

Birds of Dindéfello Nature Reserve, south-east Senegal

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Les oiseaux de la Réserve Naturelle de Dindéfello, sud-est du Sénégal. Nous présentons les résultats d'un inventaire ornithologique de la Réserve Naturelle de Dindéfello, une zone de 13.150 ha dans la région de Kédougou, au sud-est du Sénégal. Le travail de terrain a été effectué principalement au cours de trois visites en 2011. Au total, 220 espèces ont été recensées, 16 d'entre elles présentant une extension de l'aire connue de répartition. Six espèces de rapaces diurnes sont d'intérêt pour la conservation. La Réserve Naturelle de Dindéfello est le seul endroit connu actuellement au Sénégal pour six espèces, en raison de la présence de falaises et de forêts galeries dans les ravins—des habitats qui sont rares dans le pays. L'Amarante du Mali *Lagonosticta virata*, rarement enregistré au Sénégal, a également été observé.

Summary. We present the results of a bird survey in Dindéfello Nature Reserve, a 13,150 ha area in the Kédougou region, south-east Senegal. Field work was mainly conducted during three visits in 2011. A total of 220 species was recorded, 16 of them extending previously known ranges. Six diurnal raptors are of conservation concern. Dindéfello Nature Reserve is the only currently known location in Senegal for six species, due to the occurrence of cliffs and gallery forests in ravines—habitats that are rare in the country. Kulikoro Firefinch *Lagonosticta virata*, rarely recorded in Senegal, was also found.

The avifauna of the coastal strip of Senegal is relatively well known, as estuaries and wetlands associated with the Senegal, Gambia, Saloum and Casamance Rivers have been the subject of research and ringing campaigns in recent decades, and are regularly visited by European and African ornithologists (Zwarts *et al.* 2010). In contrast, information concerning large parts of the interior is comparatively weak and, in general, data concerning species occurrence and distribution come from occasional and usually old surveys (Coulthard 2001). In south-east Senegal, more systematic surveys were conducted in Niokolo-Koba National Park (Dupuy 1970, Morel & Morel 1990), but for the adjacent region of Kédougou in particular, the only available literature seems to be Morel (1985), apart from several records by Sauvage & Rodwell (1998) and, more recently, R. Demey (*in Bull. ABC* 17: 123; *in litt.* 2012).

Dindéfello Nature Reserve was formally established in 2010 by an agreement between the Spanish branch of The Jane Goodall Institute and the Communauté Rurale de Dindéfello. The goal was to contribute to the conservation of natural resources and the socio-economic development of the local population, via the implementation of sustainable and promotional activities. The theoretical model of management follows that proposed by IUCN for the so-called Indigenous and Community Conserved Areas, with the

local community as the basic agent, supported by external advice. Within this framework, an ornithological survey was conducted in the reserve to determine the most important species, and subsequently to promote their conservation or their use in awareness and ecotourism programmes.

Coulthard (2001), who reviewed ornithological knowledge for Senegal to identify Important Bird Areas (IBAs), stated that the region of Kédougou merited field studies, given the presence of certain habitats extremely rare in the rest of the country. Here we provide a list of bird species recorded at Dindéfello Nature Reserve during surveys in 2011, highlighting those relevant either from conservation or biogeographical perspectives.

Study area

Dindéfello Nature Reserve (12°24'N 12°18'W) covers c.13,150 ha. Its boundaries follow the border between Senegal and Guinea-Conakry to the west and south, the Gambia River to the east, and a buffer zone separating small villages, crop fields and plantations to the north (Fig. 1).

The reserve has an unusual altitudinal variation in the context of Senegal, as it includes a basal plain at a mean altitude of 150 m, and an east-west oriented massif with steep slopes and rocky cliffs, topped by a laterite plateau at 400–450 m. This massif forms the north-westernmost extension of the Fouta Djallon highlands.

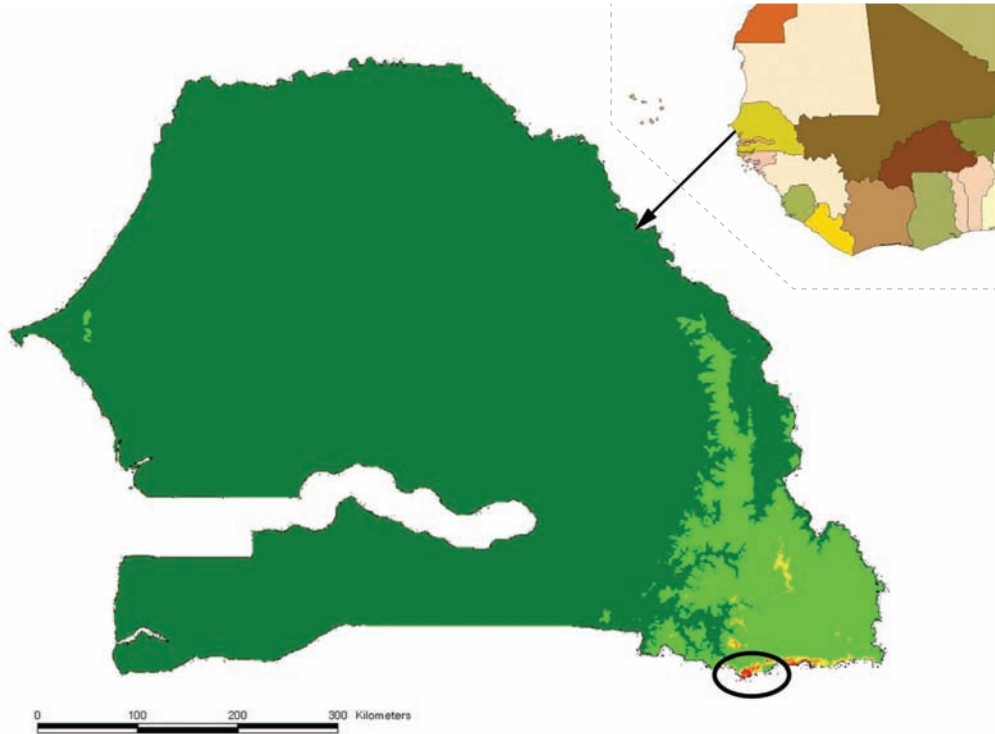


Figure 1. Location of Dindéfello Nature Reserve within West Africa and Senegal, showing the altitudinal range (0–500 m) for the country.

Situation géographique de la Réserve Naturelle de Dindéfello en Afrique de l'Ouest et au Sénégal, montrant la variation d'altitude (0–500 m) pour le pays.

Biogeographically, Dindéfello Nature Reserve straddles two ecoregions: the 'forest mosaic-Guinean savannah' and 'Sudan savannah' (Burgess *et al.* 2004, Oates 2011). The former has a four-month dry season and consists of a mosaic of forest patches, crops and pasture woodlands, as a result of historic processes of cutting and burning of the original dry forest by the human population. The forest patches are poorer in plant species than the coastal rainforest. As for Sudan savannah, the longer dry season drives a reduction of the forest canopy and the size of trees, and a greater herbaceous cover.

Local topographic factors influence the structure and composition of the habitats, approaching in some cases the forest-mosaic type (semi-deciduous forests, gallery forests in ravines and drainages) and the more seasonal Sudan savannah in others (grassland with woodland patches interspersed in *boue* or lateritic soils; see Figs. 2–4). The semi-deciduous forest covering



Figure 2. Savannah with patches of grass and shrubs, semi-deciduous forest on the foothills and rocky cliffs, during the wet season, Dindéfello Nature Reserve, Senegal, September 2011 (J. M. Fernández-García)

Savane avec des parcelles d'herbes et d'arbustes, et de la forêt semi-décidue sur les contreforts et les escarpements rocheux, pendant la saison des pluies, Réserve Naturelle de Dindéfello, Sénégal, septembre 2011 (J. M. Fernández-García)



Figure 3. Interior view of a gallery forest, Dindéfello Nature Reserve, Senegal, April 2011 (N. Ruiz de Azua)
 Vue à l'intérieur d'une forêt galerie, Réserve Naturelle de Dindéfello, Sénégal, avril 2011 (N. Ruiz de Azua)



Figure 4. Seasonal grasslands on lateritic soils (*bawe*) and forest patches cover the plateau of Dindéfello Nature Reserve, Senegal, September 2011 (N. Ruiz de Azua)

Des prairies saisonnières sur cuirasses latéritiques (*bawe*) et des parcelles de forêt couvrent le plateau de la Réserve Naturelle de Dindéfello, Sénégal, septembre 2011 (N. Ruiz de Azua)

the mountain slopes is characterised by *Bombax costatum*, *Vitellaria paradoxa*, *Combretum glutinosum*, *Ficus* sp., *Nauclea lautifolia*, *Parkia*

biglobosa, *Piliostigma thonningii*, *Azelia africana*, *Pterocarpus erinaceus* and dense patches of bamboo *Oxytenanthera abyssinica*. Predominant tree species in the gallery forests are *Carapa procera*, *Ceiba pentandra*, *Pseudospondias microcarpa*, *Cola cordifolia* and *Borassus aethiopum*, and the liana *Saba senegalensis*. The grasslands are dominated by the genera *Sacciolepis*, *Echinochloa*, *Setaria*, *Leersia*, *Viteveria*, *Panicum* and *Acroceras*, whilst wooded patches in savannah include *Bombax costatum*, *Vitellaria paradoxa*, *Tamarindus indica*, *Dichrostachys cinerea* and *Caparis tomentosa*.

Methods

Data were primarily collected during three visits in 2011 (17–30 January, 21–30 April and 15 September–1 October), totalling 32 field days. The first two surveys were conducted in the dry season, whilst the third was at the end of the rainy season, with many passerines exhibiting conspicuous breeding plumages.

Bird species were recorded during transects and point counts, which covered every representative habitat within the reserve. Less accessible sectors, such as the eastern border, were under-visited. Field work was performed from dawn (c.06.00 hrs) until 13.00–14.00 hrs, and from 17.00 hrs until dusk. Some species were recorded opportunistically at night. Field guides used for identification were Barlow *et al.* (2002b) and Borrow & Demey (2008), while Barlow *et al.* (2002a) and <http://www.xeno-canto.org/africa> were consulted with respect to vocalisations. We did not use playback to attract inconspicuous species, nor did we apply quantitative census methods. However, encounter rates were estimated using the frequency of daily records, considering the number of visits to appropriate habitats and seasons of the year. Mist-netting was carried out during five mornings in one gallery forest patch (total length of mist-nets: 24 m). Finally, some previous photographic records compiled by Jane Goodall Institute staff at Dindéfello were taken into account.

Results

We recorded 220 species, 208 during field work in 2011, and 12 based on photographs taken in 2010 (Table 1). Recent checklists for Senegal (Borrow & Demey 2011, Lepage 2011, Dowsett *et al.* 2012) include 591–599 species, depending

on taxonomy. Thus, our survey recorded 37% of the country's known species.

Sixteen species that occur in Dindéfello were not previously mapped for south-east Senegal by Morel & Morel (1990) and Borrow & Demey (2011). For 14 additional species only single or old records were available for the region (Morel 1985, Morel & Morel 1990, Sauvage & Rodwell 1998).

Dindéfello Nature Reserve is the only currently known location in Senegal for Fox Kestrel *Falco alopex*, Narina's Trogon *Apaloderma narina*, Rock Martin *Ptyonoprogne fuligula*, Mocking Cliff Chat *Thamnolaea cinnamomeiventris*, Neumann's Starling *Onychognathus neumanni* and Dybowski's Twinspot *Euschistopiza dybowskii*. Dindéfello's unique avifauna (within a Senegalese context) is related to the presence of habitats rare in Senegal, such as cliffs and gallery forests in ravines.

Six species are of conservation concern, i.e. 25% of the globally threatened species known from Senegal (BirdLife International 2012): one is classified as Endangered (Hooded Vulture *Necrosyrtes monachus*), two as Vulnerable (Lappet-faced Vulture *Torgos tracheliotus* and Beaudouin's Snake Eagle *Circaetus beaudouini*) and three as Near Threatened (White-backed Vulture *Gyps africanus*, Bateleur *Terathopius ecaudatus* and Martial Eagle *Polemaetus bellicosus*).

Among the 33 species restricted to the Sudan-Guinea savanna biome (Coulthard 2001), 23 occur in Dindéfello. In Senegal, only Niokolo-Koba National Park, c.70 times larger, boasts a comparable number.

Senegal has no avian endemics, but the south-east, including Dindéfello, are home to Kulikoro Firefinch *Lagonosticta virata*, otherwise known only from the Upper Niger Valley in Mali and a few records from south-east Senegal (Coulthard 2001).

Finally, we found an unexpected pattern of disjunct distribution for several forest species that occur both in the south-west (Casamance region) and south-east of the country. These include Blue-spotted Wood Dove *Turtur afer*, Green Turaco *Tauraco persa*, Yellow-breasted Apalis *Apalis flavida*, Green-headed Sunbird *Cyanomitra verticalis*, Copper Sunbird *Cynniris cupreus* and Variable Sunbird *C. venustus*. Whether this pattern of separate ranges is a consequence of

ecological conditions or the result of incomplete data for inland Senegal is unknown.

Notes on selected species

Black Stork *Ciconia nigra*

Two soaring overhead on 26 January. Regular in small numbers in the extreme north-west, with few records elsewhere (Sauvage & Rodwell 1998, Walsh 2002; R. Demey *in Bull. ABC* 17: 123). However, recent data from satellite-tracked birds reveal regular migrants and wintering individuals in eastern Senegal, in the Senegal and Falémé River basins (Bobek *et al.* 2008, Chevallier *et al.* 2011).

African Cuckoo Hawk *Aviceda cuculoides*

An adult flushed and heard calling in a forest patch on 29 September. Few records for Senegal of this non-breeding visitor (Barlow *et al.* 2002b mentions only five), most in the south-west.

Red-chested Goshawk *Accipiter toussenellii* (= *A. tachiro macroscelides*)

An adult photographed in gallery forest in March 2010 (Fig. 5). Mainly restricted to the Casamance, with scattered records in the Gambia River basin,



Figure 5. Red-chested Goshawk / Autour de Toussenel *Accipiter toussenelli*, Dindéfello Nature Reserve, Senegal, September 2010 (L. Pacheco)

east to Niokolo-Koba National Park (Sauvage & Rodwell 1998, Borrow & Demey 2011).

Red-thighed Sparrowhawk *Accipiter erythropus*

One in gallery forest in April. Mainly restricted to south-west Senegal, with scattered records east to Niokolo-Koba National Park (Sauvage & Rodwell 1998, Borrow & Demey 2011).

Fox Kestrel *Falco alopex*

Present year-round and regularly observed hunting over the plateau's savannah. A pair was seen perched on a cliff on 21 September. Apart from Dindéfello, where the species was first found in 1984, in Senegal Fox Kestrel has been recorded only in Niokolo-Koba National Park (Morel 1985).

Lanner Falcon *Falco biarmicus*

A nest with three full-grown chicks found on a cliff on 26 April. Breeding in Senegal apparently still required confirmation (Barlow *et al.* 2002b, Dowsett *et al.* 2012).

Common Buttonquail *Turnix sylvaticus*

One flushed in grassland on 23 April. Knowledge of the distribution and movements of this secretive species are possibly incomplete for Senegal.

Forbes's Plover *Charadrius forbesi*

One photographed in pastureland in August 2010. In Senegal, this species is rare and has only been recorded in the south-east (Morel & Morel 1990, Borrow & Demey 2011).

African Green Pigeon *Treron calvus*

Regularly seen, occurring alongside the more abundant Bruce's Green Pigeon *T. waalia*. In Senegal mapped only for the west and the Gambia River basin in Morel & Morel (1990) and Borrow & Demey (2011).

Adamawa Turtle Dove *Streptopelia hypopyrrha*

Small flocks and pairs observed in riverine forests in April and September. The only previous records in Senegal are from Niokolo-Koba National Park (Baillon 1992, Sauvage & Rodwell 1998) and Sabodala, Kédougou region (R. Demey *in Bull. ABC* 17: 123).

Shining-blue Kingfisher *Alcedo quadrybrachys*

One observed in gallery forest in June 2010. Known from western Senegal (Casamance, Saloum), with a few records from Niokolo-Koba National Park (Sauvage & Rodwell 1998).

Little Green Bee-eater *Merops orientalis*

A small flock in September of this typical Sahelian bee-eater, which is not mapped for southernmost Senegal in Borrow & Demey (2011).

Narina's Trogon *Apaloderma narina*

The first records for Senegal were made in Dindéfello in April 2010 (Aransay *et al.* 2012). Additionally, we photographed a female in gallery forest on 30 April 2011.

Singing Bush Lark *Mirafra cantillans*

Singles observed twice in April, in grasslands or *bowe*. Relatively common in northern Senegal, but there is just one previous record from the Kédougou area (Morel & Morel 1990, Borrow & Demey 2011).

Flappet Lark *Mirafra rufocinnamomea*

One in grassland on 24 April. Morel & Morel (1990) mention only one record for the Kédougou region; its status in Senegal is unclear.

Rock Martin *Ptyonoprogne fuligula*

Regularly seen throughout the year. Its presence at Dindéfello was discovered by Morel (1985), but he could not establish the species' status. We observed nests and chicks being fed by adults in September. This is the first confirmed breeding for Senegal and still the only known locality in the country (*cf.* Borrow & Demey 2011).

Black-eared Wheatear *Oenanthe hispanica*

Several females in dry grassland on 24 April. Distinguished from Northern Wheatear *O. oenanthe* by the sandy-buff to ochre-tinged upperparts, uneven terminal tail-band with slightly more black at the sides and less in the centre, and slimmer body. There are apparently no previous records from southern Senegal: the species is not mapped for the area in Borrow & Demey (2011).

Common Rock Thrush *Monticola saxatilis*

One male in lightly wooded savannah on 21 January. Few records for Senegal, with just one

from the Kédougou area, in March 1972 (Morel 1985, Borrow & Demey 2011).

Yellow-breasted Apalis *Apalis flavida*

Seen and photographed in April and September, with 1–2 individuals joining mixed-species flocks in the canopy of gallery forest. Discovered in Senegal as recently as 2004, in Mako near Niokolo-Koba National Park, and since then just two additional records reported (B. Greiner & L. Greiner in *Bull. ABC* 12: 188; A. Geilvoet in *Bull. ABC* 14: 102).

Olive Sunbird *Cyanomitra olivacea*

One photographed in gallery forest in March 2010. In Senegal mainly restricted to the Casamance region, and previously recorded at just two sites in the south-east (Niokolo-Koba National Park and near Kédougou: Morel & Morel 1990).

Neumann's Starling *Onychognathus neumanni*

In small groups, in the wooded belt and savannah around cliffs. Dindéfello is the only known location in Senegal where the species is regularly recorded (Morel 1985, Sauvage & Rodwell 1998).

Greater Blue-eared Starling *Lamprotorornis chalybaeus*

Regularly observed in April and September. Distinguished from the commoner Lesser Blue-eared Starling *L. chloropterus* by its longer tail and larger size, which were quite apparent when both species were seen together. Morel & Morel (1990) considered this starling to be rare to scarce south of the Gambia River.

Red-billed Quelea *Quelea quelea*

Small flocks in non-breeding plumage recorded several times in April. Not mapped for the extreme south-east in Morel & Morel (1990) and Borrow & Demey (2011).

Dybowski's Twinspot *Euschistospiza dybowskii*

A female with Red-billed Firefinches *Lagonosticta senegala* on 16 April. Apparently only two previous records for Senegal, both from the extreme south-east, at Dindéfello and nearby Ségou (Morel & Morel 1990), at the north-westernmost edge of the species' range.



Figure 6. Male Kulikoro (Mali) Firefinch / Amarante du Mali *Lagonosticta virata*, Dindéfello Nature Reserve, Senegal, April 2011 (J. M. Fernández-García)

Kulikoro (Mali) Firefinch *Lagonosticta virata*

One mist-netted in shrubby secondary forest on 26 April (Fig. 6). Identified by the relatively slender bill with bluish lower and darker upper mandible tending to blackish on the tip, pinkish orbital ring and black undertail-coverts. Sexed as a male, based on its deep red underparts. Separated from the similar Blue-billed Firefinch *L. rubricata polionota* by the narrow slightly curved bill, the broad unemarginated outer primaries, and the fewer white spots on the breast-sides (Payne 2005, Borrow & Demey 2011), although the last-named feature is not always diagnostic (R. Payne in *litt.* 2012). The rocky habitat at Dindéfello is also typical of this species (Payne 2005). There are only two previous records for Senegal, in 1966 and 2009, both from the Kédougou region (Payne 1997; R. Demey in *Bull. ABC* 17: 123).

Wilson's Indigobird *Vidua wilsoni*

A pair copulating on 30 September. The male was separated from the much more frequent Village Indigobird *V. chalybeata* by its brown, pale-fringed flight feathers and pale legs, and from Quailfinch *V. nigeriae* and Barka Indigobirds *V. larvaticola* by the absence of glossy green plumage tones and the briefly heard vocalisations, mimicking the present species' host, Bar-breasted Firefinch *Lagonosticta rufopicta*. This confirms breeding in Senegal, which is not listed by Dowsett *et al.* (2012). Wilson's Indigobird is a relatively recent addition to the Senegal list (not mentioned by Morel & Morel 1990) and its known distribution comprises Niokolo-Koba National Park (Borrow & Demey 2011). Probably the species has been

overlooked in other areas due to confusion with Village Indigobird.

Species previously recorded from the study area but not found by us

Egyptian Vulture *Neophron percnopterus*

Morel (1985) provides the only reliable record of possible breeding in Senegal: a female about to lay captured at Dindéfello in March 1972. This location holds the best breeding habitat for the species in the country, but we were unable to confirm its presence. Some satellite-tracked Western Palearctic migrants winter in eastern Senegal (Meyburg *et al.* 2004, García-Ripollés *et al.* 2010).

Rock Pigeon *Columba livia*

Morel (1985) mentions that the wild race *gymnocycla* was observed 'in considerable numbers' on the cliffs in Dindéfello in 1984, but we found only feral birds (*C. l. f. domestica*).

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Appendix 1. Bird species recorded in Dindéfello Nature Reserve, south-east Senegal, in 2011. Sequence and taxonomy follow Dowsett *et al.* (2012) with a few amendments. Status in Senegal (Borrow & Demey 2011): R = Resident, M = Intra-African migrant, P = Palearctic migrant, V = Vagrant. IUCN threat status (BirdLife International 2012): EN = Endangered, VU = Vulnerable, NT = Near Threatened. Biome-confined species (Coulthard 2001): SG = Sudan-Guinea Savanna, GC = Guinea-Congo Forests. Encounter rate: C = common or fairly common (species recorded on most days in appropriate habitat and period of year), U = uncommon (irregularly recorded in appropriate habitat and not on the majority of days), R = rare (very few records of singles or pairs).

Annexe 1. Espèces d'oiseaux observées dans la Réserve Naturelle de Dindéfello, sud-est du Sénégal, en 2011. L'ordre et la taxonomie suivent Dowsett *et al.* (2012) avec quelques amendements. Statut au Sénégal (Borrow & Demey 2011) : R = Résident, M = Migrateur intra-africain, P = Migrateur paléarctique, V = Occasionnel. Statut de conservation IUCN (BirdLife International 2012) : EN = Menacé d'extinction, VU = Vulnérable, NT = Quasi menacé. Espèces inféodées à un certain biome (Coulthard 2001) : SG = Savane soudano-guinéenne, GC = Forêts guinéo-congolaises. Fréquence d'observation : C = commune ou assez commune (espèce observée quotidiennement ou sur >50% des jours dans le bon milieu et la période de l'année appropriée), U = peu commune (irrégulièrement observée < 50% des jours – dans le bon milieu), R = rare (très peu d'observations d'individus solitaires ou de couples).

		Status	IUCN	Biome	Encounter rate
PHALACROCORACIDAE					
<i>Microcarbo africanus</i>	Reed Cormorant	R			C
ARDEIDAE					
<i>Butorides striata</i>	Striated Heron	R			U
<i>Bubulcus ibis</i>	Cattle Egret	R/M			U
<i>Egretta garzetta</i>	Little Egret	R/P			U
<i>Egretta intermedia</i>	Intermediate Egret	R			U
<i>Ardea purpurea</i>	Purple Heron	R/P			U
SCOPIIDAE					
<i>Scopus umbretta</i>	Hamerkop	R			C
CICONIIDAE					
<i>Ciconia nigra</i>	Black Stork	P			R
THRESKIORNITHIDAE					
<i>Bostrychia hagedash</i>	Hadada Ibis	R			U
ACCIPITRIDAE					
<i>Aviceda cuculoides</i>	African Cuckoo Hawk	M			R
<i>Milvus aegyptius</i>	Yellow-billed Kite	M/R			U
<i>Haliaeetus vocifer</i>	African Fish Eagle	R			U
<i>Gypohierax angolensis</i>	Palm-nut Vulture	R			U
<i>Necrosyrtes monachus</i>	Hooded Vulture	R	EN		C
<i>Gyps africanus</i>	White-backed Vulture	R	NT		C
<i>Torgos tracheliotus</i>	Lappet-faced Vulture	R	VU		U
<i>Circaetus beaudouini</i>	Beaudouin's Snake Eagle	R	VU		U
<i>Circaetus cinereus</i>	Brown Snake Eagle	R			C
<i>Circaetus cinerascens</i>	Western Banded Snake Eagle	R			U
<i>Terathopius ecaudatus</i>	Bateleur	R	NT		C
<i>Polyboroides typus</i>	African Harrier Hawk	R			U
<i>Micronisus gabar</i>	Gabar Goshawk	R			C
<i>Accipiter toussenellii</i>	Red-chested Goshawk	R			R
<i>Accipiter badius</i>	Shikra	R/M			C
<i>Accipiter erythropus</i>	Red-thighed Sparrowhawk	R		GC	R
<i>Bulastur rufipennis</i>	Grasshopper Buzzard	M			U
<i>Kaupifalco monogrammicus</i>	Lizard Buzzard	R			C
<i>Buteo auguralis</i>	Red-necked Buzzard	M			U
<i>Aquila rapax</i>	Tawny Eagle	R			U
<i>Aquila spilogaster</i>	African Hawk Eagle	R			C
<i>Lophaelus occipitalis</i>	Long-crested Eagle	R			U
<i>Polemaetus bellicosus</i>	Martial Eagle	R	NT		U
FALCONIDAE					
<i>Falco alopex</i>	Fox Kestrel	V		SG	C
<i>Falco ardosiaceus</i>	Grey Kestrel	R			U
<i>Falco biarmicus</i>	Lanner Falcon	R			C
NUMIDIDAE					
<i>Numida meleagris</i>	Helmeted Guineafowl	R			R
PHASIANIDAE					
<i>Ptilopachus petrosus</i>	Stone Partridge	R			C
<i>Pternistis bicalcaratus</i>	Double-spurred Francolin	R			C
TURNICIDAE					
<i>Turnix sylvaticus</i>	Common Buttonquail	R/M			R
BURHINIDAE					
<i>Burhinus senegalensis</i>	Senegal Thick-knee	R			U
CHARADRIIDAE					
<i>Charadrius forbesi</i>	Forbes's Plover	M			R
<i>Vanellus senegallus</i>	African Wattled Lapwing	R			C

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<i>Vanellus albiceps</i>	White-crowned Lapwing	R/M			C	<i>Halcyon chelicuti</i>	R			R
<i>Vanellus spinosus</i>	Spur-winged Lapwing	R			U	<i>Ceyx pictus</i>	R/M			C
JACANIDAE						<i>Alcedo cristata</i>	R			U
<i>Actophilornis africanus</i>	African Jacana	R			U	<i>Alcedo quadribrachys</i>	R			R
SCOLOPACIDAE						<i>Megaceryle maxima</i>	R			U
<i>Actitis hypoleucos</i>	Common Sandpiper	P			U	<i>Ceryle rudis</i>	R			C
COLUMBIDAE						MEROPIDAE				
<i>Treron calvus</i>	African Green Pigeon	R			C	<i>Merops pusillus</i>	R			C
<i>Treron waalia</i>	Bruce's Green Pigeon	R			C	<i>Merops hirundineus</i>	R/M			U
<i>Turtur afer</i>	Blue-spotted Wood Dove	R			C	<i>Merops bulocki</i>	R		SG	C
<i>Turtur abyssinicus</i>	Black-billed Wood Dove	R			C	<i>Merops albicollis</i>	M			R
<i>Oena capensis</i>	Namaqua Dove	R/M			C	<i>Merops orientalis</i>	R			R
<i>Columba guinea</i>	Speckled Pigeon	R			C	<i>Merops apiaster</i>	P			C
<i>Streptopelia semitorquata</i>	Red-eyed Dove	R			C	<i>Merops nubicus</i>	M			U
<i>Streptopelia vinacea</i>	Vinaceous Dove	R			C	CORACIIDAE				
<i>Streptopelia hypopyrrha</i>	Adamawa Turtle Dove	R		SG	U	<i>Coracias naevius</i>	R/M			U
<i>Streptopelia senegalensis</i>	Laughing Dove	R			C	<i>Coracias cyanogaster</i>	R		SG	C
PSITTACIDAE						<i>Coracias abyssinicus</i>	M			U
<i>Psittacula krameri</i>	Rose-ringed Parakeet	R			C	<i>Eurystomus glaucurus</i>	R/M			U
<i>Poicephalus senegalus</i>	Senegal Parrot	R		SG	C	PHOENICULIDAE				
MUSOPHAGIDAE						<i>Phoeniculus purpureus</i>	R			C
<i>Tauraco persa</i>	Guinea Turaco	R		GC	C	<i>Rhinopomastus aterrimus</i>	R			U
<i>Musophaga violacea</i>	Violet Turaco	R		SG	C	UPUPIDAE				
<i>Crinifer piscator</i>	Western Plantain-eater	R			C	<i>Upupa epops</i>	P/R?			R
CUCULIDAE						BUCEROTIDAE				
<i>Clamator levaillantii</i>	Levaillant's Cuckoo	M			U	<i>Bucorvus abyssinicus</i>	R			R
<i>Cuculus gularis</i>	African Cuckoo	M			U	<i>Tockus kempii</i>	R			C
<i>Chrysococcyx klaas</i>	Klaas's Cuckoo	R/M			U	<i>Tockus nasutus</i>	R/M			C
<i>Centropus senegalensis</i>	Senegal Coucal	R			C	CAPITONIDAE				
STRIGIDAE						<i>Pogonilus bilineatus</i>	R			U
<i>Otus senegalensis</i>	African Scops Owl	R			U	<i>Pogonilus chrysoconus</i>	R			C
<i>Ptilopsis leucotis</i>	Northern White-faced Owl	R			C	<i>Lybius vieilloti</i>	R			U
<i>Bubo cinerascens</i>	Greyish Eagle Owl	R			U	<i>Lybius dubius</i>	R		SG	C
<i>Glaucidium perlatum</i>	Pearl-spotted Owlet	R			C	INDICATORIDAE				
CAPRIMULGIDAE						<i>Indicator indicator</i>	R			C
<i>Caprimulgus inornatus</i>	Plain Nightjar	M			U	<i>Indicator minor</i>	R			U
<i>Macrodipteryx longipennis</i>	Standard-winged Nightjar	R/M			U	PICIDAE				
APODIDAE						<i>Campethera punctuligera</i>	R			C
<i>Telacanthura ussheri</i>	Mottled Spinetail	R			U	<i>Dendropicos fuscescens</i>	R			U
<i>Cypsiurus parvus</i>	African Palm Swift	R			C	<i>Dendropicos goertae</i>	R			U
<i>Apus affinis</i>	Little Swift	R			U	ALAUDIDAE				
TROGONIDAE						<i>Mirafra cantillans</i>	R			U
<i>Apaloderma narina</i>	Narina's Trogon	R			R	<i>Mirafra rufocinnamomea</i>	R			U
ALCEDINIDAE						<i>Galerida modesta</i>	R		SG	C
<i>Halcyon leucocephala</i>	Grey-headed Kingfisher	R/M			U	<i>Eremopterix leucotis</i>	R/M			C
<i>Halcyon malimbica</i>	Blue-breasted Kingfisher	R			U					
<i>Halcyon senegalensis</i>	Woodland Kingfisher	R/M			U					

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HIRUNDINIDAE						MUSCICAPIDAE					
<i>Psalidoprocne obscura</i>	Fantail Saw-wing	R/M		GC	U	<i>Melaenornis edoloides</i>	Northern Black Flycatcher	R			C
<i>Riparia riparia</i>	Common Sand Martin	P			U	<i>Bradornis pallidus</i>	Pale Flycatcher	R			C
<i>Cecropis senegalensis</i>	Mosque Swallow	R/M			C	<i>Muscicapa aquatica</i>	Swamp Flycatcher	R			U
<i>Cecropis daurica</i>	Red-rumped Swallow	P			C	<i>Myioparus plumbeus</i>	Grey Tit-Flycatcher	R			U
<i>Ptyonoprogne fuligula</i>	Rock Martin	R			C	<i>Ficedula hypoleuca</i>	European Pied Flycatcher	P			C
<i>Hirundo smithii</i>	Wire-tailed Swallow	R			C	MONARCHIDAE					
<i>Hirundo leucosoma</i>	Pied-winged Swallow	R		SG	U	<i>Elminia longicauda</i>	African Blue Flycatcher	R			C
<i>Hirundo lucida</i>	Red-chested Swallow	R			C	<i>Terpsiphone viridis</i>	African Paradise Flycatcher	R			C
<i>Delichon urbicum</i>	Common House Martin	P			C	PLATYSTEIRIDAE					
MOTACILLIDAE						<i>Platysteira cyanea</i>	Brown-throated Wattle-eye	R			C
<i>Anthus trivialis</i>	Tree Pipit	P			U	<i>Batis senegalensis</i>	Senegal Batis	R			C
CAMPEPHAGIDAE						TIMALIIDAE					
<i>Campephaga phoenicea</i>	Red-shouldered Cuckooshrike	R/M			U	<i>Turdoides plebejus</i>	Brown Babbler	R			C
PYCNONOTIDAE						<i>Turdoides reinwardtii</i>	Blackcap Babbler	R		SG	C
<i>Chlorocichla flavicollis</i>	Yellow-throated Leaflove	R			C	PARIDAE					
<i>Pycnonotus barbatus</i>	Common Bulbul	R			C	<i>Parus (leucomelas) guineensis</i>	White-shouldered Black Tit	R			U
TURDIDAE						REMIZIDAE					
<i>Cossypha niveicapilla</i>	Snowy-crowned Robin Chat	R			C	<i>Anthoscopus parvulus</i>	Yellow Penduline Tit	R		SG	U
<i>Cossypha albicapillus</i>	White-crowned Robin Chat	R		SG	C	NECTARINIIDAE					
<i>Oenanthe hispanica</i>	Black-eared Wheatear	P			U	<i>Anthreptes longuemarei</i>	Western Violet-backed Sunbird	R			U
<i>Cercomela familiaris</i>	Familiar Chat	R			C	<i>Hedydipna platura</i>	Pygmy Sunbird	R/M			C
<i>Myrmecocichla albitrons</i>	White-fronted Black Chat	R		SG	C	<i>Cyanomitra verticalis</i>	Green-headed Sunbird	R			C
<i>Thamnotlaea cinnamomeiventris</i>	Mocking Cliff Chat	R			C	<i>Cyanomitra olivacea</i>	Olive Sunbird	R			R
<i>Monticola saxatilis</i>	Common Rock Thrush	P			R	<i>Chalcomitra senegalensis</i>	Scarlet-chested Sunbird	R			C
<i>Turdus pelios</i>	African Thrush	R			C	<i>Cinnyris pulchellus</i>	Beautiful Sunbird	R			C
SYLVIIDAE						<i>Cinnyris venustus</i>	Variable Sunbird	R			U
<i>Melocichla mentalis</i>	Moustached Grass Warbler	R			U	<i>Cinnyris cupreus</i>	Copper Sunbird	R			U
<i>Hippolais polyglotta</i>	Melodious Warbler	P			C	ZOSTEROPIIDAE					
<i>Eremomela pusilla</i>	Senegal Eremomela	R		SG	C	<i>Zosterops senegalensis</i>	African Yellow White-eye	R			C
<i>Sylvietta brachyura</i>	Northern Crombec	R			C	LANIIDAE					
<i>Phylloscopus trochilus</i>	Willow Warbler	P			C	<i>Lanius senator</i>	Woodchat Shrike	P			R
<i>Phylloscopus collybita</i>	Common Chiffchaff	P			C	<i>Corvinella corvina</i>	Yellow-billed Shrike	R		SG	C
<i>Sylvia borin</i>	Garden Warbler	P			C	MALACONOTIDAE					
<i>Hyloti flavigaster</i>	Yellow-bellied Hyloti	R			U	<i>Malaconotus blanchoti</i>	Grey-headed Bushshrike	R			U
CISTICOLIDAE						<i>Chlorophoneus sulfureopectus</i>	Orange-breasted Bushshrike	R			R
<i>Cisticola cantans</i>	Singing Cisticola	R			C	<i>Tchagra senegalus</i>	Black-crowned Tchagra	R			U
<i>Cisticola brachypterus</i>	Short-winged Cisticola	R			U	<i>Dryoscopus gambensis</i>	Northern Puffback	R			C
<i>Cisticola rufus</i>	Rufous Cisticola	R		SG	U	<i>Laniarius barbarus</i>	Yellow-crowned Gonolek	R			C
<i>Prinia subflava</i>	Tawny-flanked Prinia	R			C	<i>Nilais afer</i>	Brubru	R			C
<i>Heliolais erythropterus</i>	Red-winged Warbler	R			U	PRIONOPIIDAE					
<i>Apalis flavida</i>	Yellow-breasted Apalis	R			C	<i>Prionops plumatus</i>	White-crested Helmetshrike	R			C
<i>Camroptera brachyura</i>	Green-backed Camaroptera	R			C						



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ORIOOLIDAE						<i>Ploceus cucullatus</i>	Village Weaver	R			C
<i>Oriolus auratus</i>	African Golden Oriole	R/M			C	<i>Anaplectes rubriceps</i>	Red-headed Weaver	R			U
DICRURIDAE						<i>Quelea erythrops</i>	Red-headed Quelea	R?/M			U
<i>Dicrurus adsimilis</i>	Fork-tailed Drongo	R			C	<i>Quelea quelea</i>	Red-billed Quelea	R/M			U
CORVIDAE						<i>Euplectes franciscanus</i>	Northern Red Bishop	R			C
<i>Corvus albus</i>	Pied Crow	R			U	<i>Euplectes hordeaceus</i>	Black-winged Red Bishop	R			C
<i>Ptilostomus afer</i>	Piapiac	R		SG	C	<i>Euplectes macroura</i>	Yellow-mantled Widowbird	R			U
STURNIDAE						ESTRILDIDAE					
<i>Onychognathus neumanni</i>	Neumann's Starling	R			C	<i>Estrilda caerulescens</i>	Lavender Waxbill	R		SG	C
<i>Lamprotornis purpureus</i>	Purple Glossy Starling	R		SG	C	<i>Estrilda melpoda</i>	Orange-cheeked Waxbill	R			C
<i>Lamprotornis chalybaeus</i>	Greater Blue-eared Starling	R			C	<i>Uraeginthus bengalus</i>	Red-cheeked Cordon-bleu	R			C
<i>Lamprotornis chloropterus</i>	Lesser Blue-eared Starling	R			C	<i>Euschistospiza dybowskii</i>	Dybowskii's Twinspot	R		SG	U
<i>Lamprotornis caudatus</i>	Long-tailed Glossy Starling	R			C	<i>Lagonosticta senegala</i>	Red-billed Firefinch	R			C
<i>Cinnyricinclus leucogaster</i>	Violet-backed Starling	M			U	<i>Lagonosticta rufopicta</i>	Bar-breasted Firefinch	R			C
BUPHAGIDAE						<i>Lagonosticta virata</i>	Kulikoro (Mali) Firefinch	R		SG	R
<i>Buphagus africanus</i>	Yellow-billed Oxpecker	R			R	<i>Lonchura cucullata</i>	Bronze Mannikin	R			C
PASSERIDAE						VIDUIDAE					
<i>Passer griseus</i>	Northern Grey-headed Sparrow	R			C	<i>Vidua macroura</i>	Pin-tailed Whydah	R			C
<i>Gymnoris (Petronia) dentata</i>	Bush Petronia	R		SG	C	<i>Vidua interjecta</i>	Exclamatory Paradise Whydah	R			U
PLOCEIDAE						<i>Vidua chalybeata</i>	Village Indigobird	R			C
<i>Plocepasser superciliosus</i>	Chestnut-crowned Sparrow-weaver	R		SG	U	<i>Vidua wilsoni</i>	Wilson's Indigobird	R			R
<i>Ploceus luteolus</i>	Little Weaver	R			U	FRINGILLIDAE					
<i>Ploceus nigricollis</i>	Black-necked Weaver	R			U	<i>Serinus mozambicus</i>	Yellow-fronted Canary	R			C
<i>Ploceus vitellinus</i>	Vitelline Masked Weaver	R			C	EMBERIZIDAE					
						<i>Emberiza tahapisi</i>	Cinnamon-breasted Bunting	R/M			U

