



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



**Join the WAOS and support
the future availability of free
pdfs on this website.**

<http://malimbus.free.fr/member.htm>

If this link does not work, please copy it to your browser and try again.
If you want to print this pdf, we suggest you begin on the next page (2) to conserve paper.

**Devenez membre de la
SOOA et soutenez la
disponibilité future des pdfs
gratuits sur ce site.**

<http://malimbus.free.fr/adhesion.htm>

Si ce lien ne fonctionne pas, veuillez le copier pour votre navigateur et réessayer.
Si vous souhaitez imprimer ce pdf, nous vous suggérons de commencer par la page suivante
(2) pour économiser du papier.

The birds of the Parc National du Haut Niger, Guinea

by Gerhard Nikolaus

Feldweg 87, 27474 Cuxhaven, Germany

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 grande 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 ($10^{\circ}17'N$, $10^{\circ}28'W$), at Somoria ($10^{\circ}30'N$, $10^{\circ}28'W$), Serekoroba ($10^{\circ}25'N$, $10^{\circ}7'W$) and Kouroussa ($10^{\circ}41'N$, $9^{\circ}54'W$). 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 bowel 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 Finch. 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 Tauraco, 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 bowel 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 bowel 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*.

References

- DEMEY, R. 1995. Notes on the birds of the coastal and Kindia areas, Guinea. *Malimbus* 17: 85–99.
- DOWSETT, R.J. & DOWSETT-LEMAIRE, F. (1993) *A Contribution to the Distribution and Taxonomy of Afrotropical and Malagasy Birds*. Res. Rep. 5, Tauraco Press, Liège.
- HÜTTMANN, F. (1996) A primary report on the birds of Parc National du Haut Niger / Guinea (West Africa) with special consideration to the Palaeartic species and methodes of their research. Unpubl. rep., Direction Nationale des Eaux et Forêts, Conakry.
- MOREL, G.J. & MOREL, M.-Y. (1988) Liste des oiseaux de Guinée. *Malimbus* 10: 143–176.
- NIKOLAUS, G. (2000 in press) Eccentric primary moult in Chiffchaffs *Phylloscopus collybita*. *Ringing Migration*.
- RICHARDS, D.K., 1982, The birds of Conakry and Kakulima, Democratic Republic of Guinea. *Malimbus* 4: 93–103.
- WALSH, J.F. (1985) Records of birds seen in north-eastern Guinea in 1984–1985. *Malimbus* 9: 105–122.

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.

$W \equiv$ Primary wood and birds

卷之三

Dunes: species preferring low business, woodland edges or secondary woodland.

ANSWER: $\frac{1}{2} \pi r^2 h$ or $\pi r^2 h$

$\text{SW} \equiv \text{Swamps}$: birds depending even in the dry season on wet swampy vegetation.

RIVER-EDGE = species found along the bigger rivers in the riverine vegetation.

B3 iv = Birds living on the large open rivers Niger and Maflou

$$Z = V_{\text{cav}} = \mathcal{C}$$

(continued)
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-in 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

The study covered only late April 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	X(Sep)	R	C	X XXX	XXX	XXX	XXX X
	<i>N. leuconotus</i> White-breasted Night Heron				X	XX										
	<i>Bubulcus ibis</i> Cattle Egret			X	XX	X										
	<i>Butorides striatus</i> Green-backed Heron			X		X										
	<i>Egretta garzetta</i> Little Egret			XX	X	XX										
	<i>E. intermedia</i> Yellow-billed Egret			XX	X	X										
	<i>E. alba</i> Great White Egret			XX	X	X										
	<i>Ardea purpurea</i> Purple Heron			XX	X	X										
	<i>A. cinerea</i> Grey Heron			XX	X	X										
	<i>A. melanoptera</i> Black-headed Heron			XX	X	X										
	<i>A. goliath</i> Goliath Heron			X	XXX	X										
	Scopidae															
	<i>Scopus umbretta</i> Hamerkop			X	XXX	X										
	Ciconiidae															
	<i>Mycteria ibis</i> Yellow-billed Stork															
	<i>*Ciconia nigra</i> Black Stork			XX		X										
	Threskiornithidae															
	<i>Bostrychia hagedash</i> Hadada			X		XX										
	Anatidae															
	<i>Dendrocygna viduata</i> White-faced Tree Duck					XX	XX	X(Sep)			R					
	<i>Plectropterus gambensis</i> Knob-billed Duck					XX	X	X			R					
	<i>Pteronetta hartlaubii</i> Hartlaub's Duck						XX									
	Accipitridae															
	<i>Elanus caeruleus</i> Black-shouldered Kite			X	XX	X				X(Sep)		R				
	<i>Milvus migrans tenebrosus</i> Yellow-billed Kite			X	XXX	X		X	X		C					
	<i>Haliaeetus vocifer</i> African Fish Eagle			XX		XX		X			C/B					
	<i>Gypohierax angolensis</i> Palm-nut Vulture			XX				X			F/B					

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

		Habitat					Abund.	Month							
		For	W	Bu	Gr	Sw	RE	Riv	K	Nov	Dec	Jan	Feb	Mar	Apr
Haematopodidae															
	<i>Himantopus himantopus</i>	Black-winged Stilt		XXX	X				R						
Burhinidae				X	X	XX		X	C	X XXX	XXX	XXX	XXX	X	
	<i>Burhinus senegalensis</i>	Senegal Thick-knee							R	X					
	<i>B. capensis</i>	Spotted Thick-knee													
Glareolidae															
	<i>Pluvianus aegyptius</i>	Egyptian Plover		X	XX	X	XX	X	C	X XXX	XXX	XXX	XXX	X	
	<i>Rhinoptilus chalcopterus</i>	Bronze-winged Courser		X	X	X	X	X	F						
	<i>Cursorius temminckii</i>	Temminck's Courser			X		XX	X	R						
	<i>Glareola nuchalis</i>	Rock Pratincole							F						
Charadriidae															
	<i>Charadrius forbesi</i>	Forbes's Plover		XX	X			X	F	X XXX	XXX	XXX	XXX		
	<i>Vanellus senegalensis</i>	Senegal Wattled Plover		XXX	XX	X		C	X XXX	XXX	XXX	XXX	X		
	<i>V. albiceps</i>	White-crowned Plover			X	XX	X	C	X XXX	XXX	XXX	XXX	X		
Scolopacidae															
	<i>Gallinago gallinago</i>	Snipe		XX	X				R						
	<i>Tringa stagnatilis</i>	Marsh Sandpiper		XX	X	X			R	XXX	XXX				
	<i>T. nebularia</i>	Greenshank			X	XX			F	XXX	XXX	XXX			
	<i>T. ochropus</i>	Green Sandpiper				XX	X	X	C	XXX	XXX	XXX			
	<i>T. glareola</i>	Wood Sandpiper				XX	X	X	F	XXX					
	<i>Actitis hypoleucos</i>	Common Sandpiper				X	XX	X	C	X XXX	XXX	XXX	XXX		
Laridae															
	<i>Rynchops flavirostris</i>	African Skimmer						X	X	F					
Columbidae															
	<i>Streptopelia senegalensis</i>	Laughing Dove		XX	X			X	C	x	xxx	xxx	xxx	X	
	<i>S. vinacea</i>	Vinaceous Dove		XXX	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				
<i>S. semitorquata</i> Red-eyed Dove	XX	X						X	C/B	X XXX	XXX	XXX	XXX	XXX	X			
<i>Turtur</i> after Blue-spotted Wood Dove	X	XX						X	C/B	X XXX	XXX	XXX	XXX	XXX	X			
<i>T. tymanistris</i> Tambourine Dove	XX	X							F/B	X XXX	XXX	XXX	XXX	XXX	X			
<i>Oena capensis</i> Namaqua Dove	X							X	F									
<i>Terenon australis</i> Green Pigeon	XX	X						X	C	X XXX	XXX	XXX	XXX	XXX	X			
Psittacidae																		
<i>Poicephalus senegalus</i> Senegal Parrot	X								R						X			
<i>Agapornis pullarius</i> Red-headed Lovebird	X								R						X			
<i>Psittacula krameri</i> Rose-ringed Parakeet	X								R						X			
Musophagidae																		
<i>Tauraco persa</i> Guinea Tauraco	XX	X							F	X XXX	XXX	XXX	XXX	XXX	X			
<i>Musophaga violacea</i> Violet Tauraco	X							X	C	X XXX	XXX	XXX	XXX	XXX	X			
<i>Crinifer piscator</i> Western Grey Plantain-eater	XX	X						X	C	X XXX	XXX	XXX	XXX	XXX	X			
Cuculidae																		
<i>Clamator glandarius</i> Great Spotted Cuckoo	X	XX						X	R						X			
<i>C. jacobiinus</i> Black and White Cuckoo	X	XX						X	F						X			
<i>C. levantinii</i> Striped Crested Cuckoo	XX	X							R						X			
<i>Pachycoccyx audeberti</i> Thick-billed Cuckoo	X	XX							R						X			
<i>Cuculus solitarius</i> Red-chested Cuckoo	XX	X							F						X			
* <i>C. canorus</i> Cuckoo	X	XX							F									
<i>C. gularis</i> African Cuckoo	X	XX						X	C									
<i>Chrysococcyx cupreus</i> Emerald Cuckoo	XX	X							R									
<i>C. klaas</i> Klaas's Cuckoo	X	XX							R						X			
<i>Centropus grillii</i> Black Coucal	X	XX	X					XX	R						X			
<i>C. senegalensis</i> Senegal Coucal	X	XX	X					X	C	X XXX	XXX	XXX	XXX	XXX	X			

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

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

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

	Habitat						Abund.						Month			
	For	W	Bu	Gr	Sw	RE	Riv	K	Nov	Dec	Jan	Feb	Mar	Apr		
<i>leucopterus edolioides</i> Western Black Flycatcher	XXX	X						C	X XXX	XXX	XXX	XXX	XXX	X		
<i>cinerascens</i> White-browed Forest Flycatcher			X					F	X XXX							
<i>tricolor</i> Pied Flycatcher	XXX	X						C	X XXX	XXX	XXX	XXX	XXX	X		
<i>hypoleuca</i> Gambaga Flycatcher	XXX	X						R	X							
<i>Muscicapa gambogae</i> Gambaga Flycatcher								F	XXX	XXX						
<i>M. cassini</i> Cassin's Flycatcher			X					F	XXX	XXX						
<i>plumbeus</i> Lead-coloured Flycatcher	XXX	X						F	XXX	XXX						
<i>senegalensis</i> Senegal Bat	XX	X						C	X XXX	XXX	XXX	XXX	XXX	X		
<i>platyrhynchos</i> Wattle-eye	X	XX	X					C	X XXX	XXX	XXX	XXX	XXX	X		
<i>longicaudata</i> Blue Flycatcher	X	XX						C	X XXX	XXX	XXX	XXX	XXX	X		
<i>rufiventris</i> Red-bellied Paradise Flycatcher	X	XX						C	X XXX	XXX	XXX	XXX	XXX	X		
imantidae																
<i>puyveli</i> Puel's Illadopsis			X					F								
<i>illadopsis puebli</i> Brown Babbler			XX	X				F	X XXX	XXX	XXX	XXX	XXX	X		
<i>urolicola plebejus</i> Blackcap Babbler			XX	X				C	X XXX	XXX	XXX	XXX	XXX	X		
ariidae																
<i>leucomelas</i> White-winged Black Tit								C	X XXX	XXX	XXX	XXX	XXX	X		
alciporhithidae																
<i>spilonotus</i> Spotted Creeper									F							
iectocariniidae																
<i>fraseri</i> Fraser's Sunbird			X						R							
<i>longuemarei</i> Brown Sunbird				X					F							
<i>l. gabonicus</i> Violet-backed Sunbird					X					XXX					X	
<i>platurus</i> Pygmy Sunbird						X					R				X	
<i>leucotis</i> Olive Sunbird							X				F				XXX	
<i>verticalis</i> Green-headed Sunbird							X				F				XXX	
<i>senecaleensis</i> Scarlet-chested Sunbird							XXX	X			F				XXX	

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

	Habitat					Abund.					Month				
	For	W	Bu	Gr	Sw	RE	Riv	K	Nov	Dec	Jan	Feb	Mar	Apr	
Sturnidae															
<i>Lamprotornis purpureus</i> Purple Glossy Starling	XX	XX			X			F	XXX	XXX					
<i>L. chalcurus</i> Bronze-tailed Glossy Starling	XX	XX			X			R							XXX
<i>L. chloropterus</i> Lesser Blue-eared Glossy Starling	X	XX						C	XXX	XXX	XXX	XXX			
<i>L. candatus</i> Northern Long-tailed Glossy Starling	X	XX						F							
<i>Cinnyricinclus leucogaster</i> Violet-back Starling	XX	X						C	XXX	XXX	XXX	XXX			
<i>Buphagus africanus</i> Yellow-billed Oxpecker	X	XX	X					R							X
Ploceidae															
<i>Passer griseus</i> Grey-headed Sparrow		X	XX					F	X	XXX	XXX				
<i>Petronia dentata</i> Bush Petronia		XX	X					C/B	X	XXX	XXX	XXX			
* <i>Platospasser superciliosus</i> Chestnut-crowned Sparrow-Weaver	XX	X						F		XXX	XXX				
<i>P. nigricollis brachypterus</i> Black-necked Weaver	XX	X		X				C	X	XXX	XXX	XXX			
<i>P. nigerrimus</i> Vieillot's Black Weaver	X	X		XX				F		X	XXX	XXX			
<i>P. cucullatus</i> Village Weaver	XX	X		X				C/B	X	XXX	XXX	XXX			
<i>P. superciliosus</i> Compact Weaver	X	XX		X				R		XXX	XXX				
<i>Anaplectes rubriceps</i> Red-headed Weaver	X				X			F	X	XXX	XXX				XXX
<i>Quelea erythrops</i> Red-headed Quelea	X	XX	X	XX				F		XXX					
<i>Euplectes hordeaceus</i> Fire-crowned Bishop	X	XX	X			X		C	X	XXX	XXX	XXX			
<i>E. franciscanus</i> Red Bishop			X				X(Sep)	F							
<i>E. macrourus</i> Yellow-maned Whydah	XX	X			X			C	X	XXX	XXX	XXX			
<i>E. ardens</i> Red-collared Whydah			X					F							XXX
Estrildidae															
<i>Nesocharaxis capistrata</i> White-cheeked Oliveback	X				X				F	X	XXX	XXX	XXX		
<i>Pytilia hypogrammica</i> Yellow-winged Pytilia			XX	X					F		XXX				
<i>P. phoenicoptera</i> Red-winged Pytilia			XX	X					C	X	XXX	XXX	XXX		
<i>Piranga sanguinea</i> 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				
<i>Spermophilus haematura</i> Bluebill	X			X				F	X XXX									
<i>Eusichtospiza dybowskii</i> Dybowski's Twinspot		XX	XX	X				F	X XXX									
<i>Lagonosticta rufopicta</i> Bar-breasted Firefinch	X	XX	X					F	X XXX									
<i>L. senegala</i> Red-billed Firefinch	XX	X						X	F	X XXX								
<i>L. rara</i> Black-bellied Firefinch	X	XX	X					X	C	X XXX								
<i>L. rubricata</i> Blue-billed Firefinch		X	XX	X	XX			F	X XXX									
<i>Estrilda caerulescens</i> Lavender Waxbill		X	XX	X				X	C	X XXX								
<i>E. melpoda</i> Orange-cheeked Waxbill		XX	X	X				X	C	X XXX								
<i>E. astrild</i> Common Waxbill		XX	X	XX				X	F							XXX		
<i>Uraeginthus bengalus</i> Red-cheeked Cordon-bleu	X	XX	X					X	F							XXX	XXX	
<i>Amadava subflava</i> Zebra Waxbill			X	XX					F							XXX		
<i>Oriygospiza atricollis</i> Quail Finch			X	XX					F							XXX		
<i>Lonchura cucullata</i> Bronze Mannikin	X	XX	X					X	C	X XXX								
<i>Vidua chalybeata</i> Village Indigobird			X	XX					F	X XXX								
* <i>V. wilsoni</i> Pale-winged Indigobird			X	XX					F							XXX		
<i>V. macroura</i> Pin-tailed Widow			XX	X				X(Sep)	F							XXX		
<i>V. interjecta</i> Uelle Paradise Widow									F									
Fringillidae																		
<i>Serinus mozambicus</i> Yellow-fronted Canary		XX	X					X	C	X XXX								
Emberizidae																		
<i>Emberiza tahapisi</i> Cinnamon-breasted Rock Bunting			X						F							XXX		
<i>E. cabanisi</i> Cabanis's Bunting			XX	X					F							XXX	XXX	