He recorded two eggs as early as 19 May, 70 km south-west of our site, near Makalondi (*c.* 12°50′N, 1°40′E), where rains start earlier. At one nest there were 36 days between the young first being noted (18 Jun 1994) and the young leaving the nest (24 Jul). This period is similar to the 34–36 day nestling period mentioned for the Grey-faced Buzzard (Hoyo *et al.* 1994).

According to Thiollay (1978), most Grasshopper Buzzards are to be found in the Guinea savanna Dec–Mar, they breed in the Sudan savanna Apr–Jun, move further north to the Sahelian savanna Jul–Sep, then move all the way back south to the Guinea savanna Oct–Dec. According to Brown *et al.* (1982) and Hoyo *et al.* (1994), breeding is even as early as Mar–Apr. Apparently this picture needs reappraisal, as the species clearly breeds during the rains in Jun–Jul in the central Sahelian part of its range. We think that laying may take place even later in the northern Sahel, where the rains start later still; on 8 Aug 1993, at approximately 14°20′N, 3°05′E, some 200 km north-east of the nest described above and 25 km west of Filingué, we found a Grasshopper Buzzard nest 4 m up in a *Combretum ?micranthum* tree. It was lined with fresh leaves and there was an adult in attendance. Breeding during the rainy season is also indicated by a nest with three recent fledglings in The Gambia on 30 Jul 1996 (Barlow *et al.* 1997).

The hedgehog skin in the nest probably originated from a road kill. Many dead hedgehogs were seen along that stretch of road at that time of year. The eating of carrion by Grasshopper Buzzards is not mentioned by Thiollay in Brown *et al.* (1982), nor by Hoyo *et al.* (1994). However, given the usual type of prey of Grasshopper Buzzards, and their diurnal habits, we do not think that one of the adults would have caught a live adult hedgehog, which is nocturnal, although young hedgehogs might be taken. In Niger and Senegal, WCM has seen young (abandoned?) hedgehogs active during the day on various occasions. They weighed about 45 g. Prey up to *c.* 20 g (*Quelea quelea*) has previously been recorded for the Grasshopper Buzzard (Brown *et al.* 1982).

Thanks to Ans Brouwer for help with the literature search, and to Rob Bijlsma and an anonymous referee for helpful comments.

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Received 20 September 1999
Revised 6 November 1999

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Adamawa Turtle Dove *Streptopelia hypopyrrha* in The Gambia, with comparison of its calls in The Gambia and Nigeria

The Adamawa Turtle Dove *Streptopelia hypopyrrha* has been known in Senegambia only in the past 10 years (Baillon 1992, Barlow *et al.* 1997, Borrow 1997). *S. hypopyrrha* was seen in The Gambia in1990, from 2 km south of Georgetown Island, upriver to Bansang, on both sides of the river (Barlow *et al.* 1997, Borrow 1997). In SE Senegal, one was observed in a flock of European Turtle Doves *S. turtur* that used gallery forest on the Niokolo River; it was captured, measured, photographed and released (Baillon 1992). Before this, the species was known mainly from Nigeria and Cameroon (Urban *et al.* 1986). These observations suggest a recent extension of range, and bring into question whether the western doves are recognizably distinct from the birds of Nigeria and Cameroon, as was suggested by Baillon (1992).

On 4 March 1999, CRB, John Hook and Paul Longley heard turtle doves calling in remnant indigenous forest at Kunkilling Forest Reserve (13°32′N, 14°41′W), 5 km east of Georgetown, near sea level on the south bank of the Gambia River. The call was like that of *S. hypopyrrha* tape-recorded by CRB at Bukuru, Jos Plateau, in northern Nigeria. When the Nigerian call was played to the Gambian doves, they reacted by approaching the call and perching nearby. The dove observed most clearly had a very dark earth-brown back with pale scallop marks, a contrasting pale face and forehead, and underparts pale pink-cinnamon. In size it was like African Mourning Dove *S. decipiens*. Other doves calling at the site were Red-eyed Dove *S. semitorquata*, Speckled Pigeon *Columba guinea*, Black-billed Wood Dove *Turtur abyssinicus*, and Bruce's Green Pigeon *Treron waalia*.

Calls of the Gambian dove were compared with calls recorded by RBP at Taboru on the Jos Plateau, Nigeria (Fig. 1). Although recording conditions differed, the calls appear to be identical. Calls of the Nigerian bird consisted of two long phrases and a

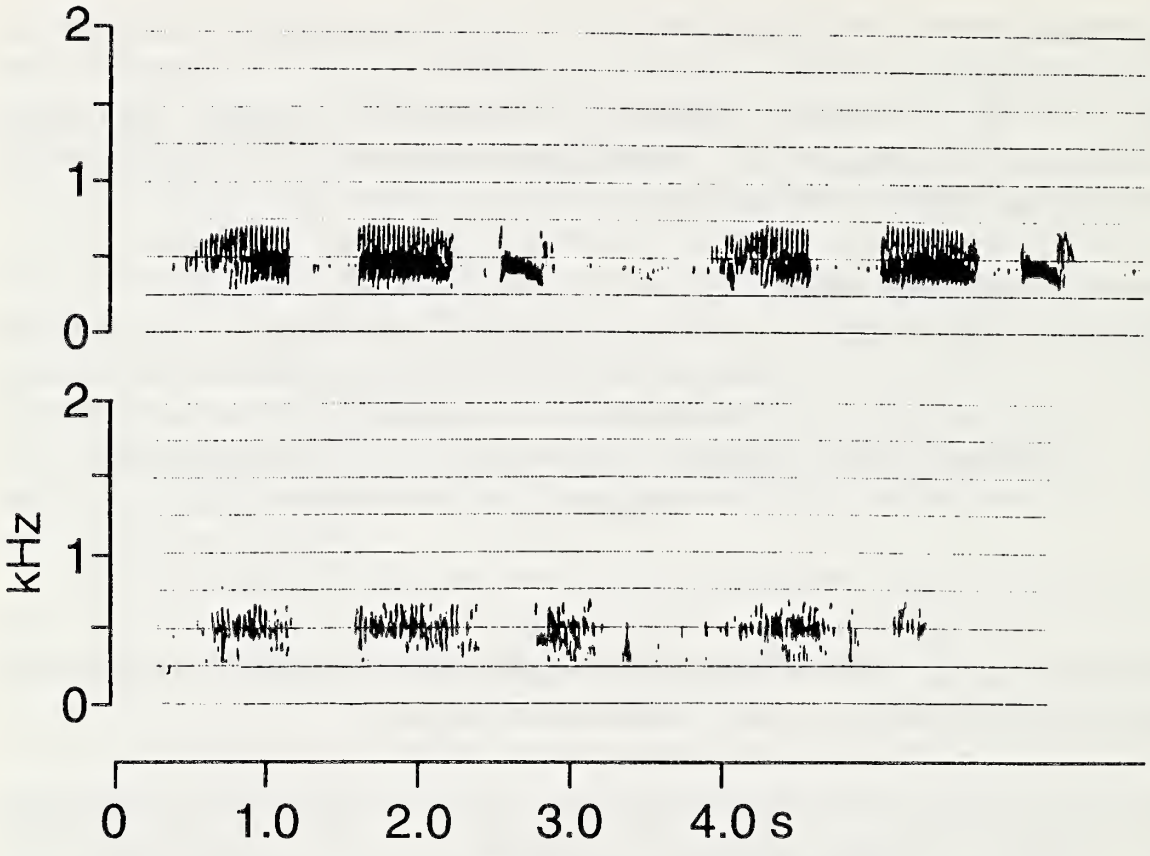

Figure 1. Audiospectrographs of *Streptopelia hypopyrrha*: above, two songs at Taboru, Nigeria; below, two songs at Kunkilling Forest Reserve, The Gambia.

third short phrase: a deep purring "croorr, croorr croo", taking 2.2–2.4 s. The purr has a peak amplitude around 0.45 kHz, the pulse rate is 30 elements per s, and the phrases are 0.70, 0.70 and 0.44 s long. The third phrase has a smaller frequency envelope. The gap between the first two phrases is 0.40–0.43 s, and between the second and third phrases 0.30 s. In the Nigerian bird, the first phrase increases in amplitude and pitch through the first half, the second phrase slightly decreases in amplitude and pitch at the end, and the third phrase is more whistled, less pulsed, and decreases in pitch and has a terminal pulse. These details are not apparent in the Gambia bird, where the call was distorted by distance and reverberations in the field. The calls are like those of the perch call of *S. hypopyrrha* illustrated and measured by Slabbekoorn *et al.* (1999), though their call lacked the third phrase; the presence of a third phrase varied in the Gambia calls.

Calls of *S. hypopyrrha* were compared with calls of other individuals of this and other species of dove in W Africa (Chappuis 1974, Urban *et al.* 1986). No other W African doves have a purred call marked by low pitch and slow delivery of three phrases, the first two each longer than the third phrase, and all three on the same pitch. In particular, the excitement and perch call of *S. turtur* has only two phrases, the first increasing in amplitude through its first half (as in Nigerian *S. hypopyrrha*) and the second of a constant amplitude, while its nest call is a series of three purred phrases

with the first shortest and the last longest (Wood 1975, Cramp 1985). Both calls are higher in pitch (0.7 kHz) than the Taboru and Kunkilling doves, which have a low pitch like the larger Wood Pigeon *Columba palumbus* but a different song structure. *S. turtur* is common in dry country in a belt across sub-saharan Africa from Senegal to Ethiopia (Urban *et al.* 1986) and occurs in The Gambia in winter (Barlow *et al.* 1997), in more open habitat than Kunkilling. It generally does not call in W Africa and it is not known to call in The Gambia. Dusky Turtle Dove *S. lugens* of E Africa is similar and closely related to *S. hypopyrrha*; its call is a bisyllabic "koo-or, koo-oor" (Someren 1956, Goodwin 1983), unlike the calls in The Gambia. In addition to its "croorr, croorr croo", *S. hypopyrrha* also has a higher-pitched "croorr crr-croor" with a short second phrase (Wood 1975, Urban *et al.* 1986); we did not hear this call.

Measurements of the bird captured in Senegal were reported to differ from those of *S. hypopyrrha* taken in Nigeria and Cameroon (Baillon 1992). The Senegal bird had the tail 129 mm and bill 17 mm (measured by Baillon), whereas four specimens from Nigeria and Cameroon in the Tring museum had tails of 123–126 and bills 21–23 (measured by P. Colston, in Baillon 1992); measurements by other workers of Tring specimens had no tail greater than 125 and no bill greater than 18 (Urban *et al.* 1986). Because measurements of what may have been the same specimens made by different ornithologists differed as much as those between the Senegal bird and either set of museum measurements, Baillon's (1992) idea that the western birds were perhaps a species distinct from eastern *S. hypopyrrha* is unsupported. Calls of the dove recorded in The Gambia do not differ from calls recorded in Nigeria, and there is no behavioural evidence that these western birds are different. In habitat the bird is in riverine forest and planted exotic trees around residences and gardens in Nigeria and Cameroon (Urban *et al.* 1986), while it is in lowland riverine forest in The Gambia.

The occurrence of *S. hypopyrrha* in The Gambia and Senegal extends the previously known range by more than 1000 km. It is otherwise known only from northern Nigeria, Cameroon and SW Chad (Louette 1981, Urban *et al.* 1986, Morel & Morel 1990, Elgood *et al.* 1994), with one record in Togo (Cheke & Walsh 1989). In The Gambia, CRB has seen and heard them call in November and March, Borrow's (1997) observations were from November and February, and the Senegal observation was in April (Baillon 1992). These dates occur during the season when they breed in Nigeria and Cameroon (Bates 1930, Bannerman 1931, Urban *et al.* 1986); in Nigeria they are resident throughout the year (Elgood *et al.* 1994). This suggests that the doves in The Gambia and Senegal are not migrants from the east. Perhaps the quietness of the call of this dove has been responsible for its having been overlooked earlier in W Africa, and it should be searched for also in Guinea and Guinea-Bissau.

We thank Mark Hopkins, Phil Hall, John Barker and Joy Agbor for assistance with recordings in Nigeria. In The Gambia, the Department of Parks and Wildlife Management Research and the Development Office allowed research, and the Director Mr. A. Danso of the Forestry Department allowed access to Kunkilling. We thank S. de Kort, R.J. Dowsett, S. Keith and the editor for comments.

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Received 6 November 1999
Revised 22 November 1999

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Reviews — Revues

Stratégie Préliminaire pour le Suivi des Oiseaux d'Eau en Afrique. Ed. by T. Dodman, 1997. 175 pp. Publ. 43, Wetlands International, Wageningen. ISBN 1-900442-14-0.

This report is the proceedings of a workshop in Senegal in 1996 on the development of waterbird counts and conservation in Africa. The contributions of about 20 authors form a valuable compilation and evaluation of the research on numbers, distribution and ecology of Palaearctic and Afrotropical Anatidae, since the initial Sahel zone work done by Francis Roux and Guy Jarry from the mid-1950s and the coordinated censuses of Palaearctic waterfowl populations, initiated by Wetlands International (in its former guise as IWRB), in 1967.

An introductory chapter explains the lack of international strategy for research on wetland conservation on the African continent, and that increased coordination would improve the probability of achieving research and conservation goals. Chapter 2 reviews the work done on wildfowl counts and its implications for conservation. Research on Anatidae and Ardeidae is singled out as particularly important. Other chapters deal with the international politics of wildfowl conservation (Ramsar and Bonn conventions), and international programmes for monitoring trends in waterbirds in Africa, proposed or initiated by the French working group on migratory West Palaearctic birds (OMPO) and Office National de la Chasse, WIWO in the Netherlands, and BirdLife International. A further section deals with the organization of waterbird counts and their objectives, in Kenya, Tanzania, Uganda, Ghana, Sierra Leone, Niger and Senegal.

Ernst P.R. Poorter

Centres of Plant Diversity. Volume 1: Europe, Africa, South West Asia and the Middle East. Ed. By S.D. Davis, V.H. Heywood & A.C. Hamilton, 1994. 354 pp., several maps and photos. WWF and IUCN, Gland. ISBN 2-8317-0197-X, hardback, £30.

The important project of which this is the first of three volumes, parallels, for plants, the Endemic Bird Area analyses published by BirdLife International. It attempts to identify and highlight plant diversity and endemism hotspots around the world, taking into account not only numbers of species present in an area and number of endemics but also degree of threat (amount of habitat/site destroyed), gene pool of value to

man, diversity of habitats, and presence of specialist species. Most of the top continental sites have over 1000 vascular plant species and over 100 endemics. Island sites chosen have over 50 species or 10% of the flora endemic.

The introductory section describes the project itself, and summarises global patterns of diversity and endemism. Some of the arguments are a little tenuous due to shortage of data, such as the calculations of continental diversity and endemism on pp. 7–8; throughout the book the lack of data compared with what we have for birds is evident. Only 15% of the 234 top global sites are considered reasonably safe.

Sites are termed "sites" where the whole area needs to be conserved; "floristic province" or "vegetation type" is used for larger areas where a network of reserves is required. This distinction leads to much inconsistency and is perhaps not very useful in practice: some "sites" such as a montane area, could equally be protected by a reserve network, while floristic provinces and vegetation types would better be broken down into sites so that we can really see what needs to be protected. The choice of the top 234 sites that are given detailed "data-sheet" treatment is open to criticism. Some bias according to the authors' and editors' regional knowledge and specialisation is evident, and others of us may wonder why our favourite sites, that easily meet the stated criteria (such as São Tomé), are not included, while others that might seem less valuable (such as St Helena with only 60 species, although 50 are admittedly endemic) are. Why include East Usambara but not West Usambara nor others of the Eastern Arc chain of montane isolates? In Sierra Leone, why include Loma and Gola but not Western Area and Tingi? The approach also leads to some neglect of the conservation requirements of widespread but rare species, as recognized in the similar EBA process.

The list of the top 234 sites is excellent for lobbying purposes, and can usefully be combined with the EBA results, but it inevitably obscures the fact that, even if all 234 were fully protected, we could still lose a large proportion of plant diversity. This could only be preserved by protecting the "lesser" sites (including such gems as the Gulf of Guinea islands), which are seriously neglected by the chosen approach. Most of the famous African sites are mentioned in the regional table (Table 25) but only 30 of 84 are given data-sheet treatment. The others should have had more attention drawn to them, such as by mapping; as it is, the few (whole-continent) maps show only the data-sheet sites. More emphasis on the "lesser" sites would have made the book a much more useful conservation tool. It is also a pity that, even for the data-sheet sites, site maps are presented for very few; maps readily place a site in context and leave a more lasting impression, and maps for every site could have been a valuable feature.

The overview section on Africa is good, dealing with vegetation types, factors influencing them, flora and threats. The African protected area system is shown to give much poorer protection to plant species than to birds: the protected areas are mostly in savannas and neglect the forests.

In summary, although the book is marked by inconsistency in the basics of the approach, this does not destroy its value as a conservation planning tool and as a useful comparison with EBAs. Hopefully a future edition will be able to draw on better information, take a broader view and present a more complete and balanced picture. Most of the above criticism refers to shortcomings that are perhaps inevitable in a first review of a comparatively poorly known group of organisms (compared to birds, at any rate); the book is definitely worth acquiring by anyone concerned with comparative biogeography or conservation planning and will serve as a very useful basis for further research.

Alan Tye

Also received:

The Atlas of European Mammals. By A.J. Mitchell-Jones, G. Amori, W. Bogdanowicz, B. Kryštufek, P.J.H. Reijnders, F. Spitzenberger, M. Stubbe, J.B.M. Thissen, V. Vohralík & J. Zima, 1999. 484 pp., many maps. Academic Press, London. ISBN 0-85661-130-1, hardback, £37.50.

An excellent dot atlas based on 50 x 50 km cells, covering Europe except Russia, Byelorussia, Ukraine and Moldova, and dealing with all species found in Europe including introduced ones.

Alan Tye

News & Letters — Nouvelles & Lettres

Tenth Pan-African Ornithological Congress, Kampala, 3-8 Sep 2000

The Pan-African Ornithological Congress is a quadrennial meeting that brings together people interested in the study and conservation of African birds. The first congress was held in Livingstone, Zambia in 1957 and subsequent ones have been held in other African countries. The objective of the PAOC is to promote research on Africa's birds and enhance their survival through conservation and raising awareness.

The tenth PAOC will be held in Kampala, Uganda from the afternoon of 3 September to the evening of 8 September 2000. The theme of this congress is "Birds and Biodiversity", highlighting the important role played by birds and research on birds in promoting the understanding and conservation of biodiversity. The congress is being organized by NatureUganda the BirdLife partner in Uganda. NatureUganda is a membership organisation promoting the understanding, appreciation and conservation of nature in Uganda. The congress is bilingual (French and English) and will comprise plenary sessions, oral and poster contributions and round-table discussions. All people involved in the study and conservation of African birds are invited to attend the congress. Uganda has very high bird species diversity (over 1010 species) for a country of only 236,000 km^2. Her tropical conditions are somewhat ameliorated by the high altitude, giving cooler and more pleasant birding conditions. Interesting pre-, mid- and post-congress excursions are organized. Special daily very-early morning bird-walks are also possible.

All correspondence concerning registration and logistics should be sent to: PAOC 10 Organising Committee, NatureUganda, PO Box 27034, Kampala. Tel: +256 41 540719; fax: +256 41 533528; email: <eanhs@imul.com>.

Abstracts and correspondence on the scientific programme should be sent to: Dr. Luc Lens, Chairman of PAOC 10 Scientific Committee, Laboratory of Animal Ecology, Department of Biology, University of Antwerp, Belgium. Tel: +32 3 8202262; fax: +32 3 8202271; email: <llens@uia.ua.ac.be>.

Registration fees: Early (before 30 April 2000) US $ 300; Late (after 1 May 2000) US $ 400; Students (proof of student status, *e.g.* letter from head of department, required) US $ 200; Daily fee US $ 60; Accompanying Persons US $ 180.

Un magazine d'ornithologie africain

C'est avec plaisir que nous avons appris que le premier numéro de *La Cigogne* vient de paraître. Il s'agit d'un magazine, publié par le Centre de Recherche Ornithologique et de l'Environnement du Bénin et dirigé par notre collègue Jacques B. Adjakpa, qui a

pour objet de promouvoir l'ornithologie dans ce pays, en particulier pour les enfants. Son titre est une référence à la Cigogne d'Abdim, sujet d'étude de ce chercheur. Nous lui souhaitons bon accueil.

Gérard J. Morel

Écrivons en français

Lors de la dernière réunion du Conseil de SOOA (juillet 1999), notre Rédacteur a constaté une diminution marquée du nombre d'articles en français. Pourtant, C. Hilary Fry Rédacteur d'alors, dans le numéro 2 de 1979, constatait qu'il lui était alors soumis à peu près le même nombre de manuscrits dans les deux langues. Et il écrivait que si les lecteurs de langue anglaise se sentaient "menacés", il leur appartenait de redresser la situation en augmentant la soumission d'articles en anglais. Mais, Hilary n'avait peut-être pas prévu que quelques années plus tard l'équilibre se trouverait renversé au profit de l'anglais. C'est ainsi que dans *Malimbus* 17(1) (1995), j'exprimais déjà mon étonnement que certains auteurs francophones écrivaient leurs articles en anglais même s'il s'agissait d'observations faites en pays francophones. Depuis 1995, cette tendance n'a fait que s'accélérer. Je me hâte d'ajouter que, quoi qu'il en soit, notre Rédacteur continuera à accepter les articles dans les deux langues.

Gérard J. Morel, Président

Society Notices — Informations de la Société

Back numbers of the *Bulletin of the Nigerian Ornithologists' Society*

The Librarian of the Scottish Ornithologists' Club has written to say that they have a complete set of the *Bulletin of the Nigerian Ornithologists' Society*. Photocopies can be supplied at 10 p per page, on application to: S.O.C., 21 Regent Terrace, Edinburgh EH7 5BT, U.K.

The S.O.C. is not aware of the origin of their set of the *Bull. NOS*. Most likely it was presented by a member of that Society, Mr V.S. Maclelland (now deceased).

R.E. Sharland

W.A.O.S. Research Grants

This is to remind researchers on W African birds that the Society makes grants of up to £500 for research projects that meet certain criteria. Full details were published in *Malimbus* 15(2), and are available from the Secretary (address inside front cover).

Bourses de recherches de la S.O.O.A.

Ceci est pour rappeler aux chercheurs sur les oiseaux de l'Ouest africain que la Société octroie des bourses d'un montant maximal de 500£ pour des projets de recherche qui satisfont à certains critères. Tous les détails ont été publiés dans *Malimbus* 15(2), et peuvent être obtenus chez le Secrétaire (adresse au verso de la couverture).

Next general meeting of the Society, Uganda 2000

It is proposed to organize a meeting of the Society at the forthcoming Pan-African Ornithological Congress (see details p. 44 of this issue). Would WAOS members intending to attend the PAOC please inform either the President or the Meetings Secretary (addresses inside front cover).

Prochaine réunion générale de la Société, Ouganda 2000

La Société se propose d'organiser une réunion au prochain Congrès Panafricain d'Ornithologie (pour les détails, voir p. 44 de cette livraison). Nous serions obligés

envers les abonnés qui ont l'intention d'assister au PAOC de le faire savoir soit au Président soit au Secrétaire des Réunions (adresses au verso de la couverture).

A new member of Council

During the Council meeting in London in July 1999, Roger Wilkinson advised of his difficulty in carrying out all of the duties of the Secretary, due to other commitments. It was therefore decided to create a new post of Meetings Secretary, to take on some of these duties. We welcome onto Council Dr Hazell Shokellu Thompson, who takes up this new office. Hazell will take responsibility for arranging meetings of the Society's members and will also assist the Treasurer and Membership Secretary, Bob Sharland, in maintaining the membership lists. Roger Wilkinson continues as Secretary, with responsibility for administering the WAOS Research Grant scheme and Council meetings.

Hazell is Sierra Leonean, and was trained in Zoology at Fourah Bay College, University of Sierra Leone, where he then took up a lectureship while working for his MSc (on mannikins *Lonchura* spp.) and latterly his PhD (on *Picathartes gymnocephalus*). He is currently working for BirdLife International in Cambridge.

As regards contact points for members, Bob Sharland remains the person with whom members should correspond regarding their subscriptions, and whom anyone wishing to join the Society should contact. Questions regarding research grants should continue to be addressed to Roger Wilkinson, while suggestions for meetings, or questions regarding attendance at meetings, should be addressed to Hazell Thompson. Their addresses are inside the front cover of each issue of *Malimbus*.

Un nouveau membre du Conseil

Au cours de la réunion du Conseil à Londres, en juillet 1999, Roger Wilkinson a reconnu la difficulté d'assurer convenablement son travail de Secrétaire, compte tenu de ses autres obligations; nous avons donc été décidé de créer le poste de Secrétaire Adjoint pour le soulager d'une partie de sa tâche. Nous accueillons au Conseil le Dr Hazell Shokellu Thompson, qui prend le nouveau poste. Hazell aura la responsabilité d'organiser les réunions de la Société et d'aider le Trésorier et le Secrétaire aux Adhésions, Bob Sharland, en tenant à jour la liste des membres. Roger Wilkinson continuera comme Secrétaire, responsable de l'administration des Bourses de Recherches de la SOOA et des Réunions du Conseil.

Hazell est Sierra Léonais, et acquit sa formation de Zoologiste à Fourah Bay College, Université de Sierra Leone, où il fut ensuite assistant tout en préparant son mémoire de maîtrise (sur les Capucins *Lonchura* spp.) et récemment sa thèse de

doctorat (sur *Picathartes gymnocephalus*). Il travaille actuellement pour BirdLife International à Cambridge.

En ce qui concerne les rapports avec les membres, Bob Sharland reste celui à qui les adhérents doivent s'adresser pour leurs abonnements et que toute personne désireuse d'adhérer à la société doit contacter. Les questions relatives aux bourses de recherches doivent toujours être posées à Roger Wilkinson, tandis que les suggestions pour les réunions et les questions ayant pour objet leur inscription à celles-ci doivent être adressées à Hazell Thompson. Leurs adresses figurent à l'intérieur du couverture de chaque numéro de *Malimbus*.

Instructions to Authors

Malimbus publishes Papers, Short Notes, Reviews, News & Letters, and illustrative material covering the field of West African ornithology.

Papers and **Short Notes** cover original contributions; material published elsewhere, in whole or in part, will not normally be accepted. Short Notes are articles not exceeding 1500 words (including references) or three printed pages in length. Wherever possible, manuscripts should first have been submitted to at least one ornithologist or biologist for critical scrutiny. Manuscripts will be sent for critical review to at least one relevant authority.

Items for **News & Letters** should not exceed 1000 words.

Contributions are accepted in English or French; editorial assistance will be made available to authors whose first language is not one of these. Two copies are required, typed on one side of the paper, with double spacing and wide margins. Dot-matrix printouts will only be accepted if they are of "near-letter" quality. Initial submissions by e-mail are not normally accepted; authors should not send a diskette copy of their initial submission, but are requested to indicate whether they can send a diskette or e-mail copy if their paper is accepted. Diskettes will be returned to authors. Consult the editor for further details, *e.g.* for acceptable software.

Conventions regarding tabular material, numbers, metric units, references, *etc.* may be found in this issue and should be adhered to carefully. Note particularly the following: dates should be in the form 2 Feb 1990 but months standing alone in text may be written in full; times of day are written 6h45, 17h32; coordinates are written in the form 7°46′N, 16°4′E; numbers up to ten are written in full, except when followed by abbreviated units (*e.g.* 6 m), numbers from 11 upwards are written in figures except at the beginning of a sentence. All references mentioned in the article, and only such, must be entered in the bibliography.

Avifaunal articles must contain a map or gazetteer, including all localities mentioned. They should include brief notes on climate, topography, vegetation, and conditions or unusual events prior to or during the study (*e.g.* late rains *etc.*). **Species lists** should include only significant information; full lists are justified only for areas previously unstudied or unvisited for many years. Otherwise, include only species for which the study provides new information on range, period of residence, breeding *etc.* For each species, indicate migratory status, period of residence (as shown by the study), range extensions, an assessment of abundance (*Malimbus* 17: 36) and dated breeding records. Where appropriate, set data in context by brief comparison with an authoritative regional checklist. Lengthy species lists should be in tabular form (*e.g. Malimbus* 12: 39–51, 1: 22–28, or 1: 49–54) or of the textual format of recent issues (e.g. *Malimbus* 12: 19–24, 12: 61–86, 13: 49–66, 16: 10–29). The **taxonomic sequence** and **scientific names** (and preferably also **vernacular names**) should follow Dowsett & Forbes-Watson (1993, *Checklist of Birds of the Afrotropical and Malagasy Regions*, Tauraco Press, Liège) or *The Birds of Africa* (Brown *et al.* 1982, Urban *et al.* 1986, 1997, Fry *et al.* 1988, Keith *et al.* 1992, Urban *et al.* 1998, Academic Press, London), unless reasons for departure from these authorities are stated. A more complete **guide for authors** of avifaunal papers, including the preferred abundance scale, appeared in *Malimbus* 17: 35–39. A copy may be obtained from the Editor, who will be happy to advise on the presentation of specific studies.

Figures should be prepared as for final reproduction, allowing for 20–50% reduction, using indian ink on good quality white paper or heavy tracing, and adhesive transfer lettering as appropriate. Diagrams produced by computer programs other than specialized graphics packages, and by printers other than laser printers, are rarely of acceptable quality. When designing Figures, pay attention to the page-shape of *Malimbus*.

All Papers (but not Short Notes) should include a **Summary**, not exceeding 5% of the paper's length. The Summary should include brief reference to major findings of the paper and not simply review what was done. Summaries will be published in both English and French and will be translated as appropriate by the Editorial Board.

Ten **offprints** of Papers (but not of Short Notes) will be sent to single or senior authors, *gratis*. Offprints will not be stapled, bound, or covered; they are merely cut from copies of the journal.

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Journal of the West African Ornithological Society
Revue de la Société d'Ornithologie de l'Ouest Africain

VOLUME 22 Number 2 September 2000
ISSN 0331-3689

West African Ornithological Society
Société d'Ornithologie de l'Ouest Africain

La correspondance doit être adressée comme suit:
— au Rédacteur en Chef (CDRS, Casilla 17-01-3891, Quito, Ecuador) pour les publications dans *Malimbus*, y compris éventuellement des photos ou des dessins au trait;
— au Trésorier (1 Fisher's Heron, East Mills, Fordingbridge, Hampshire, SP6 2JR, U.K.) pour les abonnements, les questions financières et les numéros anciens;
— au Secrétaire du Conseil (Zoological Gardens, Chester CH2 1LH, U.K.) pour les demandes des Bourses de Recherches de la Société;
— au Secrétaire adjoint (BirdLife, Wellbrook Court, Girton Road, Cambridge CB3 0NH, U.K.; e-mail hazell.thompson@birdlife.org.uk) pour la présence aux réunions ou des suggestions pour celles-ci.
— au Président (1 Route de Sallenelles, 14860 Bréville-les-Monts, France; e-mail gmorel@mail.cpod.fr) pour les questions d'intérêt général.

La Société tire son origine de la "Nigerian Ornithologists' Society", fondée en 1964. Son but est de promouvoir l'intérêt scientifique pour les oiseaux de l'Ouest africain et de faire avancer l'ornithologie de ces régions principalement au moyen de sa revue *Malimbus* (anciennement *Bulletin of the Nigerian Ornithologists' Society*).

Les demandes d'adhésion sont les bienvenues. Les cotisations annuelles sont de £10 pour les Membres Ordinaires et de £25 pour les Sociétés (les cotisations peuvent être payées en £ sterling au Trésorier ou en francs français au Président). Les Membres Ordinaires reçoivent *Malimbus* par courrier ordinaire et les Sociétés par courrier aérien, gratuitement. Un supplément est exigé des Membres Ordinaires pour le courrier aérien (demander au Trésorier le tarif).

Anciens Numéros: Les Volumes 11–14 (1975–78) du *Bulletin of the Nigerian Ornithologists' Society* (du même format que *Malimbus*) sont disponibles à £ 2 par numéro (£4 par volume) ou £15 l'ensemble. Les Volumes 1–9 de *Malimbus* sont disponibles à £3 par numéro (£6 par volume) et, à partir du Vol. 10, à £5 par numéro (£10 par volume). On peut acheter la série complète des Vols 1–22 de *Malimbus* au prix spécial de £170. Frais de port et emballage sont gratuits. Veuillez joindre le paiement à votre commande et l'adresser au Trésorier.

Bourses de Recherches de la S.O.O.A.: Les conditions à remplir pour les candidatures se trouvent dans *Malimbus* 15: 103–106 et peuvent être obtenues auprès du Secrétaire du Conseil (voir adresse ci-dessus).

Kordofan Bush Lark *Mirafra cordofanica* and Desert Lark *Ammomanes deserti*, additions to the avifauna of Burkina Faso

by Lincoln Fishpool[1], Georges Oueda[2] & Prosper Compaoré[3]

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Received 8 November 1999

Summary

Kordofan Bush Lark *Mirafra cordofanica* and Desert Lark *Ammomanes deserti* are reported from Burkina Faso for the first time. Kordofan Bush Lark was found in association with the grass *Schoenefeldia gracilis*, and recordings made of its song are, apparently, the first for this species. The Desert Larks differed in coloration from that of the nearest recorded subspecies, while these records are amongst the southernmost for the species in West Africa.

Résumé

L'Alouette du Cordofan *Mirafra cordofanica* et l'Ammomane isabelline *Ammomanes deserti* ont été observées pour la première fois au Burkina Faso. L'Alouette du Cordofan fut trouvée en association avec la graminée *Schoenefeldia gracilis*, et les enregistrements de son chant sont, apparemment, les premiers pour cette espèce. L'Ammomane isabelline différait par sa couleur de la plus proche sous-espèce observée, alors que ces observations sont les plus méridionales pour l'espèce dans l'Ouest africain.

Introduction

During the course of a visit to the *Réserve Partielle du Sahel*, northern Burkina Faso, in June 1999, two lark species were recorded, which appear not to have been previously reported from the country (Dowsett 1993).

Kordofan Bush Lark *Mirafra cordofanica*

On the evening of 16 June 1999 an unfamiliar lark was seen to the north of the village of Déou, some 10 km south of Forage Christine at about 14°52′N, 0°44′W. Initial

impressions were that the bird was larger, longer tailed and more brightly coloured than the Singing Bush Larks *Mirafra cantillans* which had been seen commonly over the course of the preceding few days. The bird was re-located the next morning and the following details noted.

The centres of the feathers of the upperparts were a striking, pale golden-rufous, with paler, sandy-coloured, fairly wide fringes. There appeared to be some darker flecking on the feathers of the back and mantle. The crown was streaked, the ear coverts pale rufous. A narrow, ill-defined darker stripe extended behind the eye but the white supercilium, lores and the area below the eye meant that overall the head was conspicuously pale, especially given that the bill, which was stubby and relatively strong with a decurved culmen, was also whitish. The central tail feathers were concolorous with the back and wings, the adjacent tail feathers were black, or almost so, while the outermost ones were white. Below, the throat was white, there was a gorget of gingerish streaks on the upper breast (which appeared to be more marked on some individuals than others) while the belly and lower breast were pale creamy white. The legs were pale pinkish. Compared with *M. cantillans* it seemed more robust, less neat and compact. From subsequent examination of skins at the Natural History Museum, Tring the birds were identified as Kordofan Bush Larks *Mirafra cordofanica.*

The habitat was an area of gently undulating, reddish-coloured sand, patchily covered with a few low shrubs and dead grasses, in which *Schoenefeldia gracilis* appeared to predominate. All the grasses were dry, with bare seed heads, since they were the remains of the previous year's growth, this year's rains having barely begun. Despite this, all available characters support the determination and collected specimens closely resemble the illustration, in Andrews (1956), of the spikes after the fall of the florets. The overall "quality" of the savanna here, however, appeared to be relatively high since, unlike much of the region, there was little evidence of heavy grazing activity by domestic stock, presumably because of distance from water sources.

The birds were vocally active and what later proved to be this species was heard at first light (around 4h40). It was later seen singing from bare sand patches between dead grasses, from the tops of bushes at 2–3 m (*Maerua* sp.) and from aerial song flights. The song consisted of a sustained series of short, varied, non-repeated phrases, made up of short trills, harsh and mellow chirps and melodious, whistled notes. One bird sang from the top of a bush for some minutes, after which it took off and towered, keeping a more or less constant angle to its point of departure as it extended up and away downwind. It then remained on this station, but for some minor lateral movement, at an altitude of perhaps 100 m, and stayed aloft, head into the wind, on rapid, shallow, fluttery wing beats for fully 35 minutes, singing all the while. After some time it became clear that the song contained a number of mimetic elements including White-faced Duck *Dendrocygna viduata*, White-cheeked Bee-eater *Merops albicollis*, Grey Woodpecker *Mesopicos goertae* and Tawny-flanked

Prinia *Prinia subflava*, all of which were seen in the area. At the end of this period the bird descended to land on the ground within a few metres of its take-off point.

Sound recordings were made of a perched bird (apparently the first time *M. cordofanica* has been recorded: C. Chappuis *in litt.*) but none was made during the aerial cruise since it was felt that the bird's altitude and the strength of the wind would have resulted in a recording of poor quality. This decision was, in retrospect, a mistake since playback of the recordings subsequently revealed that the mimetic elements were only or mostly confined to the aerial song.

The reddish sand habitat concurs with previous reports of its association with this substrate (Butler 1905, Bannerman 1936, Cave & MacDonald 1955, Salvan 1968, Nikolaus 1987, Dean *et al.* 1992). This appears, however, to be the first time the bird has been noted in association with *Schoenefeldia gracilis*. The two other grass species with which the lark has previously been reported to be associated are Heskanit *Cenchrus biflorus* (= *C. catharticus*: Butler 1905, Bannerman 1936, Cave & MacDonald 1955), and *Stipagrostis uniplumis* (= *Aristida papposa*: Lynes 1924, Bannerman 1936, Cave & MacDonald 1955).

No other lark species was seen in the immediate vicinity; nor was *M. cordofanica* seen other than in this apparently limited area. It is of interest that *M. cordofanica* was singing despite the lack of rain, while *M. cantillans*, seen commonly not far away, was not.

Desert Lark *Ammomanes deserti*

A pair of larks was found on a rocky outcrop at approximately 14°40′N, 0°0′, altitude *c.* 300 m, some 5 km north of the town of Markoye on 18 June 1999. The larks were uniform, unstreaked dark slate grey on the crown, back, mantle and wings; the ear coverts were slightly paler but were otherwise also unstreaked grey. There was a narrow whitish eye-ring, fairly conspicuous against the face, which was dark and plain except for a poorly defined, narrow, dirty white supercilium extending behind the eye, over a darker line through the eye. The flight feathers were blackish on the inner webs, buffy on the outer ones. There were a few darker, almost black spots on the median coverts; the edges of the greater coverts had buffy fringes. The tail feathers were likewise black on the inner webs, while the outer webs, at least in the basal half of the outer feathers, were a rich rufous-chestnut. Although the rump was not clearly seen, it too appeared to be rufous-chestnut and black. The throat was dirty white, with some darker streaking on the neck and upper breast. The lower breast and belly were pale centrally, while the flanks were a conspicuous buffy-tan. The bill was prominent, relatively large, and of a dirty yellow colour except for a darker line along the culmen. The eyes were black.

The isolated, small outcrop on which they were discovered rose abruptly from the surrounding stony plain to a height of perhaps 20 m. It comprised a jumble of

weathered, granitic boulders and rocks, uniformly battleship-grey in colour which contrasted conspicuously with the yellows and browns of the plain. The larks were clearly intimately associated with this habitat; they were not seen to leave it and their overall colour closely matched that of the rocks.

The birds were relatively confiding, allowing good views through a telescope at close range as they foraged in the sparse, dry vegetation between the broken rocks where they were seen to catch and eat acridid grasshoppers, at least one of which was *Harpezocatantops stylifer*. They appeared relatively large, larger than the locally common *M. cantillans*, about the same size as the nearby Grey-headed Sparrows *Passer griseus*. The pair was persistently tracked by a White-throated Bee-eater, which left its perch to harass one or other whenever it caught a grasshopper.

A second pair was later found in, and also seemed confined to, identical habitat at similar altitude 6–7 km southwest of Markoye on the Gorom-Gorom road, at about 14°36′N, 0°2′E, on a higher, more extensive hill also of broken granitic boulders and stones. These birds often perched conspicuously on the tops of rocks when they appeared almost thrush-like. A third bird seen later, in company of the other two, was possibly an immature, as it was distinctly browner above with paler spotting on the coverts. They made "wheoo" or "weow" contact calls as they foraged, while in flight a soft, rapidly delivered series of "tyup-tyup-tyup-tyup" notes was heard. Although we were present at dawn on 19 June, no song was heard.

While these birds were clearly Desert Larks *Ammomanes deserti,* their subspecific identity is less apparent. As Dean *et al.* (1992) make clear, the species is very variable and, in parts of Africa at least, the situation appears confused. These birds should, on distributional grounds, be of the race *geyri*, the range of which is given by Dean *et al.* (1992) as "Mauritania to Nigeria (Kano) and SE Algeria". However, the upperparts of *geyri* are described as being "sandy grey-brown, rump pink-brown; tail feathers darker brown with rufous outer margins" which does not match the colour of these birds. Examination of skins at the Natural History Museum, Tring has confirmed that the Burkina Faso birds were much darker than *geyri* and, in fact, resemble the dark grey races *assabensis* of Ethiopia and Somalia, *saturatus* of Saudi Arabia and *annae* of Jordan and Syria. They did, however, match *geyri* in basic colour pattern, in particular in the distribution and amount (but not degree of saturation) of red in the flight, tail and rump feathers, and thereby differed from the other three dark subspecies, which lack or show much less red in wings and tail.

These records appear to be among the southernmost localities known for Desert Lark in West Africa. Hall & Moreau (1970) map none south of 15°N; Dean *et al.* (1992) state that the species' range includes Kano (12°N, 8°E), although Nigeria is not included in the accompanying distribution map. The Kano record had, however, earlier been rejected by Elgood (1982), who attributed it to White (1961). White wrote that the range of *A. d. geyri* comprised "the southern edge of Sahara from Tillia to Damergou and Kano in northern Nigeria." The confusion may date back to Sclater (1930) who stated that *geyri* occurs in "Damergu country between Asben and Kano,

in French Sahara", words repeated almost exactly by Bannerman (1936). Both these authors, however, say "between" Asben (= Aïr) and Kano; White's (1961) slight rewording changes the sense. These authors were probably all drawing upon the description of *geyri*, the type locality of which is Farak (15°18′N, 8°55′E), Damergu in present day Niger (Hartert 1924). The only localities from the southern, sahelian parts of the country given by Giraudoux *et al.* (1988) are those of Hartert (1924), and of Bates (1934), from Tillia (16°8′N, 4°47′E), other than for a sight record of two, 30 km south of Filingué (14°21′N, 3°19′E). More recently, Holyoak & Seddon (1991) report the species from several sahelian localities but none south of 16°N.

Elsewhere in West Africa, Lamarche (1981) states that in Mali *A. deserti* is common and widespread in the north of the Sahel, descending in the east to 16°N. In Chad it is apparently not known south of Ennedi (*c.* 17°N) (Salvan 1968, Dean *et al.* 1992); there are no records from Senegal (Morel & Morel 1990).

Acknowledgments

LF is grateful to Dr Robert Prŷs-Jones of the Natural History Museum, Tring for access to skins and to Dr Claude Chappuis and Ron Demey for information and comment on the recordings of *M. cordofanica*. He would also like to thank the staff of Fondation Naturama, Ouagadougou for their hospitality and generous assistance. Copies of these recordings have been sent to Dr Chappuis and to the British Library's National Sound Archive, Wildlife Section, London. This work was carried out under BirdLife International's GEF/UNDP-funded programme for the conservation of Important Bird Areas in Africa (RAF/97/G31/C/IG/31).

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The birds of Comoé National Park, Ivory Coast

by Volker Salewski

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Received 30 November 1999; revised 8 April 2000.

Summary

Between 1994 and 1999 I spent about 24 months in Comoé National Park, Ivory Coast, during the European winters. During this time, 321 bird species were recorded, of which ten were new for the park, including Red-chested Swallow *Hirundo lucida*, which is published here for the first time. Gabon Nightjar *Caprimulgus fossii*, Mourning Dove *Streptopelia decipiens*, White Wagtail *Motacilla alba*, Tawny Pipit *Anthus campestris*, Stonechat *Saxicola torquata* and Great Grey Shrike *Lanius excubitor*, mentioned by former authors, were rejected from the confirmed list. Including previous published records, 494 species have been reliably recorded in the park, and are listed here. This high species diversity results from the variety of habitats within the park and indicates its importance as the largest remnant of relatively intact W African savanna.

Résumé

Entre 1994 et 1999, j'ai passé environ 24 mois dans le Parc National de la Comoé en Côte d'Ivoire pendant l'hiver européen. Durant cette période, 331 espèces furent observées dont dix nouvelles pour le parc, y compris l'Hirondelle de Guinée *Hirundo lucida*, dont c'est ici la première mention. L'Engoulevent du Mozambique *Caprimulgus fossii*, la Tourterelle pleureuse *Streptopelia decipiens*, la Bergeronnette grise *Motacilla alba*, le Pipit rousseline *Anthus campestris*, le Traquet pâtre *Saxicola torquata* et la Pie-grièche grise *Lanius excubitor* (déjà signalée par d'anciens auteurs), étaient rejetés de la liste officielle. Si nous incluons les publications précédentes, 494 espèces ont été observées indiscutablement dans le parc et sont données ici. La grande diversité spécifique résulte de la variété des habitats du parc et montre son importance comme vestige relativement intact de savane ouest-africaine.

Introduction

The Comoé National Park (see maps in Poilecot 1991, Salewski 1997a) is, with 11,491 km², the biggest national park in West Africa; it is also a Biosphere Reserve

and World Heritage Site. The first steps to protect the area were taken in 1926, when the sector between the Comoé river and Bouna became the "Refuge Nord", which was changed in 1953 into the "Réserve Totale de Faune de Bouna". The evacuation of the few settlements inside the park started in 1953 and was completed about ten years later (Lauginie 1975). On 9 February 1968, the Réserve, together with the Forêt Classé de Kong west of the Comoé river was declared a National Park. The fauna was investigated in 1968 by Geerling & Bokdam (1971, 1973) who mainly focused on the larger mammals. The potential for tourism was investigated in the early seventies (Rahm & Bienek 1973), followed by a biological-economic study by Lauginie (1975). These efforts culminated in the biological-ecological analysis being used as a basic for the development of tourism by FGU Kronberg (1979). A list of 445 recorded bird species compiled by I. Kühn and W. Werres (and including information of others), based mainly on mist-netting and observations in 1979 and 1980, was added to this report later (FGU 1980). However, this was never published. In the otherwise excellent study of Poilecot (1991) birds are treated only marginally. Since 1979, 50 more species have been recorded for the park, but these records are scattered in a number of different publications (Thiollay 1985, Balchin 1988, 1990, Demey & Fishpool 1991, Williams 1997, Salewski 1997a, 1998a, Salewski & Korb 1998, Falk & Salewski 1999). I stayed in Comoé National Park from 1994 to 1999 in each European winter (usually Sep–Apr) and made intensive bird observations. The intention of this article is to summarise all these observations and to provide the first comprehensive list of the birds of the park, together with notes on their habitat, presence and abundance. For this purpose I include previous published records and the unpublished observations by FGU (1980), which are analysed critically to exclude some doubtful records and to indicate possible changes in abundance or distribution.

Comoé National Park

The Comoé National Park lies in NE Ivory Coast close to Burkina Faso and Ghana. It extends from about 8°30′ to 9°30′N and from 3°0′ to 4°30′W. The 100–200 m-wide Comoé river flows north–south through the park for about 230 km (Porembski 1991) and drains most of the area. A small part in the east (the Kolodio River) belongs to the drainage system of the Volta River in Ghana. Major tributaries of the Comoé are the rivers Bawé, Boin, Iringou and Kongo. Inside the park there are several lakes containing water throughout the year. Over most of its area, the park is a plateau with an average elevation of 250–300 m; the highest peak is at 635 m. Inselbergs are found in various places. Major villages around the Park are Bouna (with the park headquarters), Kafolo, Kong, Gansé, Kakpin and Tehini.

As in most parts of N Ivory Coast, the plateaux are of granite. Along the Comoé river metamorphic slates are found. The soils are mostly laterized, often with a hard

surface crust. They are generally lithosols, with ferruginuos tropical soils in the south-east (Poilecot 1991).

Within the park lies the border between two climate zones, the Sub-sudan Zone (the Northern Guinea Savanna Zone of Thiollay 1985) in the south-west and the Sudan Zone in the north-east (see map in Poilecot 1991). The rainy season in both zones lasts in general from March or April to October and is also characterized by less distinct daily temperature changes. In the south, the rain decreases in July before its peak in September. Relative humidity usually exceeds 90%. During the dry season there is hardly any rainfall and the Harmattan, a hot dry wind from the north, blows regularly. In this season the daily temperature differences are in general high and relative humidity is below 30%. Annual rainfall varies between 1100 and 1300 mm. Maximum daily temperatures (37°C) are highest in March and minimum daily temperatures lowest (15°C) in January (Poilecot 1991).

The high diversity of bird species in the park is explained by the variety of different habitats. Besides the savanna there are forests, bowals, mountain regions and waterways, all with their typical bird communities.

Tree and bush savanna cover about 70% of the park (Poilecot 1991), with several subdivisions defined by different dominant tree species on different soils. Tree cover is usually 2–70% with dominant species including *Crossopteryx febrifuga, Daniellia oliveri, Burkea africana, Terminalia avicennioides, Detarium microcarpum* among others. The herbaceous layer is up to 2 m high, with dominant grasses including *Brachiaria jubata* and *Andropogon africanus*. Savanna forests with *Isoberlinia doka* as the dominant species and tree cover of 70–90% are found in the north. Species composition of savannas and savanna forests is influenced by the annual bush fires, most of them anthropogenic, which burn the whole savanna area of the park between November and January proceeding from north to south (Poilecot 1991).

Bowals are laterite pans lacking trees or bushes. Depending on the season, their surface is often covered with water, grass or is bare after the fires. Alluvial plains are often found along the gallery forest of the Comoé river and separate the forest from the savanna. They are characterised by the lack of trees and bushes, with vegetation cover often less than 30% (Porembski 1991). Although of quite different origin, bowals and alluvial plains therefore often have a similar general appearance.

Gallery forests are found along the Comoé river and its larger tributaries like the Iringou. They range from less than ten to several hundred meters broad; only rarely are savanna habitats found next to the river. The riparian forests show similarities to the rain forests in the south, but with lower tree species diversity. They are mostly dense but more open close to the savanna fringe. The upper tree strata are higher than in the savanna formations, with species like *Cynometra megalophylla, Cola cordifolia, Manilkara multinervis* and *Ceiba pentandra* attaining > 40 m (Porembski 1991). Smaller trees up to 15 m high are *Dialium guineense, Dyospyros abyssinica, Oxyanthus racemosus* or *Syzygium guineense*. A herbaceous layer is hardly developed.

Isolated forests are patches of various sizes, scattered in the savanna without any connection to the riparian forest. The origin and dynamics of these forests is not yet understood. There are two types of isolated forests (Porembski 1991): "wet" forests show similarities to riparian forests (dominants: *Cynometra megalophylla, Dialium guineense, Chlorophora excelsa, Cola cordifolia* and *Anisogeisus leiocarpus*); dry forests are believed to be an extreme closed wooded savanna (typical tree species: *Anisogeisus leiocarpus, Ceiba pentandra* and *Lannea kerstingii*, all deciduous).

The isolated forests and gallery forest are not influenced by the savanna fires, but vegetation cover decreases in the dry season because some tree species are deciduous.

Species list

The list below includes all 494 bird species recorded in the park until 2000, including Red-chested Swallow *Hirundo lucida*, which I observed regularly in the north of the park in 1999 but which has not been recorded before. This includes 321 species whose presence was confirmed by my own observations. The other records were taken from literature. I did not see all birds in the list but due to the known quality of the observers, most published records were accepted. Species provisionally rejected include White Wagtail *Motacilla alba* and African Mourning Dove *Streptopelia decipiens* because they would be new species for the country, and they are listed in FGU (1980) and Mühlenberg *et al.* (1990) without detailed descriptions. This is also the case for the Gabon Nightjar *Caprimulgus fossi*, although Thiollay (1985) mentioned a bird found dead in the park. The latter would be the only record for West Africa and it was rejected by Dowsett & Dowsett-Lemaire (1993) because of the lack of proper documentation. For the same reasons, a Great Grey Shrike *Lanius excubitor* mentioned by Fischer & Groß (1998) was rejected. Stonechat *Saxicola torquata*, reported by the same authors, was also rejected; it seems unlikely that the species would occur in the park because of its habitat requirements (Thiollay 1985) and no description was given. Tawny Pipit was also rejected. It was recorded as "common" by FGU (1980) but Thiollay (1985) mentioned only one definite record for Ivory Coast, which is not in the park. Therefore, the records in FGU (1980) might be based on misidentification. The only record of Swallow-tailed Kite *Chelictina riocourii* for the country, by FGU (1980), was accepted because the park lies just south of the regular distribution of the species (Thiollay 1985) and it is unlikely to be misidentified.

Some species mentioned as abundant by FGU (1980) were not observed in the period covering this study, including obvious species like White-crested Hornbill, Yellow-casqued Hornbill, Great Blue Turaco, and Senegal Kingfisher. I am familiar with these species and their calls from other parts of the country and a lack of observations means that they are at least not very abundant. This is also the case for some of the bulbuls (Little Greenbul, Yellow-whiskered Greenbul), which were

indicated to be common by FGU (1980). Despite intensive observations, mist-netting and voice recording in gallery forest I was not able to find these species, indicating that they are at least not common. Whether numbers have really declined is difficult to assess. A number of species which were only recorded in the north of the park by FGU (1980), including Chestnut-crowned Sparrow, some *Lagonosticta* finches, some sunbirds, and Togo Paradise Widow, are abundant in the south now (Salewski 1997a). However, information is similarly not sufficient to judge whether this really indicates a southward extension of bird species in the region.

In the list below, nomenclature follows Dowsett & Forbes-Watson (1993). Records in brackets were not confirmed by my own observations. The information is presented in the following sequence, after the species name: Habitat, Status, Abundance. References.

Habitat

The habitat in which a species is most likely to be observed.

A	Air (aerial species like swifts and swallows).
W	Water (rivers, ponds).
F	Forest (riparian- and isolated forests).
P	Plains (bowals and alluvial plains).
S	Savanna.
-N/-S	Occurs only in the north/south of the park.
-(N)/-(S)	Occurs mainly in the north/south of the park.

Status

M	African migrant.
MB	African migrant probably breeding in the park.
P	Palearctic migrant.
RB	Resident, probably breeding in the park.
MB, RB	Breeding is explicitly reported in the literature or by my own observations (nests, juveniles, incubation patches, courtship behaviour, mating, carrying of food or nesting material). This difference was made because most of the information about the status of residents came from the list of FGU (1980), where no breeding details were given.
Italics	Status to be confirmed
(Oct-Mar)	Months in which the species occurs, in this case October to March.

Abundance

The relative abundance of a species in the park in the specified habitat or time period is indicated. This is only tentative for the species recorded by myself because I was present only during the European winter months and only in the western parts of the park. For species not confirmed by own observations I tried to transform the information from literature into the abundance categories used here. However, in such

species the letters indicating abundance are written in italics (status to be confirmed) except when given as vagrant or rare (see below).

v	Vagrant, one observation in several years, migrant species
r	Rare, one observation in several years, resident species
u	Uncommon, several observation in one year
f	Frequent, observed regularly, but not every day
c	Common, 1–10 individuals observed every day
a	Abundant, > 10 individuals observed every day

Reference

Gives the first mention of a species in the park since FGU (1980).

FGU	FGU 1980.
VS	Information about habitat, status or relative abundance of a species found in the literature has been modified according to my own unpublished observations; for abundance, (VS+) indicates abundance higher and (VS-) lower than in previous literature.
(VS-)	Abundance of a species found in the literature (here FGU 1980) has been reduced, because I did not observe the species and the previously published abundance seemed therefore too high.

Podicipepidae

(*Tachybaptus ruficollis* Little Grebe. W, M, *v/u*. FGU.)

Phalacrocoracidae

(*Phalacrocorax carbo* White-breasted Cormorant. W, ?, v. Demey & Fishpool 1991.)

P. africanus Reed Cormorant. W, M, u. FGU.

Anhingidae

(*Anhinga rufa* Darter. W, M, v. FGU.)

Ardeidae

(*Ixobrychus minutus* Little Bittern. W, *R/M,* v. FGU.)

(*I. sturmii* Dwarf Bittern. W, MB(Jun–Nov), v. FGU.)

(*Tigriornis leucolophus* White-crested Tiger Heron. W–S, RB, r. FGU.)

Nycticorax nycticorax Black-crowned Night Heron. W/F, M(Oct–Apr), u. FGU.

Gorsachius leuconotus White-backed Night Heron. W/F, *RB*, u. Salewski & Korb (1998).

(*Ardeola ralloides* Common Squacco Heron. W, M(Oct–May), v. (VS-).)

Bubulcus ibis Cattle Egret. W/S/P, M(Sep–May), f. FGU.

Butorides striatus Green-backed Heron. W, **RB**, c. FGU, VS+.

Egretta garzetta Little Egret. W, M(Sep–May), f. FGU.

(*E. intermedia* Yellow-billed Egret. W, M, v. FGU.)

E. alba Great White Egret. W, M(Sep–May), u. FGU.

(*Ardea purpurea* Purple Heron. W, M(Sep–Apr), v. (VS-).)

A. cinerea Grey Heron. W, *RB/M*, f. FGU. Most individuals probably Palaearctic migrants, but Thiollay (1985) reports a breeding colony near Korhogo.

A. melanocephala Black-headed Heron. W, M(Nov–May), u. FGU.
A. goliath Goliath Heron. W/F, **RB**, f. FGU, Demey & Fishpool (1991).

Scopidae

Scopus umbretta Hamerkop. W/S-(S), **RB**, c. FGU, Salewski (1997a).

Ciconidae

Mycteria ibis Yellow-billed Stork. W/P, **RB**, u. FGU, Salewski & Korb (1998).
(*Anastomus lamelligerus* Openbill Stork. W/P, M(Nov–May), r. Thiollay (1985).)
(*Ciconia nigra* Black Stork. ?, P. One fitted with a satellite transmitter in 1995 in the Czech Republic stayed some days in the north-east of the park in winter 1995–6 (Salewski *et al.* 2000).
C. abdimii Abdim's Stork. W/S, **MB**(Mar–Jun), v. FGU, Salewski (1997a).
C. episcopus Woolly-necked Stork. W/S, **RB**, f. FGU.
(*C. ciconia* White Stork. S, P(Oct–Mar), v. FGU.)
(*Ephippiorhynchus senegalensis* Saddle-billed Stork. W, **RB**, r. Walsh 1977, FGU.)
Leptoptilos crumeniferus Marabou. W/S, **RB**(Dec–Apr), u. FGU, Salewski & Korb (1998).

Threskiornithidae

(*Threskiornis aethiopicus* Sacred Ibis. ?, ?, r/v. Thiollay 1985.)
(*Plegadis falcinellus* Glossy Ibis. W, ?, v. Demey & Fishpool (1991).)
Bostrychia hagedash Hadada. W/S/F, **RB**, c. FGU.

Anatidae

Dendrocygna viduata White-faced Whistling Duck. E-(N), M, u. FGU, VS.
(*Alopochen aegyptiacus* Egyptian Goose. W, M(Feb–Mar), v. Thiollay 1985, Demey & Fishpool (1991).)
Plectropterus gambensis Spur-winged Goose. E-(N), M(Nov–Apr), u. FGU.
Pteronetta hartlaubii Hartlaub's Duck. E-S, RB, r. FGU.
(*Nettapus auritus* African Pygmy Goose. W, M(Apr–Nov), v. FGU.)
(*Anas querquedula* Garganey. W, P(Jan–Mar), v. FGU.)

Accipitridae

Aviceda cuculoides Cuckoo Hawk. S/F-(S), *MB*(Jun–Dec), u. FGU, VS-.
Pernis apivorus Honey Buzzard. S/F, P, u. FGU,VS-.
Macheiramphus alcinus Bat Hawk. S/W, RB, u. FGU.
Elanus caeruleus Black-shouldered Kite. S/P, RB, u. FGU.
(*Chelictinia riocourii* Swallow-tailed Kite. S/P, ?, v. FGU, Thiollay (1985). The record by FGU (1980) is the only one for Ivory Coast. Additionally, J. Korb and G. Markgraf (pers. comm.) saw a "grey tern-like raptor" at the river Lola in spring 1997. Their description fits this species.)
Milvus migrans Black Kite. S/P/W, **MB**(Sep–May), f. FGU. Both the African and the European subspecies might occur in the park. I only identified the African *M. m. parasitus*.
Haliaeetus vocifer African Fish Eagle. W, RB, f. FGU.
Gypohierax angolensis Palm-nut Vulture. W/S/F-(S), RB, f. FGU.
Necrosyrtes monachus Hooded Vulture. S/P, RB, f. FGU.

Gyps africanus White-backed Vulture. S/P, RB, c. FGU.
Torgos tracheliotus Lappet-faced Vulture. S/P, *RB*, u, Thiollay (1985).
Trigonoceps occipitalis White-headed Vulture. S/P, RB, f. FGU.
Circaetus gallicus Short-toed Eagle. S/P, M(Nov–Apr), u. FGU, VS-. European *C. g. gallicus* has never been positively identified in Ivory Coast (Thiollay 1985).
C. cinereus Brown Snake Eagle. S/P-(N), M(Dec–Apr), u. FGU, VS-.
C. cinerascens Western Banded Snake Eagle. S/P, RB, u. FGU, VS-.
Terathopius ecaudatus Bateleur. S/P, RB, c. FGU.
Polyboroides typus Gymnogene. F/S, RB, f. FGU.
Circus aeruginosus European Marsh Harrier. W/S/P, P(Dec–Mar), f. FGU.
(*C. macrourus* Pallid Harrier. S/P, P(Oct–Mar), v. FGU.)
(*C. pygargus* Montagu's Harrier. S/P, P(Dec–Apr), v. (VS-).)
Melierax metabates Dark Chanting Goshawk. S/P, **RB**, f. FGU.
M. gabar Gabar Goshawk. S/F-(N), **RB**, u. FGU, Thiollay 1985, VS-.
(*Accipiter melanoleucus* Black Goshawk. F, **RB**, r. Thiollay (1985).)
A. ovampensis Ovambo Sparrowhawk. S, M(Jul–Sep), u. FGU, Salewski (1998b), VS.
A. erythropus Western Little Sparrowhawk. F, **RB**, u. FGU.
A. tachiro African Goshawk. F/S, RB, u. FGU.
A. badius Shikra. S, **MB**(Sep–Jun), f. FGU.
Butastur rufipennis Grasshopper Buzzard. S/P, M(Nov–Apr), f. FGU.
Kaupifalco monogrammicus Lizard Buzzard. S, RB, f. FGU.
(*Buteo buteo* Common Buzzard. S, P, v. FGU, Thiollay (1985).)
B. auguralis Red-necked Buzzard. S, M(Oct–Jun), f. FGU.
Aquila wahlbergi Wahlberg's Eagle. S, **MB**(Nov–May), f. FGU.
A. rapax Tawny Eagle. S/P, **RB**, f. FGU, Thiollay (1985).
Hieraaetus spilogaster African Hawk Eagle. S, RB, u. FGU.
H. pennatus Booted Eagle. S, P(Jan–Apr), u. FGU.
H. ayresii Ayres's Hawk Eagle. S/F-S, RB, u. FGU.
Lophaetus occipitalis Long-crested Eagle. S, RB, f. FGU.
(*Stephanoaetus coronatus* Crowned Eagle. F, RB, r. FGU.)
Polemaetus bellicosus Martial Eagle. S/P/F, RB, u. FGU.
Pandion haliaetus Osprey. W, P(Oct–May), u. FGU.

Sagittariidae

Sagittarius serpentarius Secretary Bird. P, M(Oct–May), v. FGU, Thiollay (1985).

Falconidae

(*Falco naumanni* Lesser Kestrel. S, P(Jan–Apr), v. Thiollay (1985).)
F. tinnunculus Common Kestrel. S/P, *RB/P*(Oct–Apr), u. FGU.
(*F. alopex* Fox Kestrel. S/P, *M(Dec–Apr)*, v. FGU, Demey & Fishpool (1991).)
F. ardosiaceus Grey Kestrel. S/P, *RB*, f. FGU, Thiollay 1985.
(*F. vespertinus* Western Red-footed Falcon. P, P(Mar–May), v. FGU.)
(*F. chicquera* Red-necked Falcon. ?, *RB*, *r*. Balchin 1988.)
(*F. subbuteo* European Hobby. F, P, v. Thiollay 1985, Demey & Fishpool (1991).)

F. cuvierii African Hobby. S/P-(S), RB, f. FGU.
F. biarmicus Lanner. S/P, RB, f. FGU.
(*F. peregrinus* Peregrine Falcon. S/P, P/RB, u. FGU, Thoillay (1985).)

Phasianidae

Francolinus lathami Forest Francolin. F, **RB**, f. FGU.
(*F. albogularis* White-throated Francolin. S, RB, *u.* FGU.)
F. bicalcaratus Double-spurred Francolin. S, **RB**, a. FGU.
F. ahantensis Ahanta Francolin. F-S, **RB**, u. FGU.
(*Coturnix coturnix* Common Quail. S, P(Dec–Mar), *u.* FGU.)
(*C. chinensis* Blue Quail. S/P, RB, *f.* FGU.)
Ptilopachus petrosus Stone Partridge. S, **RB**, f. FGU.

Numididae

Guttera pucherani Crested Guineafowl. F, RB, f. FGU.
Numida meleagris Helmeted Guineafowl. S/P, **RB**, a. FGU.

Turnicidae

Turnix sylvatica Kurrichane Buttonquail. S/P, RB, u. FGU, VS+.

Rallidae

(*Himantornis haematopus* Nkulengu Rail. F, RB, *u.* FGU.)
(*Sarothrura pulchra* White-spotted Flufftail. F, RB, *u.* FGU.)
(*Crecopsis egregia* African Crake. S/P, RB, *u/f.* FGU.)
Amaurornis flavirostris Black Crake. W, **RB**, u/f. FGU.
(*Porphyrula alleni* Lesser Gallinule. W, RB, *u.* FGU.)
(*Gallinula chloropus* Common Moorhen. W, RB, *u.* FGU.)
(*G. angulata* Lesser Moorhen. W, *RB*, *u.* FGU, Thiollay (1985).)

Gruidae

(*Balearica pavonina* Northern Crowned Crane. P, *RB*, r. FGU, Thiollay (1985).)

Heliornithidae

Podica senegalensis African Finfoot. W, RB, u/f. FGU.

Otididae

Neotis denhami Denham's Bustard. S/P, **MB**(Oct–May), u. FGU, Salewski (1997a).
(*Ardeotis arabs* Arabian Bustard. P, ?, *r/v.* FGU, Thiollay 1985. The only record for the country apart from an old one near Beoumi (Thiollay 1985).
(*Eupodotis senegalensis* White-bellied Bustard. S, M(Nov–Apr), r. FGU.)
E. melanogaster Black-bellied Bustard. S/P, RB, u. FGU, VS.

Jacanidae

Actophilornis africanus African Jacana. W, RB, u/f. FGU.

Rostratulidae

Rostratula benghalensis Painted Snipe. W, RB, u. FGU, Thiollay (1985).

Recurvirostridae

(*Himantopus himantopus* Black-winged Stilt. W, *P/M*, v. FGU, Thiollay (1985).)

Burhinidae

Burhinus senegalensis Senegal Thick-knee. W/S/P, **MB**(Oct–May), c. FGU, VS.

(*B. vermiculatus* Water Dikkop. W, **MB**(Nov–Jun), r. FGU.)
B. capensis Spotted Dikkop. P-(N), M(Dec–Apr), u. FGU, VS.
Glareolidae
(*Pluvianus aegyptius* Egyptian Plover. W, M(Nov–May), *v.* (VS-).)
(*Rhinoptilus chalcopterus* Bronze-winged Courser. S, M(Dec–Apr), v. (VS-).)
(*Cursorius temminckii* Temminck's Courser. P/S, M(Dec–Apr), v. (VS-).)
Glareola nuchalis Rock Pratincole. W, RB, u. FGU, VS-.
Charadriidae
(*Charadrius dubius* Little Ringed Plover. W, P, *v/u.* FGU.)
C. hiaticula Ringed Plover. W, P, v/u. FGU.
(*C. pecuarius* Kittlitz's Plover. P, M(Jan–Mar), v/u. FGU.)
C. forbesi Forbes's Plover. W/P, **RB**, f. FGU.
(*C. marginatus* White-fronted Sand Plover. W, ?, v. Thiollay (1985).)
Vanellus senegallus Senegal Wattled Plover. P, **RB**, f. FGU.
V. albiceps White-crowned Plover. W, ***RB/MB***(*Oct–Jun*), c. FGU, VS.
(*V. tectus* Black-headed Plover. W, ?, v. FGU, Thiollay (1985).)
V. spinosus Spur-winged Plover. E-N, M(Dec–Mar), v/u. FGU.
(*V. lugubris* Lesser Black-winged Plover. P, **MB**(Mar–Jun), v. FGU.)
Scolopacidae
(*Gallinago gallinago* Common Snipe. W, P, *v/u.* FGU.)
G. media Great Snipe. W, P(Dec–Apr), v. FGU, Salewski (1997a).
(*Limosa limosa* Black-tailed Godwit. W, P, v. FGU.)
(*Tringa erythropus* Spotted Redshank. W, P, v. FGU, Thiollay (1985).)
(*T. totanus* Common Redshank. W, P, v. FGU.)
(*T. stagnalis* Marsh Sandpiper. W, P, v. FGU.)
T. nebularia Greenshank. W, P, v. FGU.
T. ochropus Green Sandpiper. W, P, f. FGU, VS.
T. glareola Wood Sandpiper. W, P, u. FGU.
Actitis hypoleucos Common Sandpiper. W, P(Sep–May), c. FGU, VS.
(*Arenaria interpres* Turnstone. W, P, v. FGU.)
(*Calidris minuta* Little Stint. W, P, v. FGU.)
(*Phalaropus fulicarius* Grey Phalarope. W, P, v. FGU.)
Sternidae
(*Sterna albifrons* Little Tern. W, P, v. FGU.)
Pteroclididae
Pterocles quadricinctus Four-banded Sandgrouse. S/P-(N), **MB**(Dec–Apr), f. FGU.
Columbidae
Columba iriditorques Western Bronze-naped Pigeon. F, RB, u. FGU. Listed as *C. malherbi* by FGU (1980).
(*Streptopelia turtur* European Turtle Dove. ?, P, v. Demey (1986).)
S. senegalensis Laughing Dove. S-(N), RB, u. FGU.
S. vinacea Vinaceous Dove. S, **RB**, a. FGU.

S. semitorquata Red-eyed Dove. S/F, **RB**, a. FGU.
Turtur abyssinicus Black-billed Wood Dove. S/P-(N), RB, f/c. FGU, VS.
T. afer Blue-spotted Wood Dove. F/S-(S), RB, a. FGU.
T. tympanistria Tambourine Dove. F, RB, u/f. FGU.
T. brehmeri Blue-headed Wood Dove. F, RB, f. FGU.
(*Oena capensis* Namaqua Dove. P-N, M(Dec–Mar), *v/u*. FGU.)
Treron waalia Bruce's Green Pigeon. F/S-N, RB, u. FGU.
T. australis Green Pigeon. F/S, RB, c. FGU.

Psittacidae

Poicephalus robustus Brown-necked Parrot. S-S, RB, u. FGU.
P. senegalus Senegal Parrot. S/F, RB, c. FGU.
Psittacula krameri Rose-ringed Parakeet. S-N, RB, u/f. FGU.
(*Agapornis pullaria* Red-headed Lovebird. S, ?, *r*. Hovestadt (1997).)

Musophagidae

Tauraco persa Guinea Turaco. F, **RB**, a. FGU.
(*T. macrorhynchus* Verreaux's Turaco. F, RB, r. FGU.)
Musophaga violacea Violet Turaco. F, RB, u/f. FGU.
(*Corythaeola cristata* Great Blue Turaco. F, RB, r. (VS-).)
Crinifer piscator Western Grey Plantain-eater. S, RB, u. FGU, VS-.

Cuculidae

(*Clamator glandarius* Great Spotted Cuckoo. S, M(Jan–Mar), v/u. FGU.)
(*C. jacobinus* Jacobin Cuckoo. S, M(Jan–Mar), v. FGU, Thiollay (1985).)
C. levaillantii Striped Crested Cuckoo. S/F, *RB*, u. FGU, Thiollay (1985).
(*Pachycoccyx audeberti* Thick-billed Cuckoo. F, RB, *r/u*. FGU.)
Cuculus solitarius Red-chested Cuckoo. F, **RB**, c. FGU.
(*C. clamosus* Black Cuckoo. F, M(Jul–Sep), *u*. FGU.)
C. gularis African Grey Cuckoo. S, M(Sep–Apr), u/f. European Cuckoo *C. canorus* is recorded for the park in FGU (1980) but this Palaearctic species is only recorded once in Ivory Coast (Thiollay 1985). Its presence in the park is considered unconfirmed.
Chrysococcyx cupreus Emerald Cuckoo. F, RB, u/f. FGU.
C. klaas Klaas's Cuckoo. F, **RB**, f. FGU, Thiollay (1985), VS. Courtship feeding observed several times in the south of the park in Feb.
C. caprius Didric Cuckoo. S, *RB*, f. FGU, Thiollay (1985).
Ceuthmochares aereus Green Coucal. F, RB, f. FGU.
(*Centropus grillii* African Black Coucal. S/F, RB, *u*. FGU.)
C. leucogaster Black-throated Coucal. F, RB, u. FGU.
C. senegalensis Senegal Coucal. S/F, RB, f/c. FGU.

Tytonidae

Tyto alba Barn Owl. S/F, RB, u. FGU.

Strigidae

Otus senegalensis African Scops Owl. S/F, RB, c. FGU. In FGU (1980) *O. scops* (then regarded as including *O. senegalensis*) is recorded. I only found *O. senegalensis*

(heard and mist-netted). The presence of the Palaearctic *O. scops* is unconfirmed.
O. leucotis White-faced Owl. S/F, RB, u/f. FGU.
Bubo africanus Spotted Eagle Owl. S, RB, f. FGU.
(*B. lacteus* Giant Eagle Owl. S-*N*, RB, *r/u*. (VS-).)
Scotopelia peli Pel's Fishing Owl. F, RB, f. FGU.
(*Glaucidium perlatum* Pearl-spotted Owlet. S-(N), RB, *u*. (VS-).)
G. capense Barred Owlet. F-(S), RB, f. FGU, VS+.
Strix woodfordii Wood Owl. F, **RB**, f. FGU.

Caprimulgidae

Caprimulgus ruficollis Red-necked Nightjar. S, P(*Feb–Apr*), u. Salewski (1997a).
C. pectoralis Fiery-necked Nightjar. F/S, **RB**, f. Demey & Fishpool (1991), Salewski (1997a).
C. inornatus Plain Nightjar. S/P, M(Nov–May), u/f. FGU, VS-.
(*C. tristigma* Freckled Rock Nightjar. P, *RB*, r. FGU, Thiollay (1985).)
C. climacurus Long-tailed Nightjar. S/P, **MB**(Sep–Jun), c. FGU.
Macrodipteryx longipennis Standard-winged Nightjar. S/P, **MB**(Nov–Apr), f/c. FGU.

Apodidae

Telacanthura ussheri Mottled Spinetail. A, RB, u. FGU.
Cypsiurus parvus African Palm Swift. A, RB, u. FGU, VS-.
(*Apus melba* Alpine Swift. A, P(Oct–Apr), v. Thiollay (1985).)
(*A. aequatorialis* Mottled Swift. A, ?, *v/r*. FGU, Demey & Fishpool (1991).)
A. pallidus Pallid Swift. A, *M/P*, *v/u*. Demey & Fishpool (1991).
A. apus European Swift. A, P(Sep–May), f/c. FGU.
A. affinis Little Swift. A, RB, u/f. FGU, VS-.
A. caffer African White-rumped Swift. A, *RB*, u. Demey & Fishpool (1991), Salewski (1997a).

Trogonidae

Aploderma narina Narina Trogon. F, RB, u. FGU.

Alcedinidae

Alcedo quadribrachys Shining-blue Kingfisher. W, RB, f. FGU.
A. cristata Malachite Kingfisher. W, **RB**, c. FGU.
(*A. leucogaster* White-bellied Kingfisher. W, RB, r. FGU.)
Ceyx pictus Pygmy Kingfisher. F, **RB**, c. FGU.
Halcyon leucocephala Chestnut-bellied Kingfisher. S, **MB**(Nov–May), f/c. FGU, Salewski & Schmidt 2000.
H. malimbica Blue-breasted Kingfisher. W/F, RB, c. FGU.
(*H. senegalensis* Senegal Kingfisher. S, RB, r. (VS-).)
H. chelicuti Striped Kingfisher. S, **RB**, c. FGU.
Megaceryle maxima Giant Kingfisher. W, RB, f. FGU.
Ceryle rudis Pied Kingfisher. W, RB, c. FGU.

Meropidae

Merops pusillus Little Bee-eater. S, RB, f. FGU.
M. hirundineus Swallow-tailed Bee-eater. S, **RB**, f. FGU.

M. bulocki Red-throated Bee-eater. S, **RB**, a. FGU.
M. albicollis White-throated Bee-eater. S, M(Sep–May), u. FGU, VS.
(*M. orientalis* Little Green Bee-eater. S, M(Apr–Sep), v. FGU.)
(*M. persicus* Blue-cheeked Bee-eater. S, M(Dec–Mar), v. FGU, Thiollay (1985).)
M. apiaster European Bee-eater. S, P(Sep–Apr), f. FGU, VS.
M. nubicus Northern Carmine Bee-eater. S, M(Nov–Apr), f. FGU.

Coraciidae

(*Coracias garrulus* European Roller. S, P(Jan–Feb), v. FGU, Demey & Fishpool (1991).)
C. abyssinica Abyssinian Roller. S/P, M(Feb–Apr), u/f. FGU, VS-.
C. naevia Purple Roller. S, M(Dec–Jun), u. FGU, VS-.
C. cyanogaster Blue-bellied Roller. S, RB, f. FGU.
Eurystomus glaucurus Broad-billed Roller. S/F, M(Oct–May), c. FGU, VS+.
E. gularis Blue-throated Roller. F, *RB*, r. FGU.

Phoeniculidae

Phoeniculus purpureus Wood Hoopoe. S, **RB**, f/c. FGU.
(*P. bollei* White-headed Wood Hoopoe. F, RB, r. FGU.)
(*P. castneiceps* Forest Wood Hoopoe. F, RB, r. FGU.)
P. aterrimus Black Wood Hoopoe. S, **RB**, f. FGU.

Upupidae

Upupa epops Hoopoe. S, *RB/P*(Jun–Apr), f. FGU, VS.

Bucerotidae

(*Tropicranus albocristatus* White-crested Hornbill. F, RB, r. (VS-).)
(*Tockus hartlaubi* Black Dwarf Hornbill. F, RB, r. FGU.)
(*T. camurus* Red-billed Dwarf Hornbill. F, RB, r. FGU.)
T. fasciatus Pied Hornbill. F/S-(S), **RB**, c. FGU.
T. nasutus African Grey Hornbill. S, **MB**(Apr–May), c. FGU.
Bycanistes fistulator White-tailed Hornbill. F/S-(S), MB(Sep–Jun), c. FGU.
(*B. cylindricus* White-thighed Hornbill. F, RB, r. FGU.)
B. subcylindricus Black-and-white Casqued Hornbill. F, **RB**, f. FGU.
(*Ceratogymna elata* Yellow-casqued Hornbill. F, RB, r. (VS-).)
Bucorvus abyssinicus Abyssinian Ground Hornbill. S, RB, u/f. FGU.

Lybiidae

(*Gymnobucco peli* Bristle-nosed Barbet. F, RB, r. FGU.)
(*Pogoniulus scolopaceus* Speckled Tinkerbird. F, RB, *u*. FGU.)
P. chrysoconus Yellow-fronted Tinkerbird. F/S, RB, c. FGU.
P. bilineatus Golden-rumped Tinkerbird. F/S-S, RB, c. FGU.
(*P. subsulphureus* Yellow-throated Tinkerbird. F, R, *u*. FGU.)
(*Tricholaema hirsutum* Hairy-breasted Barbet. F, RB, r. FGU.)
Lybius vieilloti Vieillot's Barbet. S, **RB**, c. FGU.
(*L. bidentatus* Double-toothed Barbet. S, RB, r. FGU.)
L. dubius Bearded Barbet. S-(N), RB, r/u. FGU, VS-.

Indicatoridae
(*Prodotiscus insignis* Cassin's Honeyguide. S, RB, r. FGU.)
Indicator maculatus Spotted Honeyguide. F, RB, u. FGU.
I. indicator Greater Honeyguide. F/S, RB, f. FGU.
(*I. minor* Lesser Honeyguide. F/S, RB, r. FGU.)
Picidae
Jynx torquilla European Wryneck. S, P(Nov–Feb), u. FGU.
Campethera punctuligera Fine-spotted Woodpecker. S, RB, f. FGU.
C. nivosa Buff-spotted Woodpecker. F, **RB**, f. FGU.
C. abingoni Golden-tailed Woodpecker. S, *RB*, u. Falk & Salewski (1999).
(*Dendropicos gabonensis* Gabon Woodpecker. F, RB, *u*. FGU.)
D. fuscescens Cardinal Woodpecker. S/F, **RB**, f. FGU.
(*Thripias pyrrhogaster* Fire-bellied Woodpecker. F, RB, r. FGU.)
Mesopicos goertae Grey Woodpecker. S/F, RB, f. FGU.
Picoides obsoletus Brown-backed Woodpecker. S/F, **RB**, f. FGU.
Eurylaimidae
Smithornis capensis African Broadbill. F, *RB*, r/u. Demey & Fishpool (1991).
Alaudidae
Mirafra rufocinnamomea Flappet Lark. P, RB, c. FGU.
Pinarocorys erythropygia Rufous-rumped Lark. P, RB, u. FGU.
Galerida modesta Sun Lark. P, RB, u/f. FGU, Salewski 1997b.
Eremopterix leucotis Chestnut-backed Sparrow Lark. P, *M*, *v/u*. Salewski (1997a).
Hirundinidae
(*Psalidoprocne nitens* Square-tailed Saw-wing. S, ?, *v*. FGU.)
P. obscura Fanti Saw-wing. S/A-(S), *MB*(Feb–Dec), f/c. FGU.
Riparia riparia European Sand Martin. S/P/A, P(Nov–Apr), u. FGU, Thiollay (1985).
(*R. cincta* Banded Martin. P/A, M(Jul–Aug), v. FGU, Thiollay (1985).)
R. paludicola Brown-throated Sand Martin. S/P/A, *M*, u/f. Salewski (1998a).
Pseudhirundo griseopyga Grey-rumped Swallow. ?, ?, *v/u*. Thiollay (1985).
Hirundo semirufa Red-breasted Swallow. S/P/A, RB, f. FGU, VS+.
H. senegalensis Mosque Swallow. S/P/A, RB, u. FGU, Salewski (1997a), VS-.
H. abyssinica Lesser Striped Swallow. S/A, RB, u/f. FGU. In the south of the park seen only Mar–Apr arriving shortly after the first rains.
H. daurica Red-rumped Swallow. S/P/A, RB, u. FGU, Thiollay (1985).
(*H. preussi* Preuss's Cliff Swallow. S-N, RB, r. FGU, Demey & Fishpool (1991).)
H. smithii Wire-tailed Swallow. S/P, **RB**, f. FGU.
(*H. nigrita* White-throated Blue Swallow. W, RB, ?. FGU.)
H. leucosoma Pied-winged Swallow. P, RB, r. FGU.
(*H. aethiopica* Ethiopian Swallow. ?, ?, ?. Demey & Fishpool (1991).)
H. rustica European Swallow. S/P/A, P(Sep–Apr), c. FGU.
H. lucida Red-chested Swallow. S/A-N, ?, f/c. Large flocks observed regularly Feb–Apr 1999 near Gué Auto. Nests in the Comoé Safari Lodge in Kafolo.

Delichon urbica House Martin. S/A, P(Oct–Apr), f. FGU, Salewski (1997a).

Motacillidae

Motacilla flava Yellow Wagtail. S/P/W, P(Oct–Apr), u/f. FGU, VS-.

(*M. clara* Mountain Wagtail. ?, *RB*, r. Thiollay (1985).)

M. aguimp African Pied Wagtail. W, RB, f. FGU.

(*Anthus richardi* Richard's Pipit. P, ?, ?. FGU, Balchin (1988). Recorded as *A. novaeseelandiae* (Thiollay 1985, Balchin 1988).)

A. leucophrys Plain-backed Pipit. P, **RB**, f/c. FGU.

A. trivialis Tree Pipit. S, P(Oct–Apr), f/c. FGU.

(*A. cervinus* Red-throated Pipit. S/P, P(Nov–Mar), *u*. FGU.)

Macronyx croceus Yellow-throated Longclaw. P, RB, f. FGU.

Campephagidae

Campephaga phoenicea Red-shouldered Cuckoo-shrike. F, **RB**, f. FGU.

Coracina pectoralis White-breasted Cuckoo-shrike. S/F, **RB**, f. FGU, Salewski (1997a).

Pycnonotidae

(*Andropadus virens* Little Greenbul. F, RB, *r*. (VS-).)

(*A. gracilis* Little Grey Greenbul. F, RB, r. FGU.)

(*A. gracilirostris* Slender-billed Greenbul. F, RB, r. FGU.)

(*A. latirostris* Yellow-whiskered Greenbul. F, RB, *r*. (VS-).)

Baeopogon indicator Honeyguide Greenbul. F, RB, f. FGU.

(*Chlorocichla simplex* Simple Greenbul. F, RB, *r/u*. FGU.)

C. flavicollis Yellow-throated Leaflove. F-(S), RB, u. FGU, VS-.

(*Thescelocichla leucopleura* Swamp Palm Bulbul. F, RB, *u*. FGU.)

Pyrrhurus scandens Leaflove. F, RB, c. FGU.

(*Phyllastrephus icterinus* Icterin Greenbul. F, RB, *u*. FGU.)

Bleda canicapilla Grey-headed Bristlebill. F, RB, c. FGU, VS+.

(*Criniger barbatus* Bearded Greenbul. F, RB, *u*. FGU.)

(*C. calurus* Red-tailed Greenbul. F, ?, ?. Mühlenberg *et al.* (1990).)

Pycnonotus barbatus Common Bulbul. S/F, **RB**, a. FGU.

Turdidae

Neocossyphus poensis White-tailed Ant Thrush. F, *RB*, r/u, Thiollay (1985).

(*Monticola saxatilis* European Rock Thrush. ?, P, v. Balchin (1990).)

Turdus pelios West African Thrush. F/S, **RB**, c. FGU.

(*Zoothera princei* Grey Ground Thrush. F, RB, r. FGU.)

Alethe diademata Fire-crested Alethe. F, RB, f. FGU.

(*A. poliocephala* Brown-chested Alethe. F, RB, r. FGU.)

Luscinia megarhynchos Nightingale. F, P(Oct–Apr), u/f. FGU.

Cossypha niveicapilla Snowy-headed Robin-chat. F, **RB**, c. FGU, VS.

C. albicapilla White-crowned Robin-chat. F, RB, f. FGU.

Erythropygia leucosticta Forest Scrub Robin. F, **RB**, f. Mühlenberg *et al.* (1990), Salewski (1997a).

Phoenicurus phoenicurus Redstart. S, P(Oct–Apr), u. FGU.

Saxicola rubetra Whinchat. P/S, P(Sep–Apr), f. FGU.
(*Oenanthe oenanthe* European Wheatear. S, P(Jan–Feb), v. FGU.)
Myrmecocichla albifrons White-fronted Black Chat. S, **RB**, f/c. FGU.
Sylvidae
Melocichla mentalis African Moustached Warbler. S, RB, f. FGU.
Acrocephalus schoenobaenus Sedge Warbler. W, P, u. Salewski (1997a), Balchin (1988).
A. scirpaceus Reed Warbler. W, P(Oct–Apr), u. FGU.
(*A. arundinaceus* Great Reed Warbler. W, P(Oct–Apr), v. FGU, Williams (1997).)
(*Hippolais pallida* Olivaceous Warbler. S, P, v. Demey & Fishpool (1991), Williams (1997).)
(*H. icterina* Icterine Warbler. ?, P, v. Williams (1997).)
H. polyglotta Melodious Warbler. S, P(Oct–Apr), c. FGU, VS+.
Eremomela pusilla Green-backed Eremomela. S/F, **RB**, a. FGU.
(*Sylvietta virens* Green Crombec. F, RB, *r.* FGU.)
(*S. denti* Lemon-bellied Crombec. ?, ?, *r.* Demey & Fishpool (1991).)
S. brachyura Northern Crombec. S/P, **RB**, f. FGU.
(*Macrosphenus concolor* Grey Longbill. F, RB, *r/u.* FGU.)
Phylloscopus trochilus Willow Warbler. S/F, P(Oct–Apr), a. FGU.
P. sibilatrix Wood Warbler. F, P(Oct–Apr), u. FGU.
P. collybita Chiffchaff. ?, P, v. Williams (1997), Salewski (1997a).
Hyliota flavigaster Yellow-bellied Hyliota. S, **RB**, f. FGU.
(*Hylia prasina* Green Hylia. F, RB, *r/u.* FGU.)
Sylvia borin Garden Warbler. S/F, P(Oct–Apr), u/f. FGU, Salewski (1997a).
S. atricapilla Blackcap. S/F, P(Dec–Mar), u. FGU.
S. communis Common Whitethroat, S/P, P(Dec–Mar), v/u. FGU, Balchin (1988).
(*S. hortensis* Orphean Warbler. ?, P. Tentatively identified by Williams (1997) but needs confirmation.)
Cisticola eximinus Black-backed Cloud Cisticola. S, RB, u. FGU.
C. juncidis Fan-tailed Cisticola. P, RB, u. FGU.
C. natalensis Croaking Cisticola. S/P, RB, c. FGU.
(*C. ruficeps* Red-pate Cisticola. S, RB, *u.* FGU, Balchin (1988).)
C. brachypterus Short-winged Cisticola. S, **RB**, c. FGU.
C. lateralis Whistling Cisticola. S, **RB**, c/a. FGU.
C. erythrops Red-faced Cisticola. S, **RB**, f. FGU.
C. cantans Singing Cisticola. S, **RB**, a.FGU, VS+.
C. galactotes Greater Black-backed Cisticola, W/S, RB, f. FGU.
Prinia subflava Tawny-flanked Prinia. S, RB, c. FGU.
Heliolais erythroptera Red-winged Warbler. S, RB, f. FGU.
Apalis flavida Yellow-breasted Apalis. S/F, R, u. FGU, VS+.
(*A. nigriceps* Black-capped Apalis. F, RB, r. FGU.)
(*A. sharpii* Sharp's Apalis. F, RB, r. FGU.)
Camaroptera brachyura Bleating Bush Warbler. F, **RB**, a. FGU.
(*C. superciliaris* Yellow-browed Camaroptera. F, RB, r. FGU.)

(*C. chloronota* Olive-green Camaroptera. F, RB, r. FGU.)
Hypergerus atriceps Oriole Warbler. F, RB, u. FGU, VS+.

Muscicapidae

Bradornis pallidus Pallid Flycatcher. S, **RB**, f. FGU.
Melaenornis edolioides Western Black Flycatcher. S, **RB**, f. FGU.
(*Fraseria ocreata* Forest Flycatcher. F, RB, r. FGU.)
F. cinerascens White-browed Forest Flycatcher. F. **RB**, f. FGU.
Ficedula hypoleuca Pied Flycatcher. F/S, P(Sep–Apr), a. FGU, Salewski (1997a).
Muscicapa striata Spotted Flycatcher. S, P(Sep–Apr), f. FGU, Salewski (1997a).
M. gambagae Gambaga Flycatcher. S/F, **RB**, f. Balchin (1988), Salewski, (1997a), Falk (1998).
M. aquatica Swamp Flycatcher. W/F, ?, *r.* Salewski's (1997) was the first published record but the species had already been mist-netted nearby in Mar 1979 by I. Kühn and W. Werres (I. Kühn pers. comm..).
M. cassini Cassin's Grey Flycatcher. W/F, RB, u. FGU.
M. caerulescens Ashy Flycatcher. F, RB, u. Salewski (1997a).
Myioparus plumbeus Lead-coloured Flycatcher. F/S, **RB**, f. FGU, VS+.

Platysteiridae

Batis senegalensis Senegal Batis. S, **RB**, c. FGU.
(*Dyaphorophyia castanea* Chestnut Wattle-eye. F, RB, r. (VS-).)
Platysteira cyanea Scarlet-spectacled Wattle-eye. F, **RB**, c. FGU.

Monarchidae

(*Erythrocercus mccalli* Chestnut-capped Flycatcher. F, RB, r. (VS-).)
Elminia longicauda Blue Flycatcher. F, **RB**, c. FGU.
Terpsiphone viridis Paradise Flycatcher. F, RB, u/f. FGU.
T. rufiventer Red-bellied Paradise Flycatcher. F, **RB**, c. FGU.

Timaliidae

(*Illadopsis fulvescens* Brown Illadopsis. F, RB, *r.* FGU.)
I. puveli Puvel's Illadopsis. F-(S), **RB**, f. FGU, Salewski (1997c).
Turdoides plebejus Brown Babbler. S/F-(N), RB, f/c. FGU.
T. reinwardii Blackcap Babbler. F-(N), RB, f. FGU.
Phyllanthus atripennis Capuchin Babbler. F, **RB**, u. FGU.

Paridae

Parus leucomelas White-winged Black Tit. S, **RB**, c. FGU.

Remizidae

(*Anthoscopus parvulus* West African Penduline Tit. S-(N), RB, *u.* (VS-).)

Certhiidae

Salpornis spilonotus Spotted Creeper. S, **RB**, f. FGU, VS+.

Nectariniidae

(*Anthreptes fraseri* Fraser's Sunbird. F, R, *r/u.* FGU.)
A. gabonicus Brown Sunbird. F/W, RB, r. FGU.
A. longuemarei Violet-backed Sunbird. F, **RB**, f. FGU.

(*A. rectirostris* Yellow-chinned Sunbird. F, RB, *r/u*. FGU.)
A. collaris Collared Sunbird. F, **RB**, u/f. FGU.
A. platurus Pygmy Sunbird. S, *MB*(*Oct–Mar*), f. FGU, Salewski (1997a).
(*Nectarinia seimundi* Little Green Sunbird. S, RB, *r/u*. FGU.)
N. olivacea Olive Sunbird. F, RB, f. FGU.
N. verticalis Green-headed Sunbird. F, RB, u/f. FGU.
N. senegalensis Scarlet-chested Sunbird. S/F, RB, f. FGU.
(*N. adelberti* Buff-throated Sunbird. S, RB, *r/u*. FGU.)
N. venusta Yellow-bellied Sunbird. F, RB, u. FGU.
(*N. chloropygia* Olive-bellied Sunbird. F, RB, *r/u*. FGU.)
N. cuprea Coppery Sunbird. S/F, RB, f. FGU.
N. coccinigaster Splendid Sunbird. S, **RB**, c. FGU.
N. pulchella Beautiful Sunbird. S/F, RB, f/c. FGU, VS.
(*N. johannae* Johanna's Sunbird. F, RB, r. FGU.)
(*N. superba* Superb Sunbird. F, RB, r. FGU.)

Zosteropidae

Zosterops senegalensis Yellow White-eye. S/F, **RB**, f. FGU.

Oriolidae

(*Oriolus oriolus* European Golden Oriole. ?, P, v. Demey & Fishpool (1991).)
O. auratus African Golden Oriole. S, RB, f. FGU, Thiollay (1985).
(*O. brachyrhynchus* Western Black-headed Oriole. F, RB, *u*. FGU.)
O. nigripennis Black-winged Oriole. F, RB, u/f. FGU.

Laniidae

(*Lanius collaris* Fiscal Shrike. S/P, RB, *r/u*. (VS-).)
L. senator Woodchat Shrike. S/P, P, u. FGU.
L. gubernator Ermin's Shrike. S, **RB**, f. Suspected breeding in the park (Balchin 1990). Courtship feeding observed Apr 1997. Female with incubation patch mist-netted Mar 1998 (K.H. Falk, pers. comm.).
Corvinella corvina Yellow-billed Shrike. S-(N), RB, *u/f*. FGU.

Malaconotidae

Nilaus afer Brubru. S, **RB**, f. FGU.
Dryoscopus gambensis Northern Puffback. S/F, **RB**, c. FGU.
(*Tchagra australis* Brown-headed Tchagra. S-S, RB, *r/u*. FGU.)
T. senegala Black-crowned Tchagra. S, **RB**, c. FGU.
Laniarius aethiopicus Tropical Boubou. S/F, **RB**, c. FGU, VS+.
L. barbarus Yellow-crowned Gonolek. S/F/W, RB, c. FGU, VS.
Malaconotus sulfureopectus Orange-breasted Bush Shrike. S/F, **RB**, c. FGU, VS+.
(*M. multicolor* Many-coloured Bush Shrike. F/S, RB, r. FGU.)
M. blanchoti Grey-headed Bush Shrike. S, RB, r. Thiollay (1985).
Nicator chloris Western Nicator. F, **RB**, f. FGU.

Prionopidae

Prionops plumatus White Helmet Shrike. S/F, RB, f/c. FGU.

(*P. caniceps* Northern Red-billed Helmet Shrike. F, *RB*, ?. Thiollay (1985).)

Dicruridae

Dicrurus ludwigii Square-tailed Drongo. F, RB, f. FGU.

(*D. atripennis* Shining Drongo. F, RB, r. FGU.)

D. adsimilis Fork-tailed Drongo. S/F, **RB**, a. FGU.

Corvidae

(*Ptilostomus afer* Piapiac. S-N, RB, r. FGU, Thiollay (1985).)

Corvus albus Pied Crow. S, RB, u. FGU.

Sturnidae

(*Onychognathus fulgidus* Forest Chestnut-winged Starling. S, RB, *r/u*. FGU.)

(*Lamprotornis purpureus* Purple Glossy Starling. S-(N), RB, *u*. (VS-).)

(*L. chalcurus* Bronze-tailed Glossy Starling. S-N, RB, *u*. (VS-).)

(*L. chalybaeus* Greater Blue-eared Starling. S, M(Dec–Mar), *r/u*. FGU.)

L. chloropterus Lesser Blue-eared Starling. S-S, **MB**(Oct–May), a. FGU.

L. caudatus Northern Long-tailed Starling. S/P, M(Nov–Apr), u. FGU.

Cinnyricinclus leucogaster Violet-backed Starling. S, **MB**, a. FGU, Thiollay (1985).

Buphagus africanus Yellow-billed Oxpecker. S, RB, f. FGU.

Passeridae

Passer griseus Grey-headed Sparrow. S, RB, c. FGU.

Petronia dentata Bush Petronia. S/P, **RB**, c. FGU, Salewski (1997a).

Ploceidae

Plocepasser superciliosus Chestnut-crowned Sparrow-weaver. S, **RB**, f. FGU, VS.

Ploceus luteolus Little Weaver. S/P, *RB*, u/f. Salewski (1997a).

P. nigricollis Black-necked Weaver. F/S, *RB*, f. Demey & Fishpool (1991), Salewski (1997a).

(*P. heuglini* Heuglin's Masked Weaver. S, RB, *u*. (VS-).)

(*P. nigerrimus* Vieillot's Black Weaver. F, RB, *r/u*. FGU, Thiollay (1985).)

P. cucullatus Village Weaver. S, **RB**, c. FGU.

(*P. superciliosus* Compact Weaver. S, RB, *u*. FGU.)

(*Malimbus nitens* Blue-billed Malimbe. F, RB, *u*. (VS-).)

(*M. rubricollis* Red-headed Malimbe. F, RB, *u*. FGU.)

Anaplectes rubriceps Red-headed Weaver. S/F, **RB**, u. Thiollay (1985).

Quelea erythrops Red-headed Quelea. S, RB, u. FGU.

(*Euplectes afer* Yellow-crowned Bishop. S, RB, *u*. FGU.)

E. hordeaceus Black-winged Red Bishop. S-(*S*), **RB**, f. FGU.

E. franciscanus Northern Red Bishop. S-(N), RB, u/f. FGU.

E. macrourus Yellow-mantled Whydah. S/P, **RB**, a. FGU.

E. ardens Red-collared Whydah. S, RB, u. FGU.

(*Amblyospiza albifrons* Thick-billed Weaver. S/W, RB, *u*. FGU.)

Estrildidae

(*Nigrita canicapilla* Grey-crowned Negrofinch. F, RB, *u*. FGU.)

(*N. bicolor* Chestnut-breasted Negrofinch. F, RB, *u*.FGU.)

(*Nesocharis capistrata* White-cheeked Olive-back. S/F, RB, *u*. FGU.)

Pytilia hypogrammica Yellow-winged Pytilia. S/P, **RB**, f. FGU, Salewski (1997a).
P. phoenicoptera Red-winged Pytilia. S/P, **RB**, f. FGU, Salewski (1997a).
(*Pyrenestes sanguineus* Crimson Seed-cracker. F, RB, *u.* FGU.)
Spermophaga haematina Bluebill. F, **RB**, f. FGU.
Mandingoa nitidula Green Twinspot. F, ?, ?. Salewski & Korb (1998).
Lagonosticta rufopicta Brown Firefinch. S, **RB**, f. FGU, Salewski (1997a).
L. senegala Red-billed Firefinch. S-(N), RB, u/f. FGU, VS.
L. rara Black-bellied Firefinch. S, **RB**, f. FGU.
L. rubricata Blue-billed Firefinch. S, RB, u/f. FGU, VS.
L. larvata Black-faced Firefinch. S, **RB**, f. FGU, Salewski (1997a).
Estrilda caerulescens Lavender Waxbill. S/F, RB, f. FGU, Salewski (1997a).
E. melpoda Orange-cheeked Waxbill. S, **RB**, c. FGU.
(*E. troglodytes* Black-rumped Waxbill. S, RB, *u.* FGU.)
(*E. astrild* Common Waxbill. S, R, *u.* FGU.)
Uraeginthus bengalus Red-cheeked Cordon-bleu. S, **RB**, a. FGU, Salewski (1997a).
(*Amandava subflava* Zebra Waxbill. S/W, RB, *u.* FGU.)
Ortygospiza atricollis Quail Finch. S, RB, u/f. FGU.
Lonchura cucullata Bronze Mannikin. S/P, **RB**, a. FGU.

Viduidae

(*Vidua chalybeata* Village Indigobird. S-N, RB, *u.* FGU.)
(*V. wilsoni* Pale-winged Indigobird. S-*N*, RB, *u.* FGU, Balchin (1988, 1990).)
V. cammerunensis Cammeroon Indigobird. S, RB, *f.* FGU. Recorded for the park (FGU 1980) and Ivory Coast (Thiollay 1985) but not mentioned by Dowsett & Dowsett-Lemaire (1993).
V. macroura Pin-tailed Widow. S/P, RB, f. FGU.
V. togoensis Togo Paradise Widow. S, RB, f/c. FGU, VS.

Fringillidae

Serinus mozambicus Yellow-fronted Canary. S, **RB**, a. FGU.
S. gularis Streaky-headed Seed-eater. S, RB, u/f. FGU, Balchin (1988), VS.

Emberizidae

(*Emberiza tahapisi* Cinnamon-breasted Rock Bunting. S-N, RB, *u.* FGU, Demey & Fishpool (1991).)
(*E. affinis* Brown-rumped Bunting. ?, ?, *r.* Thiollay 1985, Balchin (1988).)
E. cabanisi Cabanis's Bunting. S, R, u/f. FGU.

Acknowledgments

I wish to thank F. Bairlein and B. Leisler who made it possible to stay in Ivory Coast. S. Eggers, J. Fry, F. Göken, J. Korb, K. Kouadio, A. Kouakou Kouadio, Lakado, G. Nikolaus, L. Pommerencke, S. Schmidt, D. v. Stünzner-Karbe, D.T. Tietze and P. Yao were of invaluable help in the field. K.E. Linsenmair allowed use of the facilities

of the camp of the University of Würzburg. The Ministère des Eaux et Forêts gave permission to conduct research in the park. G. Manners kindly improved the English. I. Kühn, J.-M. Thiollay and W. Werres allowed use of the records in FGU (1980) and provided useful unpublished information (it was not possible to contact the other authors of that report). The project was supported by the Deutsche Forschungsgemeinschaft and Volkswagen AG.

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Noteworthy records from Ginak Island, The Gambia

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Received 3 September 1999; revised 22 May 2000.

Summary

Four species new to The Gambia are reported: Red-footed Falcon *Falco vespertinus*, Eurasian Scops Owl *Otus scops*, Barred Warbler *Sylvia nisoria* and Lesser Whitethroat *S. curruca*. The Gambian status of four species, Grasshopper Warbler *Locustella naevia*, Reed Warbler *Acrocephalus scirpaceus*, Olivaceous Warbler *Hippolais pallida* and Orphean Warbler *Sylvia hortensis*, is significantly modified by trapping records. Observations of note on 38 other species are presented.

Résumé

Je cite quatre espèces nouvelles pour La Gambie: le Faucon kobez *Falco vespertinus*, le Petit-duc scops *Otus scops*, la Fauvette épervière *Sylvia nisoria* et la Fauvette babillarde *Sylvia curruca*. Le statut pour La Gambie de quatre espèces, la Locustelle tachetée *Locustella naevia*, la Rousserolle effarvate *Acrocephalus scirpaceus*, l'Hypolaïs pâle *Hippolais pallida* et la Fauvette orphée *Sylvia hortensis*, se voit considérablement modifié par les données de capture. Sont également fournies des observations ou notes sur 38 autres espèces.

Study Area

Ginak Island is situated in North Bank Division at the mouth of the River Gambia, at 13°34′N, 16°32′W. It is a long, narrow island (10 km by max. 2.5 km), set on a north-south axis, low-lying and sandy on the west coast and separated from the mainland on the east by a mangrove-fringed channel, nowhere wider than 300 m. The highest point is about 4 m a.s.l. Ginak falls within the Guinea savanna zone. Day temperatures vary from 18°C (dawn) to 44°C but 34°C is a more usual maximum. There are shallow pools in October left from the rains and tidal overflows, which gradually dry up by February. Vegetation is lush in October with tall, dense grasses which die back leaving a parched open ground layer by late January. The west coastal strip has a line of low bushes some 200 m wide (*Maytenus senegalensis*, *Tamarix pentandra* and others), with groups of trees of various *Acacia* species and Baobab *Adansonia digitata*.

Methods

These notes summarize records collected from birds trapped and observed at the northern end of Ginak island. Trapping sites were normally within 200 m of the W coast, but observations were made over many km^2. Trapping operations were carried out mainly during the dry season (November to March) but often including the end of the rains in late September and October (Table 1), by teams of 2–6 ringers, each individual usually staying for two weeks. The first visit was in December 1994 and operations continued through to March 2000. The primary aim was to catch Palaearctic migrants. No attempt was made to census numbers.

Table 1. Trapping coverage.

Year	Period	Trapping days[1]
1994–1995	December	5
	February–April	35
1995–1996	October–April	147
1996–1997	October–April	147
1997–1998	October & November	28
	January–March	71
1998–1999	September–November	30
	January–March	60
1999–2000	September–November	38
	January–March	55

[1]One trapping day was approximately 5 hours.

Species are included in this paper only where our records supplement data given in Barlow & Wacher (1997), either as new records for the country or area, modifying the species' status, further records of infrequently recorded species or other interesting observations. All references to current status, in square brackets, are to Barlow & Wacher (1997). Wing measurements were made by the maximum length (flattened and straightened wing) method described by Svensson (1992).

Notes on Species

Accipitridae

Chelictinia riocourii Swallow-tailed Kite. Singles seen Jan 1997 and Jan–Feb 1999. [Uncommon.]

Falconidae

Falco vespertinus Red-footed Falcon. On 3 Nov 1999, Friederike Woog and I had a close view of a male, perched at a distance of less than 10 m for 5 s; it flew off

rapidly, giving a 10-s view of its upper side. It was a small falcon, about the size of Hobby *F. subbuteo*, all black with bright red cere and legs. In flight, the upperparts were all black with the primaries semi-transparent, therefore giving them a lighter appearance. There was no facial pattern. First record for The Gambia, though there have been several in both N and S Senegal (Morel & Morel 1990, Sauvage & Rodwell 1998). [No Gambian records, but likely.]

Phasianidae

Coturnix coturnix Common Quail. One trapped, Jan 1998. [Palaearctic migrant, few records.]

Turnicidae

Turnix sylvatica Little Button-Quail. One trapped, Jan 1999. [Infrequent and local, usually further inland.]

Ortyxelos meiffreni Quail-Plover. One seen, 26 Jan 1998. In flight showed bowed wings, lark-like flight and predominantly white upper wing: seen briefly at rest it had sandy-brown mantle with dark mottling, spotted breast-band and creamy-white supercilium. [Two recent previous records.]

Pteroclidae

Pterocles exustus Chestnut-bellied Sandgrouse. One male and two females seen 16 Feb 1996. One male and one female, Feb 2000. [Rare, with a few recent records upriver.]

Cuculidae

Clamator jacobinus Jacobin Cuckoo. One immature trapped, Oct 1997, was still in juvenile plumage with no sign of any post-juvenile moult. Primaries fully grown, wing 150 mm . Rarely recorded in The Gambia, but N Senegal and S Mauritania are within its breeding range (Urban *et al.* 1988, Morel & Morel 1990). Young birds in this state of plumage do not usually move far from their natal area, but if raised in N Senegal it could have moved rapidly south. [Rare to uncommon.]

C. glandarius Great Spotted Cuckoo. Three trapped, Dec 1995. Not previously recorded on the north bank but frequently seen near the coast on the south bank of the river so its occurrence here is not unexpected. Two were immature, both female on wing-length; the other was adult male. [Frequent in Western Division.]

Strigidae

Otus scops Eurasian Scops Owl. Two caught Jan–Feb 1996 (mentioned by Barlow & Wacher 1997) and one Jan 1998, all determined to be this species by wing-length: 158, 149, 164 mm (the largest *O. senegalensis* is 138mm: Urban *et al.* 1988). First records for The Gambia.

Upupidae

Upupa epops Hoopoe. Eleven caught. Photographs of two show clearly the wing pattern depicted in Fry *et al.* (1988). Although hoopoes are frequently recorded, it is not always easy to separate this species from *U. senegalensis* in the field; in the hand the white subterminal bands on the crown feathers of *U. epops* species are easily seen.

U. senegalensis African Hoopoe. Six caught. A photograph of one does not show the

ends of the primaries; the pattern of the secondaries approaches that shown in Fry *et al.* (1998) for *epops*, but the crown feathers have no white sub-terminal band and the crown colour is cinnamon-rufous, whereas photographs of *epops* show more buffish.

Picidae

Campethera abingoni Golden-tailed Woodpecker. Five trapped: male, 30 Mar 1995; female, 17 Jan 1996; female, 4 Feb 1997; male 25 Jan 1998; female 28 Feb 2000. The first four of these were retrapped and the maximum present within a week was two males in Jan 1998. There were no sight records. Photographs of a male showed ear coverts grey, blotched black, and neck, breast, flanks, belly and under tail coverts buff, heavily streaked black. Photographs of a female show the distinctive large black streaks on flanks and neck. Fine-spotted Woodpecker *C. punctuligera* was common, often with two present within one week. Cardinal Woodpecker *Dendropicos fuscens* was also common, with up to three in a week. All three species were trapped in the same area (less than 1 km x 200 m) where both the common species are known to breed. [Rare.]

Dendropicos obsoletus Brown-backed Woodpecker. One trapped, Nov 1995. [Few records outside Western and Lower River Divisions.]

Alaudidae

Mirafra rufocinnamomea Flappet Lark. One trapped, Nov 1998. [Few records, status poorly known.]

Hirundinidae

Hirundo rustica Barn Swallow. Small numbers during winter, a slight increase in late Feb when a few (mostly immatures) were just finishing primary moult. [Seldom common: usually briefly frequent on passage.]

H. lucida Red-chested Swallow. Regular in small numbers with occasional larger movements which could be a local migration: *e.g.* 42 trapped on 8 Oct 1995, 53 during Feb 1996, probably representing < 10% of those present on those dates. [Abundant throughout.]

Motacillidae

Anthus cervinus Red-throated Pipit. One caught, Nov 1998: wing 87, hind claw 12 mm. [Uncommon migrant.]

Turdidae

Phoenicurus phoenicurus Redstart. Average caught wintering: 60. One ringed at Ginak on 12 Feb 96 was killed near Ross-on-Wye, U.K. on 6 May 96 (Toms & Clark 1998); one ringed near Rosyth, Scotland on 19 Jul 97 was trapped at Ginak on 23 Oct 97. [Common migrant.]

Sylviidae

Locustella naevia Grasshopper Warbler. Total of 20 trapped (Table 2). Key features were: feathers of crown, mantle, upper wing-coverts and tertials with black-brown centres, broadly fringed and tipped buff. Rump similar but feathers with narrow centres and very broad fringes. Primaries brown-black, narrowly fringed paler on outer webs; secondaries similar but more broadly fringed on outer webs. Throat with

necklace of small, dark spots. Breast rich rufous buff. Belly shading to pale buff of chin. Wing 66.5 mm. One ringed at Ginak on 25 Jan 96 was found dead on a road in NW Germany on 22 Jun 96 (Toms *et al.* 1998). [Limited information, probably under-recorded, likely to be more regular.] Our records confirm this suggestion.

Table 2. Grasshopper Warblers present by month (including retraps).

	1996	1997	1998	1999	2000	Total
January	5	3	2		1	11
February	4		1	2	1	8
March			1	2		3

Acrocephalus schoenobaenus Sedge Warbler. About three caught per year on passage (*c.* 10% of the number of Reed Warblers). [Uncommon, likely under-recorded.]
A. scirpaceus Reed Warbler. Despite Ginak not having very suitable habitat for the species, an average of 25 were caught on passage each year. One ringed in Hampshire, U.K., 19 Aug 98, was trapped at Ginak on 5 Oct 98; very few of the ringed birds caught in N Senegal were of British origin at this time of year (S. Rumsey pers. comm.). Probably a common but much overlooked wintering species in The Gambia, since in Feb 1994 large numbers were seen in reed beds near Dankunku, Central River Division (pers. obs.) and in Feb 1998 some were caught there. Difficult to separate in the field from African Reed Warbler *A. baeticatus*, for which there are few Gambian records. [Few records.]
A. arundinaceus Great Reed Warbler. Two caught in each of Oct and Dec 1995 and one in Feb 2000. [Few records.]
Hippolais polyglotta Melodious Warbler. Common on autumn passage, a few winter; average 54 per year caught. On arrival in mid-Sep they had just started moult. [Frequent winter visitor.]
H. pallida Olivaceous Warbler. Subspecies *opaca* common on passage, with fair numbers wintering; average 65 caught per year. Main arrivals from early Oct, in moult state ranging from all old primaries to 80% complete. Active moult also recorded Nov (one in interrupted moult), but most later than this were in new plumage. Subspecies *reiseri* is a partial intra-African migrant, easily distinguished in the hand by bill shape, wing length and wing formula. About 16 of this subspecies were caught each year.
Phylloscopus bonelli Western Bonelli's Warbler. Passage migrant in small numbers both autumn and spring with a few wintering. Three records of recurrence in successive years. [Uncommon regular winter visitor.]
P. sibilatrix Wood Warbler. One caught, 30 Mar 1997: a largish *Phylloscopus* warbler (wing 71 mm) with yellow-green upperparts, bright yellow throat and white breast and belly. [Few positive records.]
P. collybita Chiffchaff. Usually a small passage with relatively many wintering (Table

3). Fed in the tops of acacias from Dec when they are in leaf, where highly visible but not easily caught. In the 1995–6 season, exceptionally large numbers were trapped (125 compared with the average for other years of 22). The 1995–96 catch might seem to contradict the suggestion that they are not easily caught after December, since the catching areas did not alter, but the large catch probably resulted from exceptional numbers present that winter (cf. Blackcap *S. atricapilla*). [Frequent winter visitor.]

Table 3. Numbers of Chiffchaffs ringed during December and January.

Year	December	January	Total	Coverage	Birds per day
1995–96	25	56	81	Full, 57days	1.42
1996–97	16	5	21	Full, 50days	0.42
1997–98		18	18	no Dec, 22days	0.81
1998–99		4	4	no Dec, 14days	0.29
1999–2000		9	9	no Dec, 14days	0.64

P. trochilus Willow Warbler. Common on autumn and spring passage, on average about twice as many as Chiffchaffs. Did not winter, none being recorded from early Dec until Feb. [Frequent passage migrant throughout.]

Sylvia nisoria Barred Warbler. One caught, Feb 1999: a very large, grey *Sylvia* (wing 90 mm) with distinct yellow eye and some barring. Forehead crown, nape and mantle flecked brown-grey. Lores and ear coverts grey; no distinct supercilium. Some greyish barring on cheeks and side of throat. Underparts off-white, with some light barring across upper breast. Flanks with faint dark barring. First record for The Gambia. Three previous records in W Africa: Djoudj in Senegal (Rodwell *et al.* 1996), Nigeria and Zaire (Urban *et al.* 1997).

S. hortensis Orphean Warbler. 100 caught of which about 25% were retrapped in the same winter; clearly a fairly common visitor on the coast, largely overlooked because of its skulking habit. Rarely seen by any of our team members in the field. Average numbers caught per month were: Nov 4, Dec 6, Jan 10, Feb 5, Mar 3. [Uncommon, probably under-recorded in coastal scrub.]

S. borin Garden Warbler. Abundant autumn migrant, rarely staying long. Exceptional after early Dec and spring records extremely rare. An average of 105 caught each year. Perhaps moves south and east to Congo, then further south before passing through Congo again then going directly north to Europe, completing a circular migration pattern (see Curry-Lindahl 1981).

S. atricapilla Blackcap. Uncommon but numbers varied widely. In the 1995–6 winter 388 were caught (half on a fruiting fig tree) compared with an average of 50 in other years. Regularly winters in W Africa, with considerable variation in numbers from year to year (Cramp 1992). Two controls of British ringed immatures: one ringed in N Yorkshire 25 Sep 1994, controlled 18 Mar 1995 (Appleton *et al.* 1997); one ringed in Hertfordshire 6 Oct 1996, controlled 19 Dec 1996 (Toms & Clark 1998).

S. communis Common Whitethroat. Common passage migrant in both autumn and spring with some present all winter. About 10% of those trapped were recaptured later during the same winter. Average yearly catch was 182. The late spring passage usually included a few of the eastern subspecies *icterops*, of which many were in active moult.

S. corruca Lesser Whitethroat. Two caught, 18 Jan and 9 Feb 1996: crown brown with grey admixed. Ear coverts darker than crown. Chin and belly white. Flanks and breast-band buffish white. Tertials brown. Legs and bill dark grey. First records for The Gambia (included in Barlow & Wacher 1997). Several caught at Djoudj, N Senegal (Sauvage & Rodwell 1998).

S. cantillans Subalpine Warbler. Common passage migrant in both directions; also wintered in good numbers. About 10% of ringed birds were recaptured later the same winter. Fed high in acacias from Dec, when they are in leaf, where highly visible but not easily caught. Therefore spring catches may underestimate numbers present. Average catch over all years was 221.

S. conspicillata Spectacled Warbler. One caught, 17 Jan 1996. A few caught in N Senegal (Rodwell *et al.* 1996). [Rare winter visitor probably under-recorded.]

Muscicapidae

Muscicapa striata Spotted Flycatcher. Only two caught, on autumn migration. [Uncommon passage migrant.]

Fidecula hypoleuca Pied Flycatcher. Only recorded on autumn passage. This tends to be early and few were caught until 1998 when trapping started earlier than usual, on 22 Sep: 18 were caught by 11 Oct with a further 12 by 22 Oct. A nestling ringed in Cumbria, U.K., 29 Jun 1998, was caught Ginak 25 Sep 1998 (J.A. Clark pers. comm.). [Passage migrant, a few overwintering.]

Remizidae

Remiz parvulus Yellow Penduline Tit. Four caught, one in each year 1997–2000, so seems to be regular in small numbers. [Uncommon to locally frequent resident, not previously recorded in North Bank Division.]

Corvidae

Ptilostomus afer Black Magpie. It is remarkable that none was seen, considering that cattle are present at all times.

Ploceidae

Ploceus heuglini Heuglin's Masked Weaver. One caught, Oct 1995. [Uncommon to rare locally, in coastal areas.]

Quelea erythrops Red-headed Quelea. 16 caught, Oct–Nov 1995, including 6 immature, 6 adult (2 male , 4 female). [Uncommon wet season breeder, most records Jul–Sep.]

Q. quelea Red-billed Quelea. Singles caught Dec 1995, Apr 1997 and Feb 1998, all in eclipse plumage. No others seen. [Uncommon dry season visitor.]

Estrildidae

Lagonosticta rufopicta Bar-breasted Fire-finch. One juvenile trapped, Dec 1996, in primary moult; it was retrapped Jan–Feb 1999, by then adult, and Mar 2000. It

appears that Red-billed Firefinch *L. senegala* juveniles have a complete post-juvenile moult (Goodwin 1982 quoting M.-Y. Morel), and possibly all *Lagonosticta* do this. No other adults were seen. [Uncommon, locally frequent; no recent records from North Bank Division.]

Ortigospiza atricollis Quail-Finch. Only two caught, but regularly recorded in small numbers in suitable habitat. [Locally common resident.]

Amadina fasciata Cut-throat Weaver. Regular in small numbers. In Feb 1998 45 were caught (cf. usual annual catch *c.* 8), all close by an old Village Weaver *Ploceus cucullatus* colony. [Rare at the coast; commonly utilises old weaver nests.]

Acknowledgments

The Ringing Committee of The British Trust for Ornithology authorized the use of BTO rings for this project. Stephen Rumsey of The Wetland Trust kindly let us use their rings, made the returns to BTO and supplied computer-checked totals of all species. In The Gambia, The Department of State for The Presidency, Fisheries and Natural Resources authorized these activities, and the Department of Parks and Wildlife Management, in the person of the Director Dr A. Camara, issued permits and helped in every way possible. The management of Madiyana Safari Lodge was most obliging. The comments of the referees and editor were much appreciated, and improved the style and content considerably. Many thanks are due to all the volunteer ringers who took part entirely at their own expense, and without whom the project could not have taken place. This is Publication no. 2 of The Gambia Ringing Project.

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Short Notes — Notes Courtes

Olive-bellied Sunbird *Nectarinia chloropygia* host to Cassin's Honeybird *Prodotiscus insignis*

On 3 November 1999, at Nguti, Korup Project Area, SW Cameroon (5°20′17.6″N, 9°25′8.3″E), we heard a short, thin, persistently uttered "seep" in a garden at a river's edge. After having tried to locate the source of the sound for some 10 min., we saw a small bird with conspicuous white outer tail feathers flying across an open area. It perched at a height of 3 m in a young tree (*Trema* sp.) at the edge of the riverine vegetation. We watched it from a distance of *c.* 10 m for 12 min., when its yellowish-green upperparts, olive-grey underparts, blackish tail with white outer feathers, and thin, black bill with pale edges to the gape allowed us to identify it as a juvenile Cassin's Honeybird *Prodotiscus insignis*, a species with which both of us were familiar. It called constantly and fluttered its wings, begging for food. While we watched, a male Olive-bellied Sunbird *Nectarinia chloropygia* came and fed it five times. A female Olive-bellied Sunbird appeared twice in the same tree, but did not feed the honeybird.

Cassin's Honeybird is known from Nguti (Rodewald *et al.* 1994), while Wahlberg's Honeybird *P. regulus camerunensis,* with which it could be confused in Cameroon, is only known from montane areas (Louette 1981, Fry *et al.* 1988). Juveniles of the latter also show entirely white outer tail feathers, but are brown, not yellowish-olive above and appear slightly larger (Fry *et al.* 1988).

This is apparently the first definite record of a sunbird being host to Cassin's Honeybird. Only flycatchers, warblers and white-eyes were hitherto recorded as hosts of the species, but sunbirds are known to be parasitized by its congeners Wahlberg's Honeybird and Eastern Green-backed Honeybird *P. zambesiae* (Fry *et al.* 1988).

We thank Ron Demey for his comments on a first draft of this note.

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Received 23 December 1999

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Notes complémentaires sur l'avifaune du Niger

Notre note apporte des compléments sur l'avifaune du Niger, en ne présentant que les observations d'espèces peu communes. La notation des zones est conforme à celle de Giraudoux *et al.* (1988). Les observations ont été réalisées de juin à juillet 1998 pour celles qui concernent la Zone 2 (région de Niamey: ville en elle-même, fleuve et savane aux alentours); les observations à Boubon (village le long du fleuve Niger) ayant eu lieu le 26 juillet, et celles de Kouré le 23 juillet. Les observations de la Zone 7 (massif de l'Aïr) se sont déroulées du 1 au 8 août. La Zone 2 est une zone sud-sahélienne avec des ensembles dunaires fixés, et dont une grande partie de l'espace est occupé par des champs de mil, de sorgho et d'arachide. Le fleuve Niger et ses affluents offrent de l'eau libre en toutes saisons pour l'avifaune. La Zone 7 est constitué du massif montagneux de l'Aïr, sorte de plateau d'altitude (700–800 m) entrecoupé d'un réseau de koris (oueds) orientés vers l'ouest. Le paysage est essentiellement minéral, mais le fond des koris accueillent de nombreux oasis. Cette partie du désert saharien appartient à la zone afrotropicale (pluies en été) (Giraudoux *et al.* 1988).

Une espèce nouvelle au pays est rapportée (*Centropus leucogaster*), ainsi que deux espèces nouvelles pour l'Aïr (*Pterocles quadricinctus*, *Ploceus melanocephalus*). Les autres observations concernent des dates ou des lieux intéressants. O = Occasionnel (< 10 individus, en 1–2 observations).

Ciconia ciconia Cigogne blanche. Zone 7: vol de 60 individus vers le sud, au-dessus de Gougaram, 6 août.
Circus macrourus Busard pâle. Zone 2: un à Boubon, 26 juil (mâle très clair, fin, avec le bout des ailes noirs, chassant très bas).
Milvus migrans parasitus Milan noir. Zone 2: O, Niamey.
Falco cuvieri Hobereau africain. Zone 2: un à Niamey, 24 juil.
Tringa ochropus Chevalier cul-blanc. Zone 7: un dans la vallée de l'Ânou Mekkerene, 3 août.
Calidris ferruginea Bécasseau cocorli. Zone 2: un à Niamey, 28 juil.
Cursorius cursor Courvite isabelle. Zone 7: deux au niveau d'Assodé, 4 août. Cette espèce est surtout un hôte d'hiver dans la région (Morel & Morel, 1990). Quelques observateurs le signalent en été, mais principalement dans la zone 5, grandes plaines désertiques à l'ouest de l'Aïr, parfois inondées en été (Giraudoux *et al.* 1990). Cette observation ajoute donc une nouvelle zone de stationnement estival pour cette espèce.
Pterocles quadricinctus Ganga de Gambie. Zone 7: deux dans la vallée de l'Ânou Mekkerene, 3 août.
C. leucogaster Coucal à ventre blanc. Zone 2: un observé dans la zone boisée (cultures abandonnées, vergers et jardins avec de grands arbres) qui se situe sur la rive droite du Niger, en face de Niamey, 28 juil. Malgré le fait qu'aucun individu de cette espèce n'ait été signalé aussi loin de toute grande région boisée (Sauvage 1993), notre

détermination est d'autant plus certaine qu'elle a eu lieu juste après celle d'un *C. senegalensis*, à l'aide d'une longue vue et d'un ouvrage d'identification. Les critères utilisés ont été, en premier lieu, la poitrine et les joues noires (à la différence de *C. senegalensis* qui n'a qu'une calotte noire), puis le dessous vraiment blanc (non crème) ainsi qu'un bec plus fort et une corpulence générale plus imposante (les deux individus des deux espèces observés à la même distance). Les données à cette latitude sont très rares, puisqu'il n'est signalé que comme erratique possible au Mali et est déclaré absent du Burkina-Faso et de Gambie (Dowsett & Dowsett-Lemaire 1993). Seuls Morel & Morel (1990) le signalent à l'extrême sud du Sénégal.

T. erythrorhynchus Petit Calao à bec rouge. Zone 2: un à Kouré, 23 juil. Zone 7: un, le long de la piste Agadez–Timia, 3 août.

Emberiza tahapisi Bruant cannelle. Zone 7: O. Cette espèce très commune dans le sud irrigué du Niger n'a jamais été signalée aussi au nord dans la zone désertique (Giraudoux *et al.*, 1988). Toutes les observations se sont déroulées dans un milieu favorable (amas rocheux), et que l'été 1998 a été assez humide.

P. melanocephalus Tisserin à tête noire. Zone 7: O, dans les buissons épineux, au fond des oueds asséchés, le long de la piste Agadez–Iférouane (2–5 août).

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Reçu 11 mars 1999
Revu 23 novembre 1999

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Observations d'un nid du Coucal noire *Centropus monachus* et attitude de l'homme face à ses oisillons à Irangi, République Démocratique du Congo

Très peu de données ont été publiées sur le Coucal noire *Centropus monachus*, qui se rencontre dans les territoires congolais seulement de la forme *occidentalis* (Schouteden 1957). Prigogine (1971) signale qu'il se reproduit dans la zone d'Irangi

pendant les mois d'avril et septembre dans le marécage et qu'il construit son nid à 1.6 m du sol. Il habite les forêts claires, les buissons épais et les milieux marécageux (Guggisberg 1988, Dowsett 1990). Son nid est placé dans un buisson couvert près ou au dessus de l'eau (Williams & Arlott 1988). En outre, le matériel utilisé pour le nid, sa forme et dimensions, l'importance de la ponte et l'incubation, la croissance et le développement des oisillons ainsi que l'attitude de l'homme face à ses oisillons n'ont jusqu'à présent fait l'objet d'aucune étude. Les observations décrites dans cette note contribuent à combler ces lacunes.

Irangi (1°54′S, 28°27′E; alt. 750–1150 m) a des pluies suffisantes pendant toute l'année, entrecoupées par une baisse en jan-fév. La température annuelle moyenne est de 25°C avec de faible amplitude tant journalière qu'annuelle. C'est une localité couverte par la forêt tropicale humide comprennent de forêts primaires et secondaires. On trouve aussi des Palmiers d'huile *Elais guineensis* et les boutures de Manioc *Manihot esculenta* germées dans les champs abandonnés. La population autochtone est constituée par les Lega et les Tembo.

A Irangi, *C. monachus* est abondant dans les broussailles, les forêts claires, les jachères et dans les touffes d'herbes autour des étangs piscicoles, seul ou par couple, à mis hauteur et en bas de la végétation (Prigogine 1971, Wilson & Catsis 1992, Kizungu 1996, OBICO-Zaïre 1996). J'ai découvert un nid de l'espèce dans un champ de Manioc à l'abandon à Irangi, le 22 déc 1994 (cf. période de reproduction signalé par Prigogine 1971). Le nid était placé dans les buissons, *c.* 20 cm de la terre ferme. Les touffes d'herbe dans lesquelles le nid était construit étaient de *Panicum* sp. et *Setaria* sp. (Poaceae). Les feuilles de *Setaria* étaient enroulées dans celles de *Panicum* et avaient leurs racines enfoncées dans le sol. La partie supérieure était utilisée pour le contour du nid et l'intérieure était tapissée par les feuilles mortes de *Ficus* sp. (Moraceae). L'intérieure était de forme conique avec les dimensions suivantes (cm): profondeur 30; grand diamètre 24; petit diamètre 18. Le nid était situé à 50 cm au-dessus du sol lors de sa construction (26 déc), mais l'augmentation en poids des oisillons et la fréquentation régulière du nid par la femelle diminuaient la distance entre le nid et le sol jusqu'à 15 cm. Lors des premières observations du nid, quatre oeufs étaient déjà pondus (cf. trois signalés par Prigogine 1971, Guggisberg 1988). Trois oeufs étaient déjà éclos le 23 jan 1995, quand aucune coquille ni oeuf restant fut observé. A cette date les oisillons avaient déjà les rémiges, les rectrices et le duvet développés sur tout le corps exception faite de la partie supérieure de la tête où le plumage était représenté par les tigelles de 0.5 cm. Au nid, les oisillons avaient leurs becs en position centripète. L'odeur perceptible au nid d'animaux en putréfaction, suggérait que la nourriture des oisillons était composée de petits vertébrés (cf. Guggisberg 1988). Pour accéder au nid, la femelle se déplace lentement dans la végétation herbacée puis, comme le nid était situé bas, elle sautait et accédait aux oisillons par le trou d'entrée.

Il existe d'après la coutume Lega, une considération spéciale qu'on accorde à cet oiseau (Prigogine 1971). Les femmes ne doivent pas le manger et les hommes doivent

le considérer comme l'or. Lorsqu'il trouve un nid contenant des oisillons, cas d'ailleurs assez rare, un homme Lega attachera les tarses des oisillons par une corde à un support solide à l'extérieure du nid. Aussitôt que les oisillons seront prêts à voler, leur mère cherchera à couper la corde avec son bec. Les petits s'envolent avec la mère et la corde sera récupérée par l'homme. Alors, pour toute affaire judiciaire, il se munira de cette corde afin d'être rapidement libéré de tout procès et d'être acquitté même s'il est coupable. J'ai vu ces pratiques quand, le 25 jan, j'ai repassé pour la visite. Malheureusement, la femelle avait déjà déplacé ses oisillons. Le pisteur Basubi était très déçu car la corde n'était pas encore attachée sur les tarses des oisillons.

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Reçu 1 juillet 1999
Revu 10 mai 2000

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Breeding of Swallow-tailed Kite *Chelictinia riocourii* in Senegal

On 20 Jan 2000, Effoléming Manga and Valentin Mansaly of Parcs Nationaux du Sénégal found a colony of five nests of Swallow-tailed Kite *Chelictinia riocourii* in a small group of low trees in an open area *c.* 1 km from the fishing village of Bassine,

on an islet in the Saloum Delta, Région de Fatick, N Senegal (13°56′N, 16°35′W). Also present were one nest of Black-shouldered Kite *Elanus caeruleus* and one of African Scops Owl *Otus senegalensis*. All these nests had young.

They and I visited the site on 12 February, by which time there was just one nest of Swallow-tailed Kite with an adult brooding large young, and one Black-shouldered Kite brooding. The Swallow-tailed Kite left the nest as we approached, but soon returned and brooded throughout our period of observation, 30–45 min. The Scops had fledged, and an adult and one young were roosting nearby. The nests were about 5 m from the ground, in trees not more than 7 m high; the trees spread in a narrow belt about 100 m long. Five Swallow-tailed and two Black-shouldered Kites were flying around close by, all adults.

There is one previous Swallow-tailed Kite breeding record for Sénégal, at Patakour, Région de Kaffrine, in Feb 1992 (Savage & Rodwell 1998).

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Received 6 April 2000

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First records of Tufted Duck *Aythya fuligula* in Cameroon

On 22 May 1999 at 17h00, we observed two diving ducks on Lake Petponoun near Nkouden, Western Province of Cameroon (5°37′70′′N, 10°38′22′′E). They were easily identified as male Tufted Ducks *Aythya fuligula*, by their small size with short neck, yellow eyes and bluish grey bills, with rounded heads and loose crests. The birds were black with white side panels and kept jump-diving and bobbing to the surface. We spent close to an hour watching them. They shared the pond with Pygmy Goose *Nettapus auritus*, Moorhen *Gallinula chloropus* and Lesser Jacana *Microparra capensis*. When we visited the area again, one month later, the Tufted Ducks were not seen.

Tufted Duck is a Palaearctic migrant to N, NE and W Africa, south to the equator (Brown *et al.* 1997, Moreau 1972). There are several records from Nigeria (Elgood *et al.* 1994) and Moreau (1972) recorded 60 individuals on Lake Chad in February 1963. This is the first published record for Cameroon and the species is not mentioned by Louette (1981). However, a female has also been observed at the lake of Ngaoundaba Ranch (7°8′N, 13°41′E), Adamaoua Province, 2–4 Dec 1995 (C.J.R. Bowden pers. comm.).

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Received 12 May 2000

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Status of the Black Stork *Ciconia nigra* in Ivory Coast

The Black Stork *Ciconia nigra* breeds in the Palaearctic from the Iberian peninsula to SE China and the Sakhalin peninsula, to about 60°N (Hoyo *et al.* 1992); a smaller breeding population is found in southern Africa (Brown 1982). The Palaearctic population migrates to Africa annually where it winters mainly in E and NE Africa but scarcely south of the equator or in W Africa (Brown 1982).

Thiollay (1985) did not record the species for Ivory Coast. The first records for the country were made from a helicopter flying along the Comoé River in an area where it forms the border between Burkina Faso and Ivory Coast: three groups, of four, one and three Black Storks, were recorded on 8 Feb 1989 (Walsh 1991). The coordinates of the observations reveal that one location was in Burkina Faso (9°41′N, 4°51′W), one exactly on the border between Burkina Faso and Ivory Coast (9°5′N, 4°48′W), and one in Ivory Coast (9°51′N, 4°50′W). Consequently, Black Stork was listed as a vagrant for the country by Dowsett & Forbes-Watson (1993), who also report it in W Africa as a vagrant from Senegal, Gambia, Ghana, Togo and Benin, and as a Palaearctic migrant from Nigeria.

The next record from Ivory Coast and the first for Comoé National Park was a Stork that had been equipped with a satellite transmitter in Jul 1995 in the Czech Republic (Brdy Highlands, Central Bohemia). After wintering in Senegal for several months the bird flew south-east and spent some days in the north-east of Comoé NP in Feb 1996 (9°20′N, 3°54′W), before returning to Europe. A third record for the

country was also made in Comoé National Park in Dec 1997, when one individual was observed flying with Woolly-necked Storks (Demey 1998).

These observations, especially that of several groups of Storks along the Comoé River (Walsh 1991) might indicate that the Black Stork is a rare Palaearctic migrant in Ivory Coast rather than a vagrant. The same might be true of Senegal, where recent wintering of Black Storks in the country was proved for several individuals equipped with satellite transmitters (Bobek *et al.* 1999).

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Received 7 April 2000

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Reviews — Revues

Rails. A guide to the rails, crakes, gallinules and coots of the world. By B. Taylor & B. van Perlo, 1998. 600 pp. incl. 43 col. plates, many maps and line drawings. Pica Press, Mountfield. ISBN 1-873403-59-3, hardback, £35.

This is a true monograph in Pica Press style, with exhaustive treatment of all aspects of the biology of each species, over 1800 references and much unpublished information included. At the same time it is a good identification guide and source of information for conservation planning, and is embellished with thoughtful touches, such as every species listed individually in the Contents, with text and plate numbers side by side.

The author admits that much is repeated from his accounts in the Handbook to the Birds of the World (vol. 3, J. del Hoyo *et al.* 1996, Lynx, Barcelona) and, in fact, the introductory sections are pretty much word-for-word identical. However, the Handbook species accounts have less complete descriptions, voice, moult and behaviour sections, and the Handbook does not treat surely or probably extinct species. The Handbook plates are, to my eye, better than those in the present work (van Perlo's distinctive style often results in odd shapes), but include fewer juveniles.

That said, the introductory sections of the present book, on phylogeny, habitat, food, behaviour, breeding, and especially flightlessness, voice, movements, conservation and extinction are fascinating. Rail voices are famously varied and striking, including "screams, squeals, trills, whistles, whines, hoots, moans, booms, rattles, clicking and ticking notes, snoring noises, humming and buzzing sounds, trumpets, roars, grunts, barks, frog-like croaks and snake-like hisses"; the *Aramides* wood-rails perhaps take the prize for extremes, with "crazed-sounding rollicking, popping and clicking notes" and "congregating ... to set up a deafening chorus of screams, shrieks and wheezes".

Some 10% of rail species have gone extinct since 1600, all of them island species and most flightless. One of the most absorbing features of the book is the inclusion of all such species, most of them given full treatment. If one includes prehistoric anthropogenic extinctions, many islands have lost up to 80% of their land birds, including 1000–3000 rail species in Oceania alone. Human-caused loss of bird life may amount to 20% of the global avifauna, which, with the thousands of plant and other animal species lost, vividly illustrates the current biological catastrophe caused by man.

The author's main interest is the African flufftails *Sarothrura*, and much of the recent information on them derives from his own studies. His love of the family shines through, however, in the treatment of all species, which is uniformly excellent. The book is a masterpiece.

Alan Tye

Owls. A guide to the owls of the world. By C. König, F. Weick and J.-H. Becking, 1999. 462 pp., 64 colour plates. Pica Press, Mountfield. ISBN 1-873403-74-7. Hardback, £35.

This substantial work from Pica Press follows a similar format to its other recent volumes (see above). An introduction to owl biology is followed by a guest chapter by M. Wink and P. Heidrich on molecular evolution and systematics. The bulk of the book is devoted to species accounts and colour plates.

Some 212 species of owls are described. This compares with 205 in the recently published *Handbook of the Birds of the World* (HBW) vol. 5 (J. del Hoyo *et al.* 1999, Lynx, Barcelona) and 151 species in Boyer & Hume's 1991 *Owls of the World* (Dragon's World, Surrey). From where have all these new species appeared? Many are scops owls *Scops* or screech owls *Otus*. Some are newly discovered but others represent the elevation of former subspecies to species level. The authors state that they have used the biological species concept, with new splits based on new knowledge of vocalisations and phylogenetic studies based on mitochondrial DNA.

The 64 colour plates are an important feature of the book, depicting all species, distinct subspecies, colour morphs and, for some species, juvenile plumage. Illustrations of owls in flight are also given for some species. This results in about twice as many illustrations as on the 20 larger plates in HBW. The latter however wins out in its much greater coverage of natural history and stunning colour photographs in its introductory sections. The plates are of typical field guide style and although most are excellent they are not so artistically satisfying as those of Boyer. One discrepancy I noticed was that Vermiculated Fishing Owl *Scotopelia bouvieri* is correctly illustrated with brown eyes but the facing text describes these as yellow.

Each species account presents information subdivided under the headings identifi-cation, vocalisations, distribution, movements, habitat, description, measurements and weight, geographical variation, habits, food, breeding, status and conservation, remarks and references and includes a distribution map. Some corrections to these maps are included as an errata slip but, as in *The Birds of Africa* vol. 3 (Fry *et al.* 1988, Academic Press, London) and HBW, Nigeria is omitted from the range of Vermiculated Fishing Owl despite four published records (J.H. Elgood 1982, *The Birds of Nigeria*, BOU, London). Recent reports (A. Turk, *Bull. Afr. Bird Club* in press) suggest that a healthy population of the species remains near Agenbode, Nigeria.

The authors place the Itombwe (CongoBay) Owl in the genus *Tyto*, considering this species to be more similar to other *Tyto* than to *Phodilus*. The taxonomic treatment for other African owls found here parallels that in HBW and differs from *The Birds of Africa*, in that specific status is given to African Scops Owl *Otus senegalensis*, Pharaoh Eagle Owl *Bubo ascalaphus*, Vermiculated Eagle Owl *B. cinerascens*, Red-chested Owlet *Glaucidium castaneum* and Abyssinian Long-eared Owl *Asio abyssinicus*. White-faced Scops Owls are placed in *Ptilopsis* with *leucotis*

and *granti* treated as separate species on the grounds of vocal differences and DNA evidence. These taxa are morphologically very similar to each other and it is disappointing that the basis for this decision is not fully presented. However this and similar, sometimes controversial, taxonomic decisions should prompt further research on species and species boundaries in owls.

There are frequent references in the "remarks" sections of the species accounts to species differences being deduced from differences in vocalisations yet, *contra* HBW, the Usambara (Nduk) Eagle Owl *Bubo poensis vosseleri* which is larger, darker and elsewhere noted to differ vocally from other populations, is cautiously not given specific status. I look forward to the accompanying CD of owl vocalisations, which is to be published separately, but regret the lack of sonograms that in many instances would have greatly enhanced the systematic text.

The book is good value for £35, especially so because of the wealth of colour illustrations. Although those with a general interest in owls may already have been catered for by HBW, this volume will prove an essential additional reference for many owl enthusiasts.

Roger Wilkinson

Instructions aux Auteurs

Malimbus publie des Articles, des Notes Courtes, des Revues de Livres, des Informations, des Nouvelles & Lettres et des illustrations traitant de l'ornithologie ouest-africaine. Les **Articles** et les **Notes Courtes** doivent être des apports originaux; ceux déjà publiés ailleurs, en partie ou en totalité, seront normalement refusés. Les Notes Courtes sont des articles de moins de 1500 mots (références comprises) ou de trois pages imprimées. Autant que possible, les manuscrits auront été auparavant soumis au moins à un ornithologue ou biologiste pour un examen minutieux. Les manuscrits seront envoyés pour critique à au moins un lecteur compétent. Les textes des **Nouvelles & Lettres** ne devraient dépasser 1000 mots.

Les **textes** sont acceptés en anglais et en français; la Rédaction pourra aider les auteurs dont la langue maternelle n'est pas l'une de celles-ci. Les textes soumis seront tapés en deux exemplaires, d'un seul côté de la page, avec double interligne et larges marges. Les auteurs ne doivent pas envoyer une disquette en même temps que l'article qu'ils soumettent, mais sont priés d'indiquer s'ils peuvent adresser une disquette ou une copie e-mail au cas où leur article serait accepté. Les disquettes seront retournées aux auteurs. Consultez l'Éditeur pour tout détail supplémentaire, p. ex. les logiciels compatibles.

Les **conventions** concernant les tableaux, les chiffres, le système métrique, les références, *etc.* peuvent être trouvées dans ce numéro et doivent être soigneusement suivies. Notez en particulier que les dates s'abrègeront comme 2 fév 1990 mais dans un texte pourront s'écrire en entier; que les heures s'écriront comme 6h45, 17h00; que les coordonnées s'écriront comme 7°46′N, 16°4′W; que les nombres jusqu'à dix s'écriront en entier, excepté devant une unité de mesure (p. ex. 6 m), que les nombres à partir de 11 s'écriront en chiffres sauf au début d'une phrase. Toute **référence** citée dans l'article, et aucune autre, doit figurer dans la bibliographie.

Les articles d'avifaune doivent comprendre une carte ou une liste des localités citées. Ils devraient donner quelques détails sur le climat, la topographie, la végétation et l'environnement (y compris les événements inhabituels) avant ou durant l'étude (p. ex. pluies tardives, *etc.*). Les **listes d'espèces** ne devraient contenir que des données importantes: les listes complètes ne sont justifiées que pour les régions encore non étudiées ou délaissées pendant longtemps. Autrement, ne citer que les espèces sur lesquelles l'étude fournit de nouveaux faits sur la répartition, la période de séjour, la reproduction, *etc.* Pour chaque espèce, indiquer le statut migratoire, la période de séjour (telle qu'elle ressort de l'étude), l'extension de l'aire, une estimation d'abondance (*Malimbus* 17: 38) et les données datées sur la reproduction. Eventuellement, replacez les faits dans le contexte en les comparant brièvement avec une liste régionale de référence. Les longues listes d'espèces devraient être sous forme de tableaux (p. ex. *Malimbus* 12: 39–51, 1: 22–28, ou 1: 49–54) ou sous forme de texte des derniers numéros (p. ex. *Malimbus* 12: 19–24, 12: 61–86, 13: 49–66, 16: 10–29). La **séquence taxonomique** et les **noms scientifiques** (et de préférence aussi les **noms vernaculaires**) devraient suivre Dowsett & Forbes-Watson (1993, *Checklist of Birds of the Afrotropical and Malagasy Regions*, Tauraco Press, Liège) ou **The Birds of Africa** (Brown *et al.* 1982, Urban *et al.*1986, 1997, Fry *et al.* 1988, Keith *et al.* 1992, Academic Press, London), à moins de donner les raisons de s'écarter de ces auteurs. Un **guide plus complet aux auteurs** d'articles sur l'avifaune, comprenant une notation d'abondance des espèces la plus conseillée, est publié dans *Malimbus* 17: 35–39. On peut en obtenir une copie de la Rédaction, qui se fera aussi un plaisir d'offrir ses conseils sur la présentation de ce genre d'études.

Les **figures** doivent être préparées pour une reproduction directe, permettant une réduction de 20–50%; on se servira d'encre de chine sur papier blanc de bonne qualité ou calque épais et de caractères Letraset (ou équivalent) selon le cas. Les diagrammes obtenus par programmes informatisés autres que logiciels graphiques et sur imprimantes autres que laser sont rarement de qualité acceptable. Pour le dessin des Figures, tenir compte du format de *Malimbus*.

Tous les Articles (mais non les Notes Courtes) comporteront un **Résumé**, n'excédant pas 5% de la longeur totale. Le Résumé mentionnera brièvement les principaux résultats et conclusions de l'Article et ne sera pas un simple compte rendu du travail. Les résumés seront publiés à la fois en anglais et en français et seront traduits au mieux par la Rédaction.

Dix **tirés-à-part** des Articles (mais non des Notes courtes) seront envoyés gratis à l'auteur ou à l'auteur principal. Les tirés-à-part ne seront ni agrafés, ni reliés ou recouverts; ce sont de simples extraits de la revue.

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