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BIRDS OF THE CENTRAL AFRICAN REPUBLIC

by Richard W. Carroll

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INTRODUCTION

Previous Work

This is an attempt to compile an avifaunal list for the C.A.R., using personal observation and including species lists from different areas of the country which are generally difficult to obtain. The majority of species were noted by several workers and can be considered confirmed observations.

Previous work in the Manovo-Gounda-Saint Floris National Park was carried out in the course of ecological surveys of the park and is noted in Barber *et al.* 1980, and Buchannon & Schacht, 1979. This work was greatly expanded upon by the author in conjunction with B. Hulberg from 1979-1981. The park list was doubled and detailed habitat associations and species status were determined.

Reference was made to a list compiled by Germain (1978) of ORSTOM in the Lobaye Prefecture and to the annual reports of the Institute Pasteur (Anon. 1977-1980) who, in their viral studies, mist netted many species. A preliminary list by Green (1981) for the Bamingui-Bangoran National Park was also referred to.

THE CENTRAL AFRICAN ENVIRONMENT

Physical Aspects

The C.A.R. is situated in the heart of the African continent between the latitude 2°16' and 11°20'N and the longitudes 14°20' and 27°45'E, covering an area of 622,000 km (Fig. 1).

The country is bordered on the north by Chad, the east by Sudan, the south by Zaire and the Congo, and the west by Cameroon.

The country is an immense plain with an axis oriented southwest-northeast. The relief varies between 500-700 m bordered on the west and east by two mountain ranges. To the west the Massif du Yade and Mont Pana reach 1360 m in height and extend south in a sandstone plateau towards Berberati. In the east the Massif des Bongo attains a height of 1300 m and extends southerly towards Bria.

In the centre of the country there are schists and gneiss formations which alternate with granite. In the south are sedimentary formations with sandstones and quartz forming a hilly region with many streams and rivers.

In the extreme north near Bria, a floodplain extends toward the Chadien basin with often inundated alluvial soils.

Two large watershed basins divide the country:

- 1) The southern basin of Chad comprising the affluents of the Upper Chari (the Aouk and the Ouham) and the Upper Logone (the Pende and the Mbere).
- 2) The Oubangui basin comprising the Kemo, Ouaka, Kotto, and M'Bomou rivers to the east and the Sangha, Lobaye and Mpoko rivers to the west (Carroll 1982).

Climate

The climate is dominated by two high pressure zones, one centered over the Atlantic and the other over the Chadien-Libyan desert. Four principal climatic zones are distinguished: (Fig. 2).

- 1) Congolese Equatorial Climate distinguished by the absence of a true dry season. Typically there is a minimum rainfall during January and February. This occurs in the region south of Bayanga and in the forest around Bangassou. Annual precipitation is over 1500 mm.
- 2) Subequatorial or Oubanguien characterised by annual precipitation of over 1500 mm; there are at least three months of dry season and high humidity throughout the year.
- 3) Sudano-Guinean climate characterised by precipitation of approximately 1400 mm annually with 3-6 months of dry season.
- 4) Tropical-Sahelien climate with annual precipitation of less than 1200 mm and more than 6 months of dry season, with at least 5 days of rain amounting to 22 mm. December and January are totally dry (Auberville 1950).

In general the dry season begins in December and extends through March. This dry season is accentuated in the north and northeast and progressively diminishes toward the southwest in the Ombrophile forest region (Carroll 1982).

Soils and Vegetation

In the C.A.R. two principal soil types correspond with the climatic zones (Boulvert 1981):

- 1) Iron soils corresponding with the Sudanian and Sahelien climatic zones with a 6-8 month dry season, between 600-1200 mm of rain per year and comprised of kaolinite and potassium clay with a sandy surface.
- 2) Iron soils localised in the dense forest zone and wooded savanna where precipitation is more than 1200 mm per year and comprised of kaolinite and gibbsite.

These two types of soils are characterised by laterite shields. One also finds two other localised soil types:

- 3) Skeleton soils of pebbles and gravel.

- 4) Hydromorphic soils occupying temporary or permanent obstructed terrains.

The vegetation is also correlated with climate. Four major zones from south to north are noted in Figure 3 and are described as follows (Auberville 1950):

- 1) Dense Forest Zone: Encompassing, a) Ombrophile Dense Forest comprised of evergreen species b) Tropophile Forest with deciduous trees and c) Ombro-Tropophile transition zone.
- 2) Sudanian Zone: Dry forest with an upper canopy of deciduous trees and a lower story without grass cover; and a clear wooded savanna composed of trees and shrubs and a dominant grass cover.
- 3) Savanna-Park Zone: Limited to the alluvial depressions south of the Chadien basin composed of vast grasslands with small groups of trees.
- 4) Sudano-Sahelien Zone: Open dry savannas with little woody vegetation.

For a further breakdown and description of the vegetation zones see Sillans (1958).

The ancient northern limit of the dense forest has receded southward in the past centuries before a general drying tendency. According to Auberville (Sillans 1958) the former northern limits followed a line connecting Zemio, Bakouma, Bambari and Boda then passed 100 km north of Carnot before crossing the Camerounian border. Now the limit of continuous forest follows a line from Mbaiki to Nola. The subdivisions and boundaries of the dense forest zone are shown in Figure 4 (Sillans 1958).

Within this forest zone several small patches of savanna exist. Every stage of degradation and succession due to human activities form a variety of habitats such as village clearing, native slash and burn agriculture, extensive coffee plantations, and large areas of exploitation by logging operations, (Carroll 1982).

For a further breakdown of the dense forest habitats see Carroll (1986) and for the Savanna-Park Zone see Carroll & Hulberg (1982) and Green (1983).

Changing Land Use

The outlook for the Central African environment is one of change brought on largely by human impact. I suggest that major threats to the natural environment include:

- a) The encroachment of the semi-arid Sahelien zone from Chad and Sudan southward into northern C.A.R. A factor which may hasten this process of desertification is the increasing movement of cattle, goats and sheep southwards as the North becomes dryer. Ahead of these herds vast areas of grasslands are burned to encourage early regrowth of grass for the stock. To date, only limited studies of

the effects of burning in this area have been undertaken. Large herds of domestic animals displace the natural herbivores, overgraze and trample many areas, and carry diseases harmful to wildlife.

- b) In the C.A.R., the indigenous human population density is very low (c. 3 million) and vast areas in the north and east are virtually empty of permanent villages. These areas support substantial wildlife populations (Barber *et al.* 1980; Buchannon & Schacht 1979; Carroll & Hulberg 1982). Due to the remoteness of these areas and the lack of proper surveillance, poachers (often associated with the above mentioned cattle herds) can rapidly destroy the wildlife for profitable sale of ivory, rhino horn, giraffe tail, skins and meat.
- c) At the other end of the country vast tracts of dense forest of the southwest are being exploited by logging societies. Currently, approximately 48% of these forests are being selectively logged (Carroll 1986). The felling of the forests results in drastic habitat and faunal changes.
- d) The invasion of the dense forests by large scale coffee plantations results in the permanent clearing of large tracts of forests creating savanna-like habitats. The use of pesticides is certainly altering the forest ecology (Carroll 1986).
- e) Across the central band and the east of the country cotton has been a major cash crop and pesticide use is extensive.

In effect, the Central African environment is being attacked on many fronts and may be permanently altered before its natural potential is realised. I believe that the altering of the natural habitats, the spreading use of pesticides and the destruction of the floral and faunal components will have drastically detrimental consequences for the avifauna of C.A.R. Further extensive research is necessary to determine the present status of the avian communities in C.A.R. such that this may form a basis of indicating environmental change.

CHECKLIST

The Appendix lists bird species with the locations of observations throughout the country and the status, abundance and habitat associations within the Manovo-Gounda-Saint Floris National Park. Little work has been done in other areas in C.A.R on status, abundance and habitat associations, so this information for this northern park is usefully tabulated. Green (1983) presents similar information for birds observed in the Bamingui-Bangoran National Park.

The nomenclature and order follow White (1961; 1962; 1970) and Steffe (1984).

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SUMMARY

An avifaunal list was compiled based primarily on the work of the author from 1978-1981 in the Manovo-Gounda-Saint Floris National Park in northeastern C.A.R., the Lobaye Prefecture in south central C.A.R., and in the dense forest zone of the Haute Sangha Prefecture of the southwest. Lists compiled by other authors working in other areas of the country, but which were difficult to obtain, were also incorporated to determine distributional patterns of species. A total of 668 species are listed for C.A.R., and information is presented on their abundance and status in the Manovo-Gounda-Saint Floris National Park. This is not an exhaustive literature review of the birds of C.A.R., but the detailed observations of the author and other workers in the country.

RESUME

Une liste de la faune avienne a été établie principalement d'après les recherches de l'auteur, de 1978 à 1981, dans le Parc National Manovo-Gounda-Saint Floris au Nord-Est de la RCA, dans la Préfecture de Lobaye (au sud de la région centrale de la RCA) et dans la zone couverte de forêts épaisses qui se trouve dans la Préfecture de Haute Sangha vers le Sud-ouest. Des listes dressées par d'autres auteurs, qui ont travaillé dans des régions différents, sont difficiles à obtenir mais on en a incorporées afin de déterminer la répartition des espèces. Le montant total pour la RCA s'élève à 668 espèces et on a inclus des informations sur leur abondance et statut dans le Parc National de Manovo-Gounda-Saint Floris. Cette étude n'est pas un recensement approfondi des oiseaux de la RCA mais plutôt un résumé des observations faites par l'auteur et par plusieurs parmi les autres investigateurs qui ont travaillé dans le pays.

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APPENDIX

 LOCATION CODE FOR BIRD OBSERVATIONS IN THE
 CENTRAL AFRICAN REPUBLIC

1. MANOVO-GOUNDA-SAINT FLORIS NATIONAL PARK
 2. LOBAYE PREFECTURE
 3. BANGUI AREA
 4. BAMINGUI AREA
 5. HAUTE SANGHA PREFECTURE
 6. BAMINGUI-BANGORAN NATIONAL PARK
-

 ABUNDANCE AND STATUS CODES FOR BIRDS OBSERVED IN THE
 MANOVO-GOUNDA-SAINT FLORIS NATIONAL PARK, C.A.R.

ABUNDANCE

- A....ABUNDANT: LIKELY TO BE SEEN IN LARGE NUMBERS IN APPROPRIATE HABITAT
 C....COMMON: REGULARLY SEEN IN APPROPRIATE HABITAT
 O....OCCASIONAL
 U....UNCOMMON: BIRDS RARELY OBSERVED IN THE PARK

STATUS

- R....RESIDENT: YEAR ROUND INHABITANTS OF THE PARK
 B....BREEDING: CONFIRMED NESTING WITHIN THE PARK
 M....MIGRANT: INTRA-AFRICAN AND PALEARCTIC MIGRANTS
 L....LOCAL: BIRDS OF LOCALLY RESTRICTED OR REGIONAL DISTRIBUTION
-

 HABITAT TYPES AND SPECIAL FEATURES OF THE
 MANOVO-GOUNDA-SAINT FLORIS NATIONAL PARK, C.A.R.

1. Terminalia laxiflora savanna woodland
 2. Isoberlinia doka savanna woodland
 3. Anogeissus leiocarpus forest
 - a. Gounda gorge forest
 - b. fringe forest along rivers
 4. Terminalia macroptera-Pseudocedrela kotschyi savanna woodland
 5. Mixed lowland savanna woodland
 6. Syzygium-Adina riparian woodland
 7. Gallery forest
 8. Floodplains
 9. Grass and wooded savanna on recent alluvial deposits
 10. Legume savanna woodland
 11. Salines
 12. Laterite shield
 13. Rocky zone of escarpment
 14. Rock
-

For a complete description of the components of each habitat type refer to Barber *et al.* 1980, Buchannon & Schacht 1979, Peyre de Fabregues 1981, and Carroll & Hulberg 1982.

SPECIES	LOCATION	ABUNDANCE	STATUS	HABITAT
STRUTHIONIDAE				
<u>Struthio camelus</u>	1	C	L, R, B	1, 3, 8
PODICIPEDIDAE				
<u>Podiceps ruficollis</u>				
PELECANIDAE				
<u>Pelecanus onocrotalus</u>	1	C	M	8, 6, 5
<u>P. rufescens</u>	1	C	M	8, 6, 4, 1
PHALACROCORACIDAE				
<u>Phalacrocorax carbo</u>	1	U		8
<u>P. africanus</u>	1, 2, 5, 6	U	R, B	6, 7, 8
<u>Anhinga rufa</u>	1, 2, 6	U		6
ARDEIDAE				
<u>Botaurus stellaris</u>	1, 5, 6	U	M	8
<u>Ixobrychus minutus</u>	1, 2	O	M	8
<u>I. m. payesi</u>	2	U		8
<u>I. sturmi</u>	1, 2, 5		R	6, 8
<u>Tigrionis leucolophus</u>	2			
<u>Nycticorax nycticorax</u>	1, 2, 5	O	R, B	6, 8
<u>N. leuconotus</u>	2			
<u>Ardeola ralloides</u>	1-4, 6	O	M	6, 8
<u>A. ibis</u>	1-6	C	R, B	6, 8
<u>Butorides striatus</u>	1, 2, 5, 6	C	R	8
<u>Egretta alba</u>	1, 2, 5, 6	C	R	6, 8
<u>E. intermedia</u>	1, 5	C	R	4, 6, 8
<u>E. garzetta</u>	1, 2, 4, 5	O		6, 8
<u>Ardea cinerea</u>	1, 2, 5, 6	C	M	6, 8
<u>A. melanocephala</u>	1, 2, 5, 6	C	M	5, 6, 8, 11, 13
<u>A. goiath</u>	1, 5, 6	C	B	6, 8
<u>A. purpurea</u>	1, 2, 5, 6	O	M	5, 7, 8
BALAENICIPITIDAE				
<u>Balaeniceps rex</u>	1	U	M	8
SCOPIDAE				
<u>Scopus umbretta</u>	1-6	C	R, B	6, 8, 11
CICONIIDAE				
<u>Ciconia ciconia</u>	1	O	M	8
<u>C. nigra</u>	1, 5, 6	U	M	8
<u>C. abdimi</u>	1, 2, 5, 6	C	M	5, 6, 8
<u>C. episcopus</u>	1, 5, 6	O	M	5, 7
<u>Ephippiorhynchus senegalensis</u>	1, 6	O	R, B	1, 6, 8
<u>Anastomus lamelligerus</u>	1, 6	O	M	8
<u>Leptoptilos crumeniferus</u>	1, 6	A	R, B	1-6, 8
<u>Ibis ibis</u>	1, 6	C	R	1, 4, 6, 8
THRESKIORNITHIDAE				
<u>Threskiornis aethiopica</u>	1, 6	O	M	8
<u>Bostrychia hagedash</u>	1, 2, 5, 6	C	R, B	5-8, 11

<u>B. rara</u>	2	U		
<u>B. olivacea</u>	2	U		
<u>Plegadis falcinellus</u>	1,6	U	M	8
<u>Platalea alba</u>	1	U	M	8
ANATIDAE				
<u>Dendrocygna bicolor</u>	1,6	U	R	8
<u>D. viduata</u>	1,6	C	R	8
<u>Alloochen aegytiacus</u>	1,6	C	R,B	8
<u>Plectropterus gambensis</u>	1	C	R,B	8
<u>Pteronetta hartlaubii</u>	2,5	C	B	8
<u>Sarkidiornis melanota</u>	1,5,6	C	R,B	8
<u>Nettapus auritus</u>	1,2,6	U	E	6
<u>Anas crecca</u>	1	U	M	8
<u>A. acuta</u>	1-6	U	M	8
<u>A. guerquedula</u>	1	U	M	8
<u>Aythya nyroca</u>	6	U	M	8
ACCIPITRIDAE				
<u>Aegyptius tracheliotus</u>	1	O	R	8
<u>Trigonoceps occipitalis</u>	1,6	O	R	1,4,5,8
<u>Gyps fulvus</u>	4			
<u>G. ruppellii</u>	1,4,6	U	R	1,8
<u>G. bengalensis</u>	1,6	C	R	1,8
<u>Neophron percnopterus</u>	1			
<u>Neophron monachus</u>	1,4,6	C	R,B	1,2,4-6,8,11
<u>Gypohierax angolensis</u>	6	U	L	8
<u>Circus pygargus</u>	1	U	M	5,8
<u>C. macrourus</u>	1	O	M	4,8,11
<u>C. ranivorus</u>	1	C	R	8
<u>C. aeruginosus</u>	6			
<u>Polyboroides radiatus</u>	1,2,5,6	C	R	1-5,7,8,11, 13
<u>Terathopius ecaudatus</u>	1-3,6	C	R,B	1,2,5,8,11
<u>Circaetus gallicus</u>	4			
<u>C. beaudouini</u>	1	U		8
<u>C. pectoralis</u>	1	U		5
<u>C. cinereus</u>	1	O	R	1,2,5,8
<u>C. cinerascens</u>	1	O	R	5,8
<u>Dryotriorchis spectabilis</u>	2			
<u>Accipiter melanoleucus</u>	1,5,6	O	R	5
<u>A. toussenelii</u>	2			
<u>A. castanilius</u>	2			
<u>A. badius</u>	1,2,5	U		
<u>A. minullus</u>	1			
<u>A. erythropus</u>	2			
<u>Melierax metabates</u>	1	O	R	
<u>M. gabar</u>	1	O	R	
<u>Urotriorchis macrourus</u>	2,5			
<u>Kaupifalco monogrammicus</u>	1,2,4	C	R	1,3-5
<u>Buteo rufipennis</u>	1,6			
<u>Buteo rufinus</u>	1	U	M	8
<u>B. auguralis</u>	1,6	C	R,B	1,2,4,5,8
<u>B. buteo</u>	1	U	M	8
<u>Lophaetus occipitalis</u>	1,2	O	R	4,6,8
<u>Stephanoetus coronatus</u>	2,5			

<u>Folemaetus bellicosus</u>	1,6	O	R,B	1,3,6,8,13
<u>Hieraetus spilogaster</u>	1	O	R	5,8,13
<u>H. pennatus</u>	1	U	M	5
<u>H. dubius</u>	2			
<u>Aquila rapax</u>	1,5	C	R	1-3,5,13
<u>A. verreauxii</u>	1	U	M	5,8
<u>A. wahlbergi</u>	1	C	R	1,2,5
<u>Haliaeetus vocifer</u>	1,5,6	C	R,B	1,4-6,8,11
<u>Milvus migrans migrans</u>	1-6	C	M	1,3,4,6,8, 11,13
<u>M. m. parasitus</u>	1	U	M	8
<u>Pernis apivorus</u>	2			
<u>Aviceda cuculoides</u>	2			
<u>Elanus caeruleus</u>	1,2,4,5	O	R	4,5,8,11
<u>Macheirhamphus alcinus</u>	1,2	U		8
<u>Pandion haliaetus</u>	1,3	U	M	5
FALCONIDAE				
<u>Polihierax semitorquatus</u>	1	U		5,2
<u>Falco biarmicus</u>	1,2	O	R,B	1,3,5
<u>F. peregrinus</u>	1	U	M	5
<u>F. cuvieri</u>	1	U		6
<u>F. chicquera</u>	6	U		
<u>F. ardosiaceus</u>	1,2,6	O	R	4,5,8
<u>F. naumanni</u>	1	U	M	5
<u>F. tinnunculus</u>	1	U	M	13
SAGITTARIIDAE				
<u>Sagittarius serpentarius</u>	1,6	O	R	1,2,5,8,11
PHASIANIDAE				
<u>Francolinus lathamii</u>	2			
<u>F. schlegelii</u>	6			
<u>F. streptophorus</u>	1	U		1
<u>F. ichterorhynchus</u>	1,2,6	A	R,B	5
<u>F. clappertoni</u>	1	A	R,B	1,5,8
<u>F. squamatus</u>	2			
<u>Coturnix delegorguei</u>	1	U	R	8
<u>Ptilopachus petrosus</u>	1,2,6	C	R,B	5,11,13
<u>Numida meleagris</u>	1,2,6	C	R,B	1,4-8
<u>Guttera edouardi</u>	1,5,6	U	R	1
<u>G. plumifera</u>	2			
RALLIDAE				
<u>Rallus caeruleus</u>	1	U		8
<u>Canirallus oculeus</u>	1	U		8
<u>Crex egregia</u>	2			
<u>Limnocorax flavirostra</u>	1,2,5,6	C	R,B	6
<u>Sarothrura sp.</u>	2			
<u>Himantornis haematopus</u>	2			
<u>Gallinula angulata</u>	2			
<u>G. chloropus</u>	6	O		
<u>Rorphyrio alleni</u>	2			
HELIORNITHIDAE				
<u>Podica senegalensis</u>	2,5	C	R	8

GRUIDAE					
<u>Balearica pavonina</u>	1, 2, 6	C	R	8	
OTIDIDAE					
<u>Neotis denhami</u>	1, 6	C	R, B	1, 2, 5, 8, 10	
<u>Eupodotis senegalensis</u>	1	U	R	1	
<u>E. melanogaster</u>	1, 3, 6	C	R	1, 2	
JACANIDAE					
<u>Actophilornis africanus</u>	1-4, 6	C	R, B	6, 8	
<u>Microparra capensis</u>	6	U			
BURHINIDAE					
<u>Burhinus senegalensis</u>	1, 6	C	R, B	5, 8	
<u>B. capensis</u>	1, 6	U	R		
<u>B. vermiculatus</u>	1		R	8	
CHARADRIIDAE					
<u>Vanellus tectus</u>	1	O	R	8	
<u>V. albiceps</u>	1, 4-6	O	R	12	
<u>V. senegallus</u>	1, 2, 6	C	R	1, 5, 6, 8, 12	
<u>V. superciliosus</u>	1	U	R	5	
<u>V. spinosus</u>	1	C	R, B	1, 6, 8	
<u>Charadrius hiaticula</u>	5	U	M		
<u>C. dubius</u>	1-4, 6	U	M	8	
<u>C. forbesi</u>	1, 6	O	M	8	
<u>C. marginatus</u>	2, 5				
<u>Numenius arquata</u>	6	U	M		
<u>Limosa limosa</u>	1	U	M	8	
<u>L. lapponica</u>	1	U	M	8	
<u>Tringa nebularia</u>	1, 2, 5, 6	C	M	8	
<u>T. stagnatilis</u>	1	U	M	8	
<u>T. glareola</u>	1-3, 5, 6	C	M		
<u>T. solitaria</u>	5				
<u>T. ochropus</u>	1, 2, 3, 6	C	M	8	
<u>T. hypoleucos</u>	1, 5, 6	C	M	8	
<u>T. totanus</u>	2	U	M		
<u>T. erythropus</u>	1	U	M	8	
<u>Calidris canutus</u>	1	U	M	8	
<u>C. minuta</u>	2				
<u>C. alba</u>	1, 5	C	M	8	
<u>Philomachus pugnax</u>	6	O	M		
<u>Himantopus himantopus</u>	1, 2, 6	C	M	8, 11	
<u>Recurvirostra avosetta</u>	5				
<u>Rostratula benghalensis</u>	1, 2, 3, 6	U	R		
GLAREOLIDAE					
<u>Pluvianus aegyptius</u>	1, 2	O	R	6, 8	
<u>Cursorius temminckii</u>	1	O	R	8	
<u>C. chalcopterus</u>	1	O	R	8	
<u>Glareola pratincola</u>	1	C	M	8	
<u>G. nuchalis</u>	2, 5	U		8	
<u>G. cinerea</u>	5				
LARIDAE					
<u>Larus cirrhocephalus</u>	3, 5				

<u>L. fuscus</u>	2			
<u>Rhynchops flavirostris</u>	1,2	O	R	6
<u>Sterna leucoptera</u>	1,3,6	O	M	8
PTEROCLIDIDAE				
<u>Pterocles exustus</u>	1	U	M	5,8
<u>P. quadricinctus</u>	1,6	O	M	1
TURNICIDAE				
<u>Turnix sylvatica</u>	1,2	O	R	8
<u>T. hottentotta nana</u>	2			
<u>Ortyxelos meiffrenii</u>	1	O	R	8
COLUMBIDAE				
<u>Columba uncinata</u>	2			
<u>C. guinea</u>	1	U	R	6,7
<u>Streptopelia semitorquata</u>	1-3,6	U		
<u>S. decipiens</u>	1		R	5
<u>S. vinacea</u>	1-3,6	C	R	1,2,5,11
<u>S. capicola</u>	1	C	M	5,11
<u>S. senegalensis</u>	3,6	C	R	
<u>Oena capensis</u>	1,6	C	R,B	1,6,8,12
<u>Turtur tympanistria</u>	2,3			
<u>T. afer</u>	1-3,6	U	R	5
<u>T. abyssinicus</u>	1,5	C	R,B	5,8,13
<u>T. brahmeri</u>	2,5			
<u>Treeron australis</u>	1,2,5	C	R,B	11
<u>T. waalia</u>	1,5,6	C	R,B	1,2,4,5,11
PSITTACIDAE				
<u>Poicephalus gulielmi</u>	1,2			
<u>P. crassus</u>	1,2	U		5,6
<u>P. meyeri</u>	1	C	R,B	1,2,5-7,11
<u>Psittacus erithacus</u>	2,5			
<u>Psittacula krameri</u>	1,6	O	R	1
<u>Agapornis pullaria</u>	1,2,6	C	R	5
<u>A. swinderniana</u>	2			
MUSOPHAGIDAE				
<u>Tauraco persa</u>	1,2	U		6
<u>T. schutti</u>	2			
<u>T. leucolophus</u>	1,2,6	O	R	3A-7,11,13
<u>Musophaga violacea</u>	1	U	R	8
<u>M. rossae</u>	1	U		7,8
<u>Crinifer piscator</u>	1,2,6	O	R	2,4-6,8,11
<u>C. zonurus</u>	6	O	R	
<u>Corythaeola cristata</u>	2,5			
CUCULIDAE				
<u>Clamator glandarius</u>	1,2	U	M	5,8
<u>C. jacobinus</u>	1	U	R	5
<u>C. levaillantii</u>	1,2	U		
<u>C. solitarius</u>	2,6	O		
<u>Cuculus canorus</u>	1,2	U	M	1,5
<u>C. canorus gularis</u>	1,2	U	M	1,5
<u>Cercococcyx mechowi</u>	2			

<u>C. flavigularis</u>	2			
<u>C. klaas</u>	2			
<u>Chrysococcyx caprius</u>	1,2,6	U	M	
<u>C. c. cupreus</u>	2			
<u>C. cafer</u>	2			
<u>Ceuthochares aereus</u>	2,5			
<u>Centropus monachus</u>	2	U		
<u>C. toulou</u>	1-3	U	R	8
<u>C. senegalensis</u>	1-4,6	C	R,B	1,2,4,6,8
STRIGIDAE				
<u>Tyto alba</u>	1,2,6	O	R,B	2
<u>Otus scops</u>	1,2,6	O	R	
<u>O. leucotis</u>	1,6	O	R	1
<u>Bubo africanus</u>	1,2,5,6	O	R,B	1,11
<u>B. poensis</u>	2			
<u>B. lacteus</u>	1	O	R,B	5
<u>B. leucostictus</u>	2			
<u>Scotopelia peli</u>	1,2,6	U		4
<u>S. bouvieri</u>	2			
<u>Glaucidium perlatum</u>	1,2,6	C	R,B	1
<u>Ciccaba woodfordii</u>	2,6	C	R,B	
CAPRIMULGIDAE				
<u>Caprimulgus binotatus</u>	5			
<u>C. pectoralis</u>	2			
<u>C. rufigena</u>	2			
<u>C. natalensis</u>	2			
<u>C. inornatus</u>	2			
<u>C. tristigma</u>	2			
<u>C. batesi</u>	2			
<u>C. climacurus</u>	1,2,4,6	C	R,B	8
<u>Macrodipteryx longipennis</u>	1,2,4,6	C	R,B	1,5,6,13
<u>M. vexillarius</u>	1,2,4,6	O		
APODIDAE				
<u>Apus aequatorialis</u>	1			
<u>A. apus</u>	1,2,6		M	6
<u>A. batesi</u>	1			6
<u>A. caffer</u>	2			
<u>A. affinis</u>	1-3,6			
<u>Cypsiurus parvus</u>	1-3,5,6	C	R,B	1,5,7,8,13
<u>Chaetura sabini</u>	2,6			
<u>C. ussheri</u>	2,5			
<u>C. melanopygia</u>	5			
<u>C. cassini</u>	2			
COLIIDAE				
<u>Colius striatus</u>	2			
<u>C. macrourus</u>	6			
TROGONIDAE				
<u>Apaloderma narina</u>	1,2	U		
<u>A. aequatoriale</u>	2			

ALCEDINIDAE

<u>Ceryle maxima</u>	1-6	O	R	4, 6, 7
<u>C. rudis</u>	1-3, 5, 6	C	R, B	6-8, 13
<u>Alcedo semitorquata</u>	5			
<u>A. quadribrachys</u>	1, 2, 5, 6	U	R	6, 7
<u>A. cristata</u>	1-3, 5, 6	C	R, B	6-8
<u>A. leucogaster</u>	1, 5	U		6, 7
<u>Ceyx picta</u>	1-3, 5, 6	C	R	6, 8
<u>C. lecontei</u>	1, 2, 5	U		4
<u>Halcyon senegalensis</u>	1-3, 5	C	R, B	4-8
<u>H. malimbica</u>	1, 2, 3, 6	U		6
<u>H. badia</u>	5			
<u>H. chelicuti</u>	1-3	C	R, B	1, 2, 11
<u>H. leucocephala</u>	1, 5, 6	C	R, B	3A-5, 7, 8

MEROPIIDAE

<u>Merops superciliosus</u>	1	O	M	11
<u>M. orientalis</u>	1	O	R	1, 6
<u>M. malimbicus</u>	2			
<u>M. nubicus</u>	1	C	R, B	1, 4-6, 8, 11
<u>M. albicollis</u>	2, 3, 5	C	R	
<u>M. pusillus</u>	1-3, 6	O	R, B	5, 8
<u>M. variegatus</u>	2, 3			
<u>M. bullocki</u>	1, 6	A	R, B	4-6, 8, 11
<u>M. gularis</u>	5			
<u>M. muelleri</u>	5			
<u>M. hirundineus</u>	1, 6	O	R, B	1
<u>M. oreobates</u>	2, 6			
<u>Bombylonax breweri</u>	1	U		8

CORACIIDAE

<u>Coracias garrulus</u>	1	U		5
<u>C. abyssinica</u>	1, 2	C	R, B	1, 4, 5, 8, 11
<u>C. naevia</u>	1, 2	O		3A-5, 8
<u>C. cyanogaster</u>	1, 2, 6	O	M	1, 2, 5
<u>Eurystomus glaucurus</u>	1, 5, 6	C	M	1, 4, 5, 8, 11
<u>E. gularis</u>	2	U		

UPUPIIDAE

<u>Upupa epops</u>	1, 2, 6	C	R, B	1, 2, 5, 11
<u>Phoeniculus purpureus</u>	1, 2, 6	C	M	1, 4, 5, 11
<u>P. castaneiceps</u>	2	C		
<u>P. aterrimus</u>	1, 2, 6	C	R, B	1, 2, 4, 5

BUCEROTIDAE

<u>Tockus nasutus</u>	1, 2, 6	C	R, B	1, 5, 8
<u>T. erythrorhynchus</u>	1, 2	C	R, B	1, 5, 8
<u>T. camurus</u>	2, 5			
<u>T. hartlaubi</u>	2			
<u>T. fasciatus</u>	2, 5			
<u>T. alboterminatus</u>	1	U		
<u>Tropicranus albocristatus</u>	2			
<u>Ceratogymna atrata</u>	2, 5			
<u>Bycanistes fistulator</u>	2, 5	O	R	6, 7
<u>B. cylindricus</u>	5, 6	O	R	
<u>B. c. albotibialis</u>	2	O	R	

<u>E. subcylindricus</u>	1, 2, 5	C	R, B	1, 5-7, 11, 13
<u>Bucorvus abyssinicus</u>	1, 6	C	R, B	1, 2, 4-6, 8, 11
CAPITONIDAE				
<u>Lybius dubius</u>	6	O		
<u>L. rolleti</u>	1, 2	C	R, B	1, 3, 5, 6
<u>L. bidentatus</u>	1-4	O		
<u>L. leucocephalus</u>	1	U		
<u>L. vieillotii</u>	1-4, 6	O	R, B	1
<u>L. hirsutus</u>	2			
<u>Gymnobucco peli</u>	2, 5			4
<u>G. bonapartei</u>	2			
<u>Buccanodon duchailloi</u>	2, 4			
<u>Pogoniulus scolopaceus</u>	2			
<u>P. chrysoconus</u>	1, 2, 4, 6	O	R, B	6, 13
<u>P. bilineatus</u>	2			
<u>P. subsulphureus</u>	2			
<u>P. atro-flavus</u>	2			
<u>Trachyphonus purpuratus</u>	2, 5			
INDICATORIDAE				
<u>Indicator maculatus</u>	2			
<u>I. indicator</u>	1-4, 6	C	R, B	5-7, 11, 13
<u>I. minor</u>	2, 3			
<u>I. exilis</u>	1, 2	O		6
<u>I. willcocksii</u>	2			
<u>Melichneutes robustus</u>	2			
<u>Prodotiscus insignis</u>				
PICIDAE				
<u>Jynx torquilla</u>	2			
<u>J. ruficollis</u>	2			
<u>Verreauxia africana</u>	2			
<u>Campethera punctuligera</u>	1, 2, 6	U		
<u>C. nubica</u>	1	U	R, B	5
<u>C. maculosa</u>	5			
<u>C. cailliautii</u>	6	U		
<u>C. caroli</u>	2, 3, 5			
<u>C. nivosa</u>	2, 3			
<u>C. permista</u>				
<u>Dendropicos fuscescens</u>	2, 3, 6	O	R	
<u>D. poecilolaemus</u>	2, 3			
<u>D. gabonensis</u>	2			
<u>D. obsoletus</u>	1, 2	O	R, B	1, 2, 4
<u>Mesopicos goertae</u>	1, 2, 6	O	R, B	3, 4, 11, 13
<u>M. xantholophus</u>	2			
<u>M. elliotii</u>	5			
<u>Thripias namaguua</u>	1, 2, 4			
EURYLAEMIDAE				
<u>Smithornis capensis</u>	2			
<u>S. rufolateralis</u>	2			
PITTIDAE				
<u>Pitta angolensis</u>	2			
<u>P. reichenowi</u>	2			

ALAUDIDAE

<u>Mirafra javanica</u>	1	U		
<u>M. africana</u>	2			
<u>M. rufocinnamomea</u>	1,2,6	U		8
<u>M. nigricans</u>	1,2	U		8
<u>Eremopterix leucotis</u>	1		R, B	
<u>Galerida cristata</u>	1		R, B	13
<u>G. modesta</u>	2			

HIRUNDINIDAE

<u>Riparia riparia</u>	1-3	U	M	6
<u>R. cincta</u>	1			6
<u>R. paludicola</u>	1,3		M	6
<u>Hirundo rustica</u>	1-6	U	M	
<u>H. nigrita</u>	2,5			
<u>H. smithii</u>	1,2,5,6	C	R, B	6,8
<u>H. aethiopica</u>	1	U	R	
<u>H. semirufa</u>	2,3			
<u>H. senegalensis</u>	1,2,5,6	C	R	1,4,8
<u>H. daurica</u>	1			4
<u>H. abyssinica</u>	1-3,6	C	R	6
<u>H. griseopyga</u>	1	O	M	6
<u>Delichon urbica</u>	1	U	M	6
<u>Psalidoprocne pristoptera</u>	6	C		
<u>P. p. petiti</u>	2,3			
<u>P. obscura</u>	1			2,5

MOTACILLIDAE

<u>Motacilla flava</u>	1,2,6	C	M	6,8
<u>M. f. thunbergi</u>	1		M	5
<u>M. clara</u>	2			
<u>M. alba</u>	1,5	C	R	6,8
<u>M. alba aguimp</u>	1-6	C	R	
<u>M. cinerea</u>	1		M	5,11
<u>Anthus novaeseelandiae</u>	1	O	M	1
<u>A. leucophrys</u>	2,4			
<u>A. trivialis</u>	2,4			
<u>Macronyx croceus</u>	1,2,6	U	R, B	5,13

LANIIDAE

<u>Prionops plumata</u>	1,2	O	R	1
<u>P. plumata cristata</u>	1,5	O	R	1
<u>P. caniceps</u>	2			
<u>Nilaus afer</u>	1,2	U	R	
<u>Dryoscopus gambensis</u>	1,2,4,6	O		
<u>D. angolensis</u>	1	O		13
<u>D. sabini</u>	5			
<u>Tchagra minuta</u>	2,3,6			
<u>T. australis</u>	2,3			
<u>T. senegala</u>	1-3,6	C	R	1,6,11
<u>Laniarius luhderi</u>	2			
<u>L. ferrugineus</u>	3,6			
<u>L. ferrugineus aethiopicus</u>	1,2		R	5,11,13
<u>L. barbarus</u>	1,6	U		
<u>L. barbarus erythrogaster</u>	1	C	R, B	3B,5,7,8
<u>L. leucorhynchus</u>	2,3,5			

<u>Malaconotus bocagei</u>	1	O		
<u>M. sulfurepectus</u>	1-3, 6	O		6
<u>M. multicolor</u>	1, 2	U		5
<u>M. cruentus</u>	2			
<u>M. blanchoti</u>	1	U		
<u>Corvinella corvina</u>	1-3	U	R	1
<u>Lanius gubernator</u>	1, 2	U		11
<u>L. excubitor</u>	1	U		5
<u>L. excubitorius</u>	1		L	8
<u>L. collaris</u>	1-4			
<u>L. senator</u>	1	U	M	8
<u>L. nubicus</u>	1	U		
ORIOLIDAE				
<u>Oriolus oriolus</u>	6			
<u>O. auratus</u>	1, 2	O	R, B	1, 2, 4, 5, 8
<u>O. brachyrhynchus</u>	2			
<u>O. larvatus</u>	2, 5			
<u>O. nigripennis</u>	2			
DICRURIDAE				
<u>Dicrurus ludwigi</u>	1, 2, 4			1
<u>D. atripennis</u>	2, 4, 5			
<u>D. adsimilis</u>	1-4, 6	C	R	1, 2, 5-7
<u>D. adsimilis modestus</u>	2			
STURNIDAE				
<u>Grafisia torquata</u>	1			
<u>Onycognathus morio</u>	2			
<u>O. fulgidus</u>	2			
<u>Lamprotornis purpureiceps</u>	2			
<u>L. splendidus</u>	2			
<u>L. purpureus</u>	1, 6	C	R	11
<u>L. caudatus</u>	1	C	R, B	1, 4, 5
<u>Cinnyrhicinclus leucogaster</u>	1, 2, 6		M	1, 5, 7, 11, 13
<u>Buphagus africanus</u>	1	C	R, B	1, 2, 8, 11
<u>B. erythrorhynchus</u>	2			
CORVIDAE				
<u>Ptilostomus afer</u>	1, 5	U	L	5
<u>Corvus albus</u>	1-3, 6	C	R, B	5, 6
PARIDAE				
<u>Parus leucomelas</u>	1, 2, 6	O	R	1, 5
CERTHIIDAE				
<u>Salpornis spilonota</u>	1	O		4
CAMPEPHAGIDAE				
<u>Campephaga lobata</u>	2			
<u>C. sulphurata</u>	1			
<u>Coracina pectoralis</u>	1, 2		R	2, 5, 11
<u>C. caesia</u>	1			
<u>C. azurea</u>	2			
<u>C. guiscalina</u>	2			
<u>C. phoenicea</u>	1-3, 6	U	R	

PYCNONOTIDAE

<u>Pycnonotus barbatus</u>	1-5	O
<u>P. barbatus tricolor</u>	1-6	C
<u>Andropadus curvirostris</u>	2,3	
<u>A. gracilis</u>	2,3	
<u>A. gracilirostris</u>	2	
<u>A. virens</u>	2,3	
<u>Calyptocichla serina</u>	2	
<u>Baeopogon indicator</u>	2,3	
<u>Ixonotus guttatus</u>	2	
<u>Chlorocichla falkensteini</u>	3	
<u>C. flavicollis</u>	2,3	
<u>C. simplex</u>	2,3	
<u>Thescelocichla leucopleurus</u>	2	
<u>Phyllastrephus scandens</u>	2	
<u>P. xavieri</u>	2,3	
<u>P. icterinus tricolor</u>	2	
<u>P. albigularis</u>	2,3	
<u>Bleda syndactyla</u>	2,3	
<u>B. eximia</u>	2,3	
<u>Criniger calurus</u>	2	
<u>C. olivaceus</u>	2	
<u>Nicator chloris</u>	2,3	
<u>N. vireo</u>	2,3	

MUSICAPIDAE

<u>Saxicola rubetra</u>	2,4,6			
<u>Oenanthe oenanthe</u>	1,6	C	M	1,8
<u>O. bottae</u>	1	C	R	6
<u>Cercomela familiaris</u>	2,6			
<u>Myrmecocichla nigra</u>	1,2	O	R	1
<u>M. tholloni</u>	1	U	M	5
<u>M. cinnamomeiventris</u>	1,6	C	R,B	13
<u>M. albifrons</u>	1,2,5,6	O	R,B	1,10,11
<u>Monticola saxatilis</u>	1		M	1
<u>Phoenicurus phoenicurus</u>	1		M	4,5,11
<u>Cercotrichas podobe</u>	4			
<u>C. hartlaubi</u>	2			
<u>Alethe castanea</u>	2			
<u>Stiphrornis erythrothorax</u>	2			
<u>Cossypha cyanocampter</u>	1,2	O	R	5,6
<u>C. heuglini</u>	1,2			
<u>C. niveicapilla</u>	1,2,6	U		5
<u>Neocossyphus rufus</u>	2			
<u>N. poensis</u>	2			
<u>Luscinia megarhynchos</u>	2			
<u>Turdus ericetorum</u>	1		M	8
<u>T. olivaceus</u>	1,2			6
<u>T. libonyanus</u>	1,5			11
<u>T. princei</u>	2			
<u>T. pelios</u>	6			
<u>Malacocincla fulvescens</u>	2			
<u>Phyllanthus atripennis</u>	2			
<u>Turdoides plebejus</u>	1,2	C	R,B	1,4,5,8
<u>T. tenebrosus</u>	1	U		2
<u>T. reinwardii</u>	2			

MUSCICAPIDAE-SYLVIINAE

<u>Acrocephalus schoenobaenus</u>	2		
<u>A. scirpaceus</u>	2,3		
<u>A. arundinaceus</u>	2,3		
<u>A. rufescens</u>	1	R	7
<u>A. gracilirostris</u>	1	R	8
<u>Chloropeta natalensis</u>	2		
<u>Sphenocercus mentalis</u>	2,3		
<u>Hippolais polyglotta</u>	2		
<u>H. pallida</u>	2		
<u>Sylvia borin</u>	2,3		
<u>Phylloscopus trochilus</u>	2,3		
<u>P. sibilatrix</u>	2		
<u>Cisticola erythroptus</u>	2,3,6		
<u>C. cantans</u>	2,3		
<u>C. lateralis</u>	2,3,6		
<u>C. aberrans</u>	6		
<u>C. galactotes</u>	2,3,6		
<u>C. natalensis</u>	2,3		
<u>C. brachyptera</u>	2,3		
<u>C. troglodytes</u>	1	R	5,6,8
<u>C. juncidis</u>	6		
<u>Prinia erythroptera</u>	2,3,6		
<u>P. subflava</u>	1-3,5	R	5
<u>P. leucopogon</u>	2,3		
<u>P. bairdii</u>	2,5		
<u>Apalis flavida</u>	2		
<u>A. pulchella</u>	2		
<u>A. goslingi</u>	1,2		7
<u>Dryocichla incana</u>	1,2		7
<u>Hypergerus atriceps</u>	2		
<u>Bathmocercus ceruiniventris</u>	2		
<u>Cameroptera superciliaris</u>	2		
<u>C. chloronota</u>	2		
<u>C. brachyura</u>	1-4	R	1,6,11
<u>Eremomela pusilla</u>	1		1,11
<u>E. canescens</u>	1,2,6	R	5,11
<u>Sylvietta virens</u>	2,3,5		
<u>S. denti</u>	2		
<u>S. brachura</u>	1-3,6	R	1,6,11
<u>Macrosphenus concolor</u>	2		
<u>Hylia prasina</u>	2,3		

MUSCICAPIDAE-MUSCICAPINAE

<u>Artomyias fuliginosa</u>	2		
<u>Bradornis pallidus</u>	2,3		
<u>Ficedula hypoleuca</u>	2		
<u>Fraseria ocreata</u>	1,2,5	R	7
<u>F. cinerascens</u>	2		
<u>Melaenorhis edolioides</u>	1-3,6	R	5
<u>Muscicapa striata</u>	2,3,5		
<u>M. aquatica</u>	1,6	R	5
<u>M. cassini</u>	1,2,5		6
<u>M. seth-smithi</u>	2		
<u>M. epulata</u>	2		
<u>M. olivascens</u>	1,2		7

<i>M. griseigularis</i>	2			
<i>M. comitata</i>	2			
<i>Myioparus plumbeus</i>	1,2,5		R	5
MUSCICAPIDAE-FLATYSTEIRINAE				
<i>Batis orientalis</i>	1			
<i>B. minor</i>	1-3			
<i>Bias musicus</i>	2			
<i>Megabyas flammulatus</i>	2			
<i>Platysteira cyanea</i>	1-3,6	O	R	5,6
<i>P. castanea</i>	2,3,5			
<i>P. touss</i>	2			
MUSCICAPIDAE-MONARCHINAE				
<i>Erythrocerus macalli</i>	2			
<i>Hylicia flavigaster</i>	2,6			
<i>H. violacea</i>	1,2			7
<i>Terpsiphona rufiventer</i>	1,2,5			3B,7,11
<i>T. viridis</i>	1-6	O	R,B	1,5,6,11
<i>T. batesi</i>	2			
<i>Trochocercus longicauda</i>	1,2,6		R	3B,7
<i>T. nitens</i>	2			
<i>T. nigromitratus</i>	2			
NECTARINIIDAE				
<i>Anthreptes rectirostris</i>	2			
<i>A. longuemarei</i>	1-3	O	R	6,7
<i>A. aurantium</i>	2			
<i>A. collaris</i>	2,3,5			
<i>A. platura</i>	1,6	C	R,B	1,5,11
<i>Nectarinia seimundi</i>	2			
<i>N. olivacea</i>	1,2,5			
<i>N. verticalis</i>	1-3,6	O	R,B	7
<i>N. rubescens</i>	1,2	O	R	11
<i>N. senegalensis</i>	1,6	C	R,B	1,3,5-8,13
<i>N. venusta</i>	2			
<i>N. chloropygia</i>	2,3,5,6			
<i>N. cuprea</i>	1-3	O	R,B	6,7
<i>N. coccinigaster</i>	2,3			
<i>N. pulchella</i>	1,6	C	R,B	1,3B,5,8
<i>N. superba</i>	2			
ZOSTEROPIDAE				
<i>Zosterops senegalensis</i>	1,2,6	C	R,B	5,8,11
EMBERIZIDAE				
<i>Emberiza cabanisi</i>	1,2			
<i>E. flaviventris</i>	1,4			
<i>E. forbesi</i>	2,6			
<i>E. tahapisi</i>	1	O	R,B	5,11,13
FRINGILLIDAE				
<i>Serinus mozambicus</i>	2,4,6			
<i>S. leucopygius</i>	1	U		8

PASSERIDAE

<u>Floccopasser superciliosus</u>	1,6	O	R	1,11
<u>Passer griseus</u>	1-3,6	U		11
<u>Petronia xanthocollis</u>	1	U	R	6
<u>P. dentata</u>	1,2		R	6
<u>Sporopopes frontalis</u>	1		R	1,11

PLOCEIDAE

<u>Amblyospiza albifrons</u>	2			
<u>Ploceus baglafecht</u>	2			
<u>P. luteolus</u>	1,6	U	R	11
<u>P. aurantius</u>	2,5			
<u>P. velatus</u>	1	O	R	
<u>P. cucullatus</u>	1,2,5,6		R,B	5,6
<u>P. intermedius</u>	1			
<u>P. nigerrimus</u>	2,3,5			
<u>P. melanocephalus</u>	2			
<u>P. superciliosus</u>	2,3			
<u>P. ocularis</u>	1-3,5	U	R	7
<u>P. nigricollis</u>	2,3			
<u>P. preussi</u>	2			
<u>P. dorsomaculatus</u>	2			
<u>P. insignis</u>	2			
<u>Malimbus coronatus</u>	2			
<u>M. cassini</u>	2			
<u>M. nitens</u>	5			
<u>M. rubricollis</u>	2,5			
<u>M. erythrogaster</u>	2			
<u>M. malimbicus</u>	2			
<u>Quelea erythrops</u>	1,2,6	A	R,B	6
<u>Q. quelea</u>	1	A	R	6,8
<u>Q. cardinalis</u>	2			
<u>Euplectes afra</u>	1,2,3,6		M	5,8
<u>E. albonotatus</u>	2			
<u>E. ardens</u>	2,3,6			
<u>E. axillaris</u>	1			
<u>E. hordeaceus</u>	1-3,5,6	C	M,B	1,5,11
<u>E. macrourus</u>	1-3,5,6	O	M,B	1
<u>E. orix</u>	1,6	C	M,B	8

ESTRIDIDAE

<u>Clytospiza monteiri</u>	2,3			
<u>C. dybowskii</u>	2,3			
<u>Pirenestes ostrinus</u>	1,2,3			6
<u>Nigrita canicapilla</u>	2,3			
<u>N. luteifrons</u>	2,3			
<u>N. bicolor</u>	2			
<u>N. fusconota</u>	2,5			
<u>Parmoptila woodhousei</u>	2			
<u>Spermophaga haematina</u>	2,3			
<u>Nesocharis capistrata</u>	1-4	O		7
<u>Pytilia melba</u>	1	O		5
<u>P. hypogrammica</u>	2			
<u>P. phoenicoptera</u>	1,2	U		
<u>Estrilda paludicola</u>	1			
<u>E. melpoda</u>	1-3,6			8

<u>E. nonnula</u>	2, 3, 5, 6			
<u>E. atricapilla</u>	5			
<u>E. troglodytes</u>	1, 6		R	5, 8
<u>E. astrild</u>	1-3, 6	C	R, B	5, 7
<u>E. caerulescens</u>	1, 6	O		6
<u>E. bengala</u>	1, 4, 6	C	R, B	1, 3, 5, 11
<u>E. larvata</u>	1-3, 6	O		11
<u>Lagonosticta rufopicta</u>	1-3	U		
<u>L. senegala</u>	1	C	R, B	6, 7
<u>L. rubricata</u>	1-3, 6	C	R	6
<u>L. rara</u>	1-3	C	R, B	1, 7, 11
<u>Amandava subflava</u>	1, 2, 6	U		
<u>Lonchura fringilloides</u>	2, 3			
<u>L. bicolor</u>	2, 5			
<u>L. cucullata</u>	1-3, 6	C	R, B	3B
<u>Vidua macroura</u>	1-4, 6	U		3, 5
<u>V. chalybeata</u>	6			
<u>V. funerea</u>	1, 2	O		11
<u>V. orientalis</u>	1, 4-6	C	M, B	1, 5, 8, 11

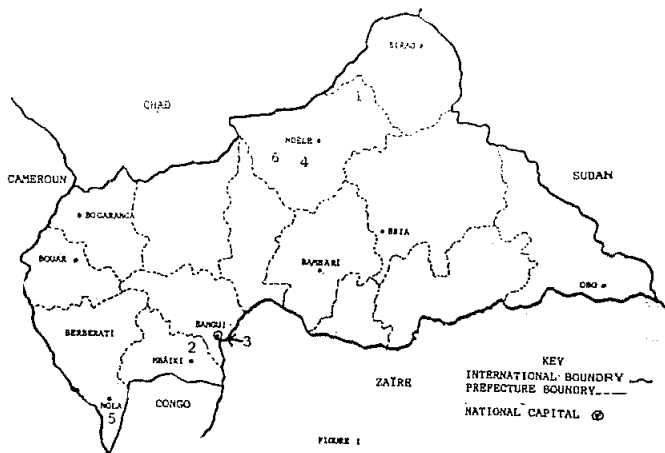


FIGURE 1
THE CENTRAL AFRICAN REPUBLIC
AND STUDY AREA

1. MANOVO-GOUNDA-SAINT FLORIS NATIONAL PARK
2. LODAYE PREFECTURE
3. BANGUI AREA
4. BAMINGUI AREA
5. HAUTE BANCHA PREFECTURE
6. BAMINGUI-BANGORAN NATIONAL PARK

SCALE 0 100 200

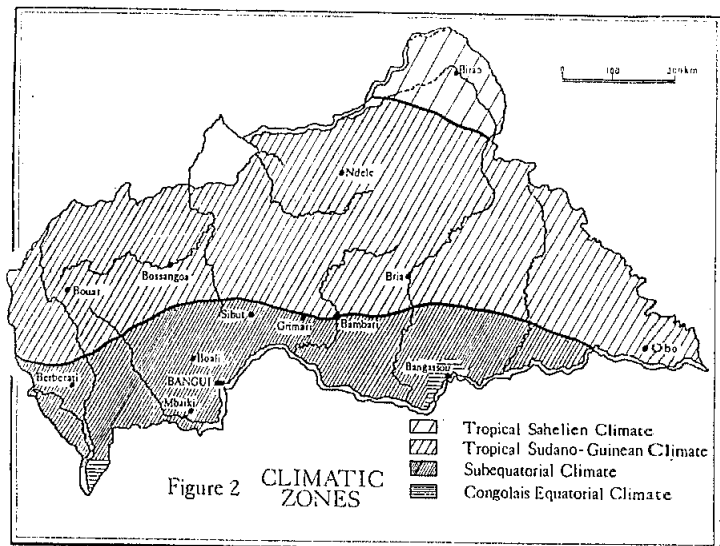






Figure 2 CLIMATIC ZONES

-  Tropical Sahelien Climate
-  Tropical Sudano-Guinean Climate
-  Subequatorial Climate
-  Congolais Equatorial Climate

