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Garden and farm-bush birds of Njala, Sierra Leone

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Summary

From October 1988 to June 1989, 95 avian species were recorded in a residential, garden area and in farm-bush areas around Njala University College, Sierra Leone. A total of 62 species was observed in the garden area. Twelve species were permanent residents and an additional 26 occurred throughout the study period. All of these species are known for close association with human habitation. Twenty-five species of European and intra-African migrants occurred in the residential area. Thirty-two species seen in the farm-bush were not observed in the garden area. Seven of these were residents while the others were migratory or casual wanderers. Migratory patterns were associated with seasonality and human activity such as burning fields.

Résumé

D'octobre 1988 à juin 1989, 95 espèces aviennes ont été notées dans les jardins d'un quartier résidentiel ainsi que sur des champs autour de Njala University College, Sierra Leone. Un total de 62 espèces fut observé dans les jardins. Douze espèces y résidaient en permanence et 26 autres y apparurent au cours de l'étude. Toutes ces espèces sont connues pour leur étroite association avec les habitations humaines. Vingt-cinq espèces de migrateurs européens et intra-africains furent rencontrées dans le quartier résidentiel. Trente-deux espèces observées sur les cultures ne le furent pas dans les jardins. Sept d'entre elles étaient résidentes tandis que les autres étaient migratrices ou occasionelles. Les modalités des migrations étaient liées aux saisons et aux activités humaines telles que les brûlis.

Introduction

Recent work in West Africa has resulted in the publication of check-lists for such areas as Nigeria (Elgood 1982), Ghana (Grimes 1987) and The Gambia (Gore 1991). For some areas, such as Sierra Leone, a published country-wide list does not exist.

In Sierra Leone, Serle (1948a, 1948b, 1949a, 1949b) reported the results of a nine-month survey made during 1942 and 1943. Additional data from otherwise unpublished sources are given in Bannerman (1930-1951). Field (1974) published an extensive account of birds of the Freetown Peninsula. Harding & Harding (1982), in the Kilimi region, and Happel (1985), in the Outamba region, surveyed the avifauna of the proposed Outamba-Kilimi National Park in the north-west part of the country near the Guinea border. Davies (1987) published a survey of birds of the Gola Forest and Tiwai Island in the far southeastern region of Sierra Leone. More recently, Allport *et al.* (1989) reported on a comprehensive, five-month survey in the Gola Forest area.

Most of these surveys concentrated on the remaining, relatively undisturbed habitats on the periphery of Sierra Leone. Areas altered by human activity dominate Sierra Leone yet, with the exception of Field's (1974) report on the Freetown peninsula and one section of the Allport *et al.* (1989) report, disrupted areas remain little studied. Elgood & Sibley (1964) showed that the avifauna of disrupted areas around Ibadan, Nigeria, retains a rich species diversity. The dynamics of the bird populations in Nigeria were associated with seasonal changes; both European species (Elgood *et al.* 1966) and African species (Elgood *et al.* 1973) migrate seasonally, creating a constantly changing avifauna. The goal of the present study was to document the avifauna associated with garden and farm-bush areas at a location in central Sierra Leone.

Study Site and Methods

The study was conducted from September 1988 to June 1989 on the campus of Njala University College, University of Sierra Leone. Njala is 205 km from Freetown at 8°30'30"N, 12°5'W. The site is adjacent to the Taia River about 125km from the coast and has an elevation of about 40 m above sea level. The annual rainfall is 190-205 cm, most of which occurs during the rainy season from May to November. The campus was established in 1964; however, agricultural activity at Njala dates to the original settlement in the early nineteenth century on a lowland rain forest site. A formal agricultural training college was established at Njala in 1919 and the area has remained a training site since that time (Kallay 1980).

The residential study was done in the Adaptive Crop Research and Extension Project (ACRE) residential area, which was established in 1963. Asphalt streets divided the houses into blocks in a rectangular network. The study area consisted of a block of single-storey houses with concrete walls and sloped metal roofs. The houses had spacious gardens, separated by hibiscus hedges. Many fruit trees, including pawpaw *Carica papaya*, banana *Musa* sp. and mango *Mangifera indica*, as well as ornamental

trees and shrubs such as Indian almond *Terminalia catappa*, grew in the garden area. The site is similar to that described as "garden" by Elgood & Sibley (1964) in Nigeria.

The observation of the garden birds was focused on the block containing the "Chief of Station" house. The garden area was defined as that area inside the asphalt road that surrounded the block. During the study period only two of the seven houses in the block were inhabited. The front gardens were maintained in a lawn-like condition by grazing goats. The back yards could best be described as "weedy".

The residential area was adjacent to fields thet were cultivated by traditional slash-and-burn techniques. Some of the fields were planted while others had one to several years' growth of farm-bush scrub. These areas are periodically farmed, grazed, or burned. Major crops include sweet potatoes, maize and cassava. In some areas upland rice is cultivated. Elgood & Sibley (1964) referred to this vegetation type as "Derived Savanna and Native Farms".

In the garden area, observations of the bird fauna throughout the study period were made daily, primarily in the early morning, late afternoon and evening. In the farm-bush, each of three different trails in the campus area was surveyed at least once a week during the study period, usually in the late afternoon. A daily survey was made of the farm-bush adjacent to the residential area.

Scientific names of birds are given in the tables.

Results

A total of 62 species was documented in the garden area during the nine months of observation (Tables 1 and 2). Many of these species were common residents in the farm-bush area and simply moved between farm-bush and gardens. A few species, indicated by a W under habitat (Table 1), were not seen in the farm-bush, but only observed in wooded areas when outside the garden.

Table 1 lists 12 species as "resident" in the garden area. All these species, observed daily throughout the study period, have a close association with human habitation that is widely documented and all but two are listed as common garden birds by Elgood & Sibley (1964).

The "common" birds (Table 1) were also known for close association with humans. Some, like the Simple Leaflove, would roost and forage in the garden, but not as consistently as the residents. The Chestnut-and-black Weaver and the Village Weaver nested in trees at the end of the rainy season, but were visitors during the rest of the period. All but three of the "common" species were reported as garden birds in Ibadan (Elgood & Sibley 1964).

Turati's Bush-shrike was an early morning visitor, usually heard rather than seen. On several occasions individuals with a white wingbar, suggestive of Bell-Shrike *L. aethiopicus*, were observed. If confirmed, this would represent an extension of range of the latter species (Field 1979).

Table 1. Birds observed in the ACRE residential garden area of Njala throughout the study period. Status: "Resident" = seen daily; "Common" = seen most days; "Frequent" = seen throughout study period but gaps of several days sometimes occurred between observations. Usual habitats: W= woodland, F=farm-bush.

	Status	Habitat
Hooded Vulture *Necrosyrtes monachus*	Common	F
Lizard Buzzard *Kaupifalco monogrammicus*	Frequent	W-F
Red-eyed Dove *Streptopelia semitorquata*	Common	W-F
Red-billed Wood Dove *Turtur afer*	Common	W-F
Grey Plantain-eater *Crinifer piscator*	Frequent	F
Senegal Coucal *Centropus senegalensis*	Frequent	F
Barn Owl *Tyto alba*	Frequent	F
Little Swift *Apus affinis*	Resident	F
Senegal Kingfisher *Halcyon senegalensis*	Frequent	F
Pied Hornbill *Tockus fasciatus*	Frequent	W-F
Lemon-rumped Tinker-bird *Pogoniulus bilineatus*	Frequent	W
Grey Woodpecker *Mesopicos goertae*	Frequent	F
Yellow-throated Long-claw *Macronyx croceus*	Frequent	F
Lesser Striped Swallow *Hirundo abyssinica*	Resident	F
Gambian Puffback *Dryoscopus gambensis*	Frequent	W
Black-crowned Tchagra *Tchagra senegala*	Frequent	F
Turati's Bush-Shrike *Laniarius turatii*	Common	W
Fiscal Shrike *Lanius collaris*	Resident	F
Glossy-backed Drongo *Dicrurus adsimilis*	Frequent	W-F
Pied crow *Corvus albus*	Common	F
Simple Leaflove *Chlorocichla simplex*	Common	W
Common Bulbul *Pycnonotus barbatus*	Resident	W-F
Scarlet-spectacled Wattle-eye *Platysteira cyanea*	Common	W
Snowy-headed Robin-Chat *Cossypha niveicapilla*	Resident	W
Kurrichane Thrush *Turdus pelios*	Resident	W
Moustached Warbler *Sphenoeacus mentalis*	Frequent	F
Grey-backed Camaroptera *Camaroptera brachyura*	Resident	W-F
Olive-bellied Sunbird *Nectarinia chloropygia*	Common	F
Copper Sunbird *N. cuprea*	Resident	F
Senegal White-eye *Zosterops senegalensis*	Common	W
Village Weaver *Ploceus cucullatus*	Common	F
Chestnut-and-black Weaver *P. nigerrimus*	Common	F
Black-necked Weaver *P. nigricollis*	Resident	F
Grey-headed Sparrow *Passer griseus*	Resident	F
Senegal Firefinch *Lagonosticta senegala*	Resident	F
Pin-tailed Whydah *Vidua macroura*	Common	F
Bronze Mannikin *Lonchura cucullata*	Resident	F
Magpie Mannikin *L. fringilloides*	Common	F

Table 2. Birds not seen in the ACRE residential garden area, but common in adjacent farm-bush throughout the period of study.

Black-shouldered Kite *Elanus caeruleus*
Double-spurred Francolin *Francolinus bicalcaratus*
Tawny-flanked Prinia *Prinia subflava*
Collared Sunbird *Anthreptes collaris*
Fire-crowned Bishop *Euplectes hordeaceus*
Yellow-mantled Whydah *E. macrourus*
Dybowski's Twin-spot *Clytospiza dybowskii*

A few species were common in the farm-bush, but never observed in the garden area (Table 2). The Double-spurred Francolin and Dybowski's Twin-spot were frequently observed foraging on the ground near the residential area, but never within it. The Fire-crowned Bishop and Yellow-mantled Whydah, common in fields across the road from the residential area, were restricted to areas with tall grass and open space.

The seasonal appearance of birds in the garden area is reported in Table 3. Some species are well-known European migrants such as the Spotted Flycatcher and the Yellow Wagtail. These arrived early in the dry season and remained common through most of this season. Other seasonal visitors were well-known intra-African migrants such as the Cattle Egret. Some arrived late in the year, for example the Broad-billed Roller did not appear until January but remained into the rainy season. Some of the migrants had a short but obvious stay. The Grey-headed Kingfisher was prominent, perching in or around the residential area for two months during the dry season. The Shikra and Grasshopper Buzzard were both present during the mid-dry season, the latter particularly obvious around fires as the farm-bush was burned.

In contrast to movements into the area during the dry season, there were also obvious movements out. The Harrier-Hawk, a frequent visitor to the residential area, was not observed in Njala for three months of the late dry season. Other species, such as the Olive-backed Sunbird and the White-cheeked Olive Weaver, disappeared for most of the dry season. Klaas's Cuckoo and the Didric Cuckoo showed a similar pattern. These species were most obvious during the weaver nesting period, stalking the nests of the Chestnut-and-black Weaver.

Great Spotted Cuckoos were obviously in transit. They were common for a week during March but were not seen before or after. This matches the "clearly defined spring passage" reported for Nigeria by Elgood *et al.* (1973).

Seasonal birds found in the farm-bush but not in the residential area (Table 4) followed patterns similar to those described above. For example, the migrant Whinchat, like the Spotted Flycatcher, was present through most of the dry season. The Little Bee-eater, like the Grey-headed Kingfisher, stayed for less than two months during the dry season. Many of these birds were not seen in the residential area because of their

Table 3. Birds with a seasonal appearance in the ACRE residential garden area of Njala.

	Months								
	O	N	D	J	F	M	A	M	J
Cattle Egret *Bubulcus ibis*		x	x	x	x	x	x	x	x
Black Kite *Milvus migrans*	x	x	x	x	x	x	x	x	
Harrier-Hawk *Polyboroides radiatus*	x	x	x	x				x	
Shikra *Accipiter badius*					x	x			
Great Spotted Cuckoo *Clamator glandarius*						x			
Red-chested Cuckoo *Cuculus solitarius*	x								
Klaas's Cuckoo *Chrysococcyx klaas*	x					x			
Didric Cuckoo *C. caprius*	x	x						x	x
Spotted Eagle-Owl *Bubo africanus*	x	x							
Long-tailed Nightjar *Caprimulgus climacurus*	x	x							
Swift sp. *Apus apus* or *A. barbatus*							x	x	x
Grey-headed Kingfisher *Halcyon leucocephalus*				x	x				
White-throated Bee-eater *Merops albicollis*	x		x	x	x	x	x	x	
Broad-billed Roller *Eurystomus glaucurus*				x	x	x	x	x	x
Vieillot's Barbet *Lybius vieilloti*	x		x						
Cardinal Woodpecker *Dendropicos fuscescens*	x								
Yellow Wagtail *Motacilla flava*	x	x	x	x	x	x	x	x	
Spotted Flycatcher *Muscicapa striata*	x	x	x	x	x				
Melodious Warbler *Hippolais polyglotta*		x	x	x	x	x	x		
Swallow *Hirundo rustica*	x	x	x	x					
Olive-backed Sunbird *Nectarinia verticalis*	x	x		x					x
White-cheeked Olive Weaver *Nesoclaris capistrata*	x							x	x
Common Waxbill *Estrilda astrild*						x		x	
Black-and-white Mannikin *Lonchura bicolor*						x		x	x

restricted habitat; for example, the Standard-winged Nightjar, Forbes' Banded Plover, and Little Bee-eater were associated with burnt fields in the dry season. Others were not seen in the residential area simply because they were so rare. For example, the Pale Flycatcher was observed on only one afternoon but for an extended period, feeding from the lower branch of a tree near the residential area. This species is normally found in the northern savanna.

Table 4. Seasonal birds found in the farm-bush but not found in the residential garden area.

	Months								
	O	N	D	J	F	M	A	M	J
Long-crested Eagle *Lophaetus occipitalis*	x								
Grasshopper Buzzard *Butastur rufipennis*				x	x				
Forbes' Banded Plover *Charadrius forbesi*				x	x				
Standard-winged Nightjar *Macrodipteryx longipennis*				x	x	x	x	x	
Palm Swift *Cypsiurus parvus*						x			
Pygmy Kingfisher *Ceyx picta*		x							
Little Bee-eater *Merops pusillus*					x	x			
Piping Hornbill *Bycanistes fistulator*				x				x	
Lesser Honeyguide *Indicator minor*								x	
Plain-backed Pipit *Anthus leucophrys*	x					x			
Rufous-chested Swallow *Hirundo semirufa*								x	
Red-rumped Swallow *H. daurica*						x			
Fanti Rough-winged Swallow *Psalidoprocne obscura*	x			x	x				
Square-tailed Rough-winged Swallow *P. nitens*	x	x	x	x	x	x			
Orange-breasted Bush-Shrike *Malaconotus sulfureopectus*							x	x	
Long-tailed Shrike *Corvinella corvina*							x		
Black-cap Babbler *Turdoides reinwardii*		x							
Pale Flycatcher *Bradornis pallidus*		x							
Pied flycatcher *Ficedula hypoleuca*						x	x		
Grey Tit-Flycatcher *Myioparus plumbeus*	x	x	x	x					
Whinchat *Saxicola rubetra*			x	x	x	x	x	x	
Grey-crowned Negro-Finch *Nigrita canicapilla*				x					
Chestnut-breasted Negro-Finch *N. bicolor*								x	
Blue-billed Firefinch *Lagonosticta rubricata*			x						
Orange-cheeked Waxbill *Estrilda melpoda*	x	x	x						

Discussion

In northern Sierra Leone, Harding & Harding (1982) described 69 species from the savanna and Happel (1985) recorded an additional 36 species in similar habitat. Of these 105 species, only 55 are shared with the list of 94 from Njala. The "derived savanna" of central Sierra Leone and the present study is substantially different from the "native savanna" of the north which was studied by Harding & Harding (1982) and Happel (1985), particularly since garden areas were not included in the northern studies. The disrupted rain forest at Njala has less bird diversity than similar areas adjacent to

non-disrupted forest habitats. In the farm-bush around the Gola Forest (Allport *et al.* 1989), 176 bird species were documented. Only 59 of these were on the Njala list.

The avifauna of the Njala residential area and farm-bush was similar to the town and garden bird populations of Ibadan, Nigeria (Elgood & Sibley 1964) and birds associated with human habitation on the Freetown Peninsula (Field 1974). Major differences concern the relative abundance and the time of occurrence of species. These locations have a long history of human habitation in disrupted rain forest areas and are probably representative of the avifauna that will displace the forest avifauna as human habitation continues to expand and destroy these forests.

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References

ALLPORT, G., AUSDEN, M., HAYMAN, P.V., ROBERTSON, P. & WOOD, P. (1989) *The Conservation of the Birds of Gola Forest, Sierra Leone.* Study Report 38, International Council for Bird Preservation, Cambridge.

BANNERMAN, D.A. (1930-1951) *The Birds of Tropical West Africa,* 8 vols. Crown Agents, London.

DAVIES, A.G. (1987) *The Gola Forest Reserves, Sierra Leone: Wildlife Conservation and Forest Management.* International Union for Conservation of Nature, Cambridge.

ELGOOD, J.H. (1982) *The Birds of Nigeria.* Check-list 4, British Ornithologists' Union, London.

ELGOOD, J.H. & SIBLEY, F.C. (1964) The tropical forest edge avifauna of Ibadan, Nigeria. *Ibis* 106: 221-248.

ELGOOD, J.H., SHARLAND, R.E. & WARD, P. (1966) Palaearctic migrants in Nigeria. *Ibis* 108: 84-116.

ELGOOD, J.H., FRY, C.H. & DOWSETT, R.J. (1973) African migrants in Nigeria. *Ibis* 115: 1-45, 375-409.

FIELD, G.D. (1974) *Birds of Freetown Peninsula.* Fourah Bay College Bookshop, Freetown.

FIELD, G.D. (1979) The *Laniarius* bushshrikes in Sierra Leone. *Bull. Brit. Orn. Club* 99: 42-44.

GORE, M.E.J. (1991) *Birds of The Gambia.* Check-list 3, British Ornithologists' Union, London.

GRIMES, L.G. (1987) *The Birds of Ghana.* Check-list 9, British Ornithologists' Union, London.

HAPPEL, R.E. (1985) Birds of the Outamba area, northwest Sierra Leone. *Malimbus* 7: 101-102.

HARDING, D.P. & HARDING, R.S.O. (1982) A preliminary checklist of birds in the Kilimi area of northwest Sierra Leone. *Malimbus* 4: 64-68.

KALLAY, T.B. (1986) *The Growth of Njala. A Historical and Social Sketch of Njala as an Educational Institution up to 1980.* Njala University College, Njala.

SERLE, W. (1948a) Notes on the birds of Sierra Leone. Part I. *Ostrich* 19: 129-141.

SERLE, W. (1948b) Birds of Sierra Leone (Part II). *Ostrich* 19: 187-199.

SERLE, W. (1949a) Birds of Sierra Leone (Part III). *Ostrich* 20: 70-85.

SERLE, W. (1949b) Birds of Sierra Leone (Part IV). *Ostrich* 20: 114-126.