

## **Birds of the International Institute of Tropical Agriculture campus, a stronghold of avian diversity in the changing Ibadan area (Nigeria) over the last 50 years**

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### **Summary**

Data from a survey carried out between 2009 and 2013 of the bird species in the International Institute of Tropical Agriculture (IITA) campus, Ibadan, Nigeria, are compared with records from the area around Ibadan (including IITA) for the last 50 years. The IITA campus is an Important Bird Area (IBA) and includes a secondary dry semi-deciduous forest reserve of *c.* 360 ha, which is fenced and protected. The forested area is now being extended and enhanced by planting indigenous trees on degraded farm plots, and by enrichment planting in degraded areas of forest. In total, 398 bird species from at least 71 families are now recorded for the Ibadan area, of which 322 species have been recorded since 2002. The IBA holds at least 269 of these species (68 %) in 64 families, while the forest reserve holds *c.* 137 species. Seventy-five species were mist-netted in the IBA in our study. Twenty-five species plus 13 vagrants are new to the IBA and the Ibadan area in general, having not been detected prior to 2002. However, a minimum 68 species plus an additional 62 vagrant species reported in the Ibadan area by earlier studies have not been detected recently. We report an additional 29 biome-restricted species present in the Ibadan area (74 had been reported previously), 17 of which occur in the IBA. Diversity of some groups of large birds (*e.g.* Anatidae) has declined whereas many forest edge or generalist species (*e.g.* Double-spurred Francolin *Francolinus bicalcaratus*) have increased in abundance and range. Forest specialists, including many Pycnonotidae and Bucerotidae species, appear to have declined. The IITA campus, with its forest reserve, lakes and farm plots, is now an “island” IBA

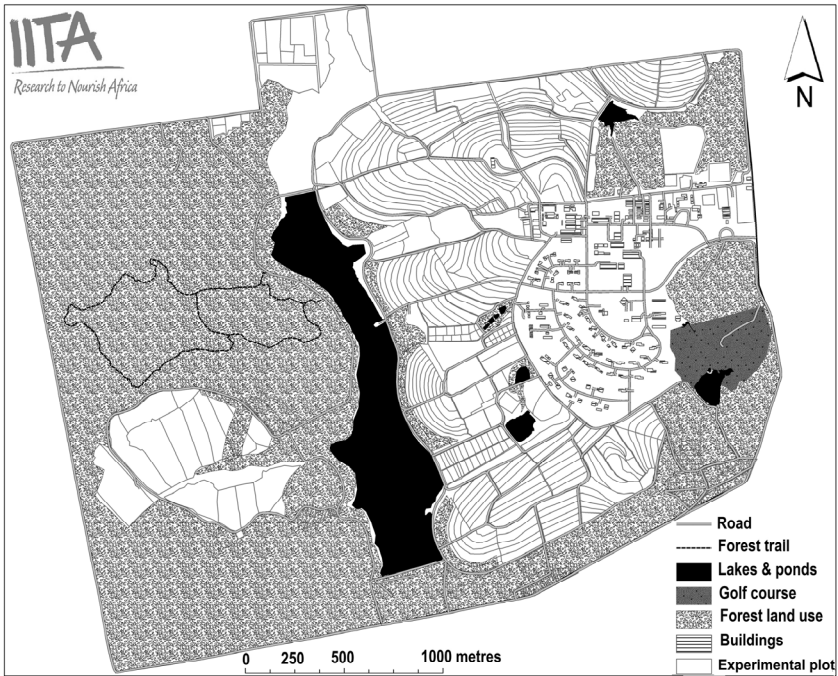
of great avifaunal diversity surrounded by a highly modified anthropogenic landscape unwelcoming for many of the birds that formerly inhabited the area.

### Résumé

**Les oiseaux du campus de l'Institut International d'Agriculture Tropicale, un bastion de la diversité de l'avifaune dans la région d'Ibadan (Nigeria), en évolution rapide au cours des 50 dernières années.** Les données d'une étude réalisée entre 2009 et 2013 sur les espèces d'oiseaux dans le campus de l'Institut International d'Agriculture Tropicale (IIAT), Ibadan, Nigeria, sont comparées avec des observations dans les alentours d'Ibadan (incluant l'IIAT) pendant les 50 dernières années. Le campus de l'IIAT est une Zone Importante pour la Conservation des Oiseaux (ZICO) et inclut une réserve de forêt secondaire sèche semi-décidue de *c.* 360 ha, clôturée et protégée. Cette zone de forêt est en cours d'extension et d'amélioration par la plantation d'espèces d'arbres indigènes sur des terrains agricoles dégradés et par des plantations visant à enrichir des zones dégradées de la forêt. Au total, 398 espèces d'oiseaux appartenant à au moins 71 familles sont aujourd'hui recensées pour la zone d'Ibadan, dont 322 espèces ont été observées depuis 2002. La ZICO héberge au moins 269 de ces espèces (68 %) en 64 familles, cependant que la réserve forestière en héberge *c.* 137 espèces. Soixante-quinze espèces ont été capturées au filet dans la ZICO au cours de notre étude. Vingt-cinq espèces plus 13 occasionnelles sont nouvelles pour la ZICO et la zone d'Ibadan en général, n'ayant pas été observées avant 2002. Cependant, au moins 68 espèces plus 62 espèces occasionnelles observées dans la zone d'Ibadan lors d'études antérieures n'ont pas été observées récemment. Nous mentionnons 29 espèces restreintes à un seul biome qui sont nouvelles dans la zone d'Ibadan (74 avaient été précédemment mentionnées), parmi lesquelles 17 sont présentes dans la ZICO. La diversité de quelques groupes de grands oiseaux (p. ex. Anatidae) a décliné alors que de nombreuses espèces péri-forestières ou généralistes (p.ex. Francolin à double éperon *Francolinus bicalcaratus*) a augmenté en abondance et zones de présence. Les espèces forestières, dont de nombreux Pycnonotidae et Bucerotidae, apparaissent en déclin. Le campus de l'IIAT, avec sa réserve forestière, des lacs et des terrains agricoles, est maintenant une "île" ZICO d'une grande diversité avifaunistique au milieu d'un paysage complètement modifié par l'homme et devenu inhospitalier pour de nombreux oiseaux autrefois présents dans la zone.

### Introduction

The campus of the International Institute of Tropical Agriculture (IITA) at Ibadan (7°30'N, 3°55'E) occupies *c.* 1000 ha (Fig. 1), including a 360 ha relict of secondary dry



**Figure 1.** The IITA campus.

semi-deciduous rainforest, the “forest reserve”. The rest of the campus, apart from the residential buildings, workshops and offices, consists of lakes, rice paddies, farm plots, marshes and bushes, which provide additional habitats for wildlife. The forest area on the campus is now being extended by reforestation and therefore the term “forest land use” on the map (Fig. 1) includes areas preserved as forest (since 1965) and areas recently reforested (during the last four years). The bird species at IITA include aquatic, savanna and forest species, and the campus has been recognised as an Important Bird Area (IBA: Ezealor 2001, A. Ezealor pers. comm.). This protected ecosystem on the IITA campus has encouraged visitors, research and collaboration; nonetheless it has also encouraged poachers, though hunting is prohibited on the site. However there is no detailed, published and up to date checklist of the avifauna of either the IITA campus as a whole (the IBA) or the forest reserve.

The Ibadan area was described in detail by Elgood & Sibley (1964). It has since grown into a large city where demand for fuel wood, timber for furniture and building, farmland and other uses has degraded the natural habitat of the area. Most areas mentioned by Elgood & Sibley (1964) and others (see Table 1 header) as holding high bird

diversity are now a shadow of their former selves. However in the midst of this changing environment, the IITA campus retains a rich diversity of resident and migratory birds.

Ibadan is located in an area divided between derived savanna and forest ecosystems. The IITA campus possesses areas of both these ecosystems, in the form of degraded farmland and secondary forest respectively. Early studies on the avifauna of the Ibadan area are numerous, though many were carried out prior to the establishment of the IITA headquarters in 1965, and the consequent protection of the site. One of the most complete early studies, which covered the general area in which IITA is now situated, was that on bird species distribution in Ibadan and southwest Nigeria by Elgood & Sibley (1964). This summarised earlier records for the Ibadan area, defined as within a 10-mile (16 km) radius of Mapo Hall at the centre of the city, and with an emphasis on birds found within and adjacent to the extensive grounds of the University of Ibadan (UI). Elgood & Sibley (1964) reported 266 bird species in total, and showed that the terrestrial element in the avifauna was evenly balanced between forest and savanna forms. The IITA and UI are < 7 km apart, separated by villages, though tracts of semi-natural vegetation are present. Nonetheless, some birds are capable of flying between the two sites daily as observed for Cattle Egrets and White-faced Whistling Ducks, which roost at UI and IITA respectively (pers. obs.). Also, the checklist of the birds of Nigeria (Elgood *et al.* 1994) gives numerous early records for Ibadan.

Since the establishment of the IITA campus, there have been only a few published records from within it. The only study specifically on IITA birds was by Ezealor (2001) for IBA designation (74 spp.). A single record for IITA was given by Ash (1990), 17 records by Elgood *et al.* (1994), seven more by Demey *et al.* (2003), and 29 others from a study of the effects of forest fragmentation on the endangered Ibadan Malimbe *M. ibadanensis* (Manu *et al.* 2005). Among earlier and more recent unpublished records within IITA are PH's from casual walks through the area during the last 25 years, and others listed in the header to Table 1. However, there remained a need for a thorough survey of the forest reserve and its environs within the IITA campus, to bring up to date and consolidate our knowledge of the bird species composition of the site. Our study therefore aims to provide an updated checklist of the avifauna at IITA. We also compare recent records from the IITA campus with earlier published and unpublished reports from within it, in order to investigate changes in the avifauna of the campus during the past 25 years. We also compare these records with earlier and more recent records from the surrounding Ibadan area, particularly UI, Eleyele, Ibadan Golf Club and Moor Plantation in order to determine how much of the diversity previously known to occur in Ibadan is being maintained by the protection of the IITA campus since 1965.

## Methods

Each month from 2009 to 2012 counts were made along nine transects, each of 1 km, of which three were placed along pre-cut walking trails in each of farmland, forest and

along the shore of the lake (forest and lake-shore transects shown on Fig. 2). In addition, counts were made from vantage points at rice paddies and lakes within IITA. Visits were made once each month of the year, all in the mornings between 6h00 and 12h00 and evenings between 15h00 and 19h00). On each visit, two or three transects were surveyed by TAA, walking at an average speed of *c.* 1 km/h (open habitats) or *c.* 0.5–0.7 km/h (forest interior, due to lower detection rates and need to spend more time on bird calls). Birds seen outside the transect times are also included. General abundance of species sighted during our study is classed as: Very Abundant (VA) >100 may be seen or heard in suitable habitat per day; Abundant (A) 11–100 may be seen or heard in suitable habitat per day; Common (C) 1–10 may be seen or heard in suitable habitat per day; Frequent (F) often seen but not every day; Uncommon (U) several records per year; Rare (R) one record per several years (resident species); Vagrant (V) one record per several years (non-residents).

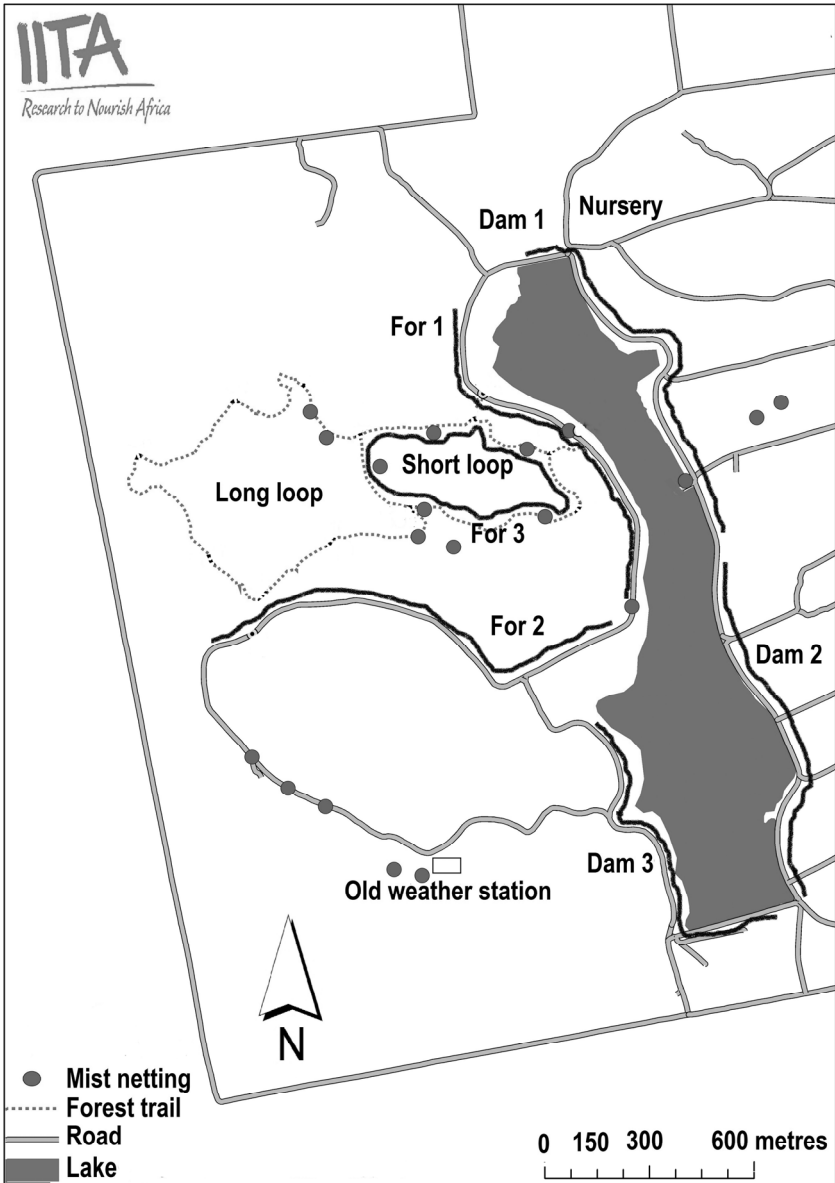
Excluding Vagrants, commoner species which were recorded in the area before 2002 but not seen between 2002 and 2013, including during this study, are regarded as “lost”, while those not recorded prior to 2002 are termed “gained”, even though some of them might have been present in the respective period but overlooked. Vagrants (as defined above) when lost or gained are represented by a V in either columns, and are not included in the totals of lost or gained. The bracket after the total lost or total gained gives the number of Vagrants excluded from the totals (Table 1).

A combination of wader nets (used for water birds) and mist nets (forest birds) with audio playback was used by TAA, TEA, TCO and GT (TAA was involved in all netting sessions) to trap birds at points shown on Fig. 2. Nets of varying lengths were used, ranging between 100 and 250 m and with height varying between 1.5 and 4 m. Netting sessions took place between 5h30 and 17h00, though sessions were shorter when the weather was not suitable for netting birds (rain or hot weather) or when the frequency of bird captures was low. Between five and 14 netting days were carried out each quarter, with rotation of nets to various habitats. Within each habitat type, nets were set up in different sites, and were moved after 2–7 days depending on trapping success. Net check interval was 20 min., to minimise heat stress and exhaustion of trapped birds. More netting time was spent in forest because of the greater probability of missing understorey birds during transect walks.

We collate and compare our 2009–13 transect and mist-netting data with earlier records, to reveal the trends in bird species composition over time. Taxonomic treatment follows Borrow & Demey (2001).

## Results

The birds recorded at IITA in the present study, and in the Ibadan area by other recent and earlier studies, are summarized in Table 1.



**Figure 2.** Location of transects (thick black lines labelled Dam 1–3 and For 1–3) and mist-netting points (ovals) within the IITA campus IBA.

**Table 1. Birds of the IITA campus IBA recorded in the present study, plus other recent and earlier records from IITA (sources underlined) and from the Ibadan area. Early records: Ban = Bannerman (1930–51); Wil = Willoughby (1949); S = Serle (1950); ES = Elgood & Sibley (1964); EFD = Elgood *et al.* (1973); EE/EE = Elgood *et al.* (1994); JB = Button (1965); DR = Robinson (1966); W = Wells (1966a, 1966b, 1967); B = Bass (1967); RP = Parker (1967, 1968, 1970); AP = Ashford & Parker (1968); P = Pettet (1968a, 1968b, 1975); A = Ashford (1968, 1969); NR = Robinson (1970); BB = Broadbent (1972); JA/JA = Ash (1990); AE = Ezealor (2001). Recent records: D = Demey *et al.* (2003); M = Manu *et al.* (2005); DB = D. Bengtsson (*in* Demey 2006); TEA = Adeyanju & Adeyanju (2012); JP = J. Peacock (pers. comm.); GH = G. Huk (pers. comm.); TH = Thibault *et al.* (2012); TAA = T.A. Adeyanju observations outside IITA. Records from P. Hall (PH) span a long period and each record is classed according to its precise date. “Gained” = species recorded in the Ibadan area since 2002 but not before; “lost” = species recorded before 2002 but not since. \* = species restricted to Guinea–Congo Rain-forest biome; \*\* = species restricted to Sudan–Guinea Savanna biome (Ezealor 2001); † = species observed in this study within the forest reserve; | ] = unconfirmed records.**

	Observed this study	Netted this study	Other recent records	Early records	Gained	Lost
<b>Podicipididae</b>						
<i>Tachybaptus ruficollis</i> Little Grebe			<u>GH (2012)</u>	ES (sporadic), B, BB		
<b>Phalacrocoracidae</b>						
<i>Phalacrocorax africanus</i> Long-tailed Cormorant	F <sup>1</sup>			ES		
<b>Anhingidae</b>						
<i>Anhinga rufa</i> African Darter				ES		X
<b>Ardeidae</b>						
<i>Botaurus stellaris</i> Great Bittern				<u>PH (2001)</u> , <u>EE</u>		V
<i>Ixobrychus minutus</i> Little Bittern	F	1		ES, BB		
<i>I. sturmii</i> Dwarf Bittern				<u>PH (1998)</u> , ES		X
<i>Gorsachius leuconotus</i> White-backed Night Heron				ES (once)		V
<i>Nycticorax nycticorax</i> Black-crowned Night Heron	F <sup>2</sup>			BB		
<i>Ardeola ralloides</i> Squacco Heron	A			ES		
<i>Bubulcus ibis</i> Cattle Egret	A		TAA(2009–14) <sup>3</sup>	ES, B		

<i>Butorides striata</i> Green-backed Heron	C	ES		
<i>Egretta ardesiaca</i> Black Heron		<u>PH</u> <sup>4</sup>		X
<i>E. gularis</i> Western Reef Heron		<u>EE</u>		V
<i>E. garzetta</i> Little Egret	U	ES		
<i>E. intermedia</i> Intermediate Egret	C	ES, EE		
<i>E. alba</i> Great Egret	C	ES		
<i>Ardea purpurea</i> Purple Heron†	C	ES		
<i>A. cinerea</i> Grey Heron	C	ES		
<i>A. melanocephala</i> Black-headed Heron	C	ES		
<b>Scopidae</b>				
<i>Scopus umbretta</i> Hamerkop		<u>PH, JP (2011)</u>	ES, P	
<b>Ciconiidae</b>				
<i>Mycteria ibis</i> Yellow-billed Stork			ES, DR	V
<i>Anastomus lamelligerus</i> African Openbill Stork			ES	V
<i>Ciconia abdimii</i> Abdim's Stork	V		ES	
<i>C. episcopus</i> Woolly-necked Stork	R		RP	
<i>C. ciconia</i> White stork		<u>PH (1998, 2000)</u>		V
<b>Threskiornithidae</b>				
<i>Plegadis falcinellus</i> Glossy Ibis	V <sup>5</sup>			V
<i>Bostrychia hagedash</i> Hadada Ibis	C <sup>6</sup>			X
<i>Threskiornis aethiopicus</i> Sacred Ibis			ES	V

<sup>1</sup>1–2 around the main lake, each year.

<sup>2</sup>Included juveniles.

<sup>3</sup>> 600 roost in UI Awba dam environs.

<sup>4</sup>Three occasions 1993–5.

<sup>5</sup>Once in 2010, a group of *c.* 6 birds.

<sup>6</sup>Favour the small lake area beside the golf course.



	Observed this study	Netted this study	Other recent records	Early records	Gained	Lost
<b>Anatidae</b>						
<i>Dendrocygna viduata</i> White-faced Whistling Duck	A <sup>7</sup>			Ban, EE		
<i>Plectropterus gambensis</i> Spur-winged Goose	F <sup>8</sup>			<u>PH</u> , Wil		
<i>Pteronetta hartlaubii</i> Hartlaub's Duck*				<u>PH (1995, a pair)</u> , <u>AE</u>		V
<i>Sarkidiornis melanotos</i> Knob-billed Goose				<u>PH (1987, 1993, 1995)</u> , Wil		V
<i>Nettapus auritus</i> African Pygmy Goose				<u>PH (until 1995)</u> , ES, ASH, <u>EE</u>		X
<i>Anas penelope</i> Eurasian Wigeon				Ban, EE		V
<i>A. crecca</i> Common Teal				<u>PH (Jan 1994, a pair)</u> , <u>EE</u>		V
<i>A. acuta</i> Northern Pintail				<u>PH (1989, 1998)</u>		V
<i>A. querquedula</i> Garganey				<u>PH (1993, 1994)</u> , <u>Ban</u> , <u>EE</u>		V
<i>Aythya nyroca</i> Ferruginous Duck				P		V
<b>Pandionidae</b>						
<i>Pandion haliaetus</i> Osprey†	U			ES, BB		
<b>Accipitridae</b>						
<i>Aviceda cuculoides</i> African Cuckoo Hawk†	U		<u>PH</u>	ES, EE		
<i>Pernis apivorus</i> European Honey Buzzard†			<u>PH (May 2010)</u>		V	
<i>Macheiramphus alcinus</i> Bat Hawk†	U <sup>9</sup>			ES		
<i>Elanus caeruleus</i> Black-shouldered Kite	F			ES		
<i>Milvus migrans</i> Yellow-billed Kite†	A			ES, W		
<i>Gypohierax angolensis</i> Palm-nut Vulture†	F			ES		
<i>Polyboroides typus</i> African Harrier Hawk†	U			ES		
<i>Circus macrourus</i> Pallid Harrier				Ban		V
<i>C. aeruginosus</i> Eurasian Marsh Harrier†	U			BB		
<i>Micronisus gabar</i> Gabar Goshawk	F				X	
<i>Accipiter tachiro</i> African Goshawk†	C	5		ES, NR		
<i>A. badius</i> Shikra	F			ES, B, NR		

<i>A. erythropus</i> Red-thighed Sparrowhawk*†			<u>PH</u>		<u>AE</u>		
<i>A. minullus</i> Little Sparrowhawk					ES		X
<i>A. melanoleucus</i> Black Sparrowhawk					<u>PH</u> , ES		X
<i>Urotriorchis macrourus</i> Long-tailed Hawk*†			<u>PH</u> , <u>D</u>		<u>AE</u>		
<i>Kaupifalco monogrammicus</i> Lizard Buzzard†	C	1			ES		
<i>Buteo auguralis</i> Red-necked Buzzard†	F				ES		
<i>Aquila rapax</i> Tawny Eagle					EE		V
<i>Hieraetus spilogaster</i> African Hawk-Eagle†	U		<u>PH (one)</u>				X
<i>Lophaetus occipitalis</i> Long-crested Eagle†	F		<u>PH</u>		ES, BB		
<b>Falconidae</b>							
<i>Falco tinnunculus</i> Common Kestrel	C				ES, EE		
<i>F. ardosiaceus</i> Grey Kestrel†	F				ES		
<i>F. cuvierii</i> African Hobby†	F				ES, BB, NR		
<i>F. biarmicus</i> Lanner†	U <sup>10</sup>				ES		
<b>Phasianidae</b>							
<i>Coturnix delegorguei</i> Harlequin Quail					JB, EE		V
<i>Ptilopachus petrosus</i> Stone Partridge					ES (rare, Ojo Hills)		X
<i>Francolinus lathamii</i> Latham's Francolin*					ES (once)		V
<i>F. squamatus</i> Scaly Francolin					<u>PH</u> <sup>11</sup>		V
<i>F. achantensis</i> Ahanta Francolin*†	C <sup>12</sup>				<u>AE</u> , Ban		
<i>F. bicalcaratus</i> Double-spurred Francolin†	VA <sup>13</sup>				ES		

<sup>7</sup>Present all year; though numbers previously observed to increase in dry season, large flocks observed in rains of 2011 and 2012.

<sup>8</sup>Bred in 2009 but in 2010 and 2011 only one individual observed. PH observed them in 1995 but breeding not confirmed.

<sup>9</sup>A pair nested within the IBA, 2009–13.

<sup>10</sup>Pairs in the IBA on very tall trees (> 40 m).

<sup>11</sup>Forest on the west bank of the main lake.

<sup>12</sup>Common at forest edges, only frequent in the interior.

<sup>13</sup>Mostly farmland but recently also present close to forest.

	Observed this study	Netted this study	Other recent records	Early records	Gained	Lost
<b>Numididae</b>						
<i>Guttera pucherani</i> Crested Guineafowl				EE		V
<i>Numida meleagris</i> Helmeted Guineafowl	F <sup>14</sup>				X	
<b>Turnicidae</b>						
<i>Turnix sylvatica</i> Little Buttonquail				ES (once)		V
<b>Rallidae</b>						
[ <i>Sarothrura elegans</i> Buff-spotted Flufftail			DB (Oct 2005)		V]	
<i>Crex egregia</i> African Crake	U			ES, W		
<i>Porzana porzana</i> Spotted Crake				<u>PH (pair, Feb 1996)</u>		V
<i>Aenigmatolimnas marginalis</i> Striped Crake				ES, W		X
<i>Amaurornis flavirostra</i> Black Crake	C	3		ES		
<i>Porphyrio alleni</i> Allen's Gallinule	C	3		ES, <u>EE</u>		
<i>P. porphyrio</i> Purple Swamphen				<u>PH (1999, 2000)</u>		V
<i>Gallinula chloropus</i> Common Moorhen	C	2		Ban		
<i>G. angulata</i> Lesser Moorhen	R	1		ES		
<b>Heliornithidae</b>						
<i>Podica senegalensis</i> African Finfoot			TEA	<u>PH (bred Aug 1999)</u> , ES, BB, W		
<b>Otididae</b>						
<i>Lissotis melanogaster</i> Black-bellied Bustard				W, ES		V
<b>Jacaniidae</b>						
<i>Actophilornis africanus</i> African Jacana	VA <sup>15</sup>	15		ES		
<b>Rostratulidae</b>						
<i>Rostratula benghalensis</i> Greater Painted-snipe	C <sup>16</sup>	13		ES, <u>EE</u>		
<b>Recurvirostridae</b>						
<i>Himantopus himantopus</i> Black-winged Stilt	F			ES, BB		

**Burhinidae***Burhinus senegalensis* Senegal Thick-kneeC<sup>17</sup>

ES

**Glareolidae***Pluvianus aegyptius* Egyptian Plover

V

PH, ES, EE*Glareola pratincola* Collared Pratincole

V (one, Jan 2011)

V

*G. cinerea* Grey PratincolePH (Sep 1994), ES, EE

V

**Charadriidae***Charadrius dubius* Little Ringed PloverPH<sup>18</sup>, ES (frequent)

X

*C. hiaticula* Common Ringed PloverPH (one, Sep 1994), ES (rare)

V

*C. forbesi* Forbes's Plover

F

ES, EE*Vanellus senegallus* African Wattled Lapwing

V

V

*V. albiceps* White-headed Lapwing

C

ES

*V. spinosus* Spur-winged Lapwing

A

5

EE**Scolopacidae***Calidris temminckii* Temminck's Stint

D

V

*C. ferruginea* Curlew SandpiperPH (one, Sep 1994)

V

*Philomachus pugnax* RuffPH (one, Oct 1996), EE (flock, Oct)

V

*Lymnocyptes minimus* Jack Snipe

U

X

*Gallinago gallinago* Common Snipe

U

2

ES, P, BB, EE

*G. media* Great Snipe

U

X

*Numenius arquata* Eurasian Curlew

ES (once)

V

*Tringa erythropus* Spotted RedshankPH

Ban, W

*T. totanus* Common Redshank

W

V

<sup>14</sup>Juveniles observed. Not recorded within the forest reserve, but feathers often found around cassava plots in IITA fields.<sup>15</sup>Juveniles in early rains.<sup>16</sup>A few resident all year and breeding. ES considered it a migrant, present Mar–Jun.<sup>17</sup>In mixed flocks of plovers at the IITA main lake.<sup>18</sup>A few present during the dry season every year 1987–95.

	Observed this study	Netted this study	Other recent records	Early records	Gained	Lost
<i>T. stagnatilis</i> Marsh Sandpiper				<u>PH (two, Oct 1994)</u>		V
<i>T. nebularia</i> Common Greenshank	V			W		
<i>T. ochropus</i> Green Sandpiper			<u>PH</u>	ES		
<i>T. glareola</i> Wood Sandpiper	F			ES		
<i>T. hypoleucos</i> Common Sandpiper	C <sup>19</sup>			ES		
<i>Arenaria interpres</i> Ruddy Turnstone				<u>PH (one, Sep 1991)</u>		V
<b>Laridae</b>						
<i>Larus ridibundus</i> Black-headed Gull			D		V	
<b>Sternidae</b>						
<i>Gelochelidon nilotica</i> Gull-billed Tern				<u>PH (one, Oct 1994)</u>		V
<i>Chlidonias leucopterus</i> White-winged Tern				<u>PH (1988, 1989, 2000), EE</u>		V
<b>Rhynchopidae</b>						
<i>Rynchops flavisrostris</i> African Skimmer				<u>EE (one)</u>		V
<b>Columbidae</b>						
<i>Treron calvus</i> African Green Pigeon†	C			ES		
<i>Turtur brehmeri</i> Blue-headed Wood Dove*†			<u>PH</u> <sup>20</sup>	<u>AE</u>		
<i>T. tympanistris</i> Tambourine Dove†	C	2		ES		
<i>T. afer</i> Blue-spotted Wood Dove†	A			ES, NR		
<i>Columba iriditorques</i> Western Bronze-naped Pigeon*				<u>PH</u> <sup>21</sup>		X
<i>C. guinea</i> Speckled Pigeon	C			<u>EE</u> <sup>22</sup>	X	
<i>Streptopelia semitorquata</i> Red-eyed Dove†	A <sup>23</sup>	1		ES		
<i>S. vinacea</i> Vinaceous Dove	R <sup>24</sup>		<u>PH</u>		X	
<i>S. senegalensis</i> Laughing Dove	C <sup>25</sup>			ES, NR		
<b>Psittacidae</b>						
<i>Poicephalus senegalus</i> Senegal Parrot**†	R		TAA	<u>AE</u> , ES, EE		
<i>Agapornis pullarius</i> Red-headed Lovebird				BB		X

**Musophagidae**

<i>Tauraco persa</i> Green Tauraco*†	C		<u>M</u>	<u>AE</u> , ES		
<i>Musophaga violacea</i> Violet Tauraco**				<u>AE</u> , P		V
<i>Crinifer piscator</i> Western Grey Plantain-eater†	C			ES, JA		
<b>Cuculidae</b>						
<i>Oxylophus jacobinus</i> Jacobin Cuckoo†	U					X
<i>O. levaillantii</i> Levaillant's Cuckoo†	U		<u>M</u>	ES, B		
<i>Clamator glandarius</i> Great Spotted Cuckoo	U			ES, B, P		
<i>Cuculus solitarius</i> Red-chested Cuckoo			<u>PH (few, rains)</u>			X
<i>C. clamosus</i> Black Cuckoo†	U					X
<i>C. canorus</i> Common Cuckoo				<u>PH (one, May 1998)</u>		V
<i>C. gularis</i> African Cuckoo†			<u>PH</u> <sup>26</sup>	W, BB		
<i>Chrysococcyx cupreus</i> African Emerald Cuckoo†	U		<u>M</u>	ES		
<i>C. klaas</i> Klaas's Cuckoo†	F			ES, NR		
<i>C. caprius</i> Didric Cuckoo†	F			ES, NR		
<i>Ceuthmochares aereus</i> Yellowbill†	C	1	<u>M</u>	ES		
<i>Centropus leucogaster</i> Black-throated Coucal*	R			<u>AE</u> , ES		
<i>C. grillii</i> Black Coucal†	U					X
<i>C. senegalensis</i> Senegal Coucal†	A <sup>27</sup>			ES, NR		

<sup>19</sup>Present throughout the year; numbers increase during dry season.

<sup>20</sup>Infrequent on west bank of main lake.

<sup>21</sup>Uncommonly heard during rains in 2000.

<sup>22</sup>First record Ibadan area 1960.

<sup>23</sup>Observed in all habitat types present.

<sup>24</sup>A savanna species, now occasionally sighted in IITA and environs.

<sup>25</sup>Only near residences.

<sup>26</sup>Occasional throughout dry season.

<sup>27</sup>Black variant "*epomidis*" Frequent.

	Observed this study	Netted this study	Other recent records	Early records	Gained	Lost
<i>C. monachus</i> Blue-headed Coucal†	F			ES		
<b>Tytonidae</b>						
<i>Tyto alba</i> Barn Owl	U		<u>PH</u>	ES		
<b>Strigidae</b>						
<i>Otus scops</i> European Scops Owl				ES, W, BB, EE		X
<i>Ptilopsis leucotis</i> Northern White-faced Owl†	C <sup>28</sup>	1		ES		
<i>Bubo africanus</i> Spotted Eagle Owl				ES		X
<i>B. poensis</i> Fraser's Eagle Owl*†	C (2011)			ES, EE		
<i>Glaucidium perlatum</i> Pearl-spotted Owlet			TAA	<u>PH</u> <sup>29</sup> , ES		
<i>Strix woodfordii</i> African Wood Owl	C			ES		
<b>Caprimulgidae</b>						
<i>Caprimulgus climacurus</i> Long-tailed Nightjar	C			ES, BB		
<i>C. nigriscapularis</i> Black-shouldered Nightjar*			<u>PH</u> <sup>30</sup>	<u>AE</u> , Ban, ES		
<i>C. inornatus</i> Plain Nightjar			<u>PH (dry season)</u>	ES		
<i>C. europaeus</i> European Nightjar	(once, 2010)			EE		
<i>Macrodipteryx longipennis</i> Standard-winged Nightjar	U			ES, BB		
<i>M. vexillarius</i> Pennant-winged Nightjar				RP		X
<b>Apodidae</b>						
<i>Telacanthura ussheri</i> Mottled Spinetail†	C			P		
<i>Cypsiurus parvus</i> African Palm Swift	C			ES		
<i>Apus pallidus</i> Pallid Swift				P		X
<i>A. apus</i> Common Swift				<u>PH (flock of 10)</u> , ES		X
<i>A. caffer</i> White-rumped Swift				<u>PH</u> <sup>31</sup>		X
<i>A. affinis</i> Little Swift	U			ES		
<b>Alcedinidae</b>						
<i>Halcyon leucocephala</i> Grey-headed Kingfisher	R			ES		

<i>H. malimbica</i> Blue-breasted Kingfisher†	C	2		ES, NR	
<i>H. senegalensis</i> Woodland Kingfisher†	A	5		ES, NR	
<i>H. helicuti</i> Striped Kingfisher				ES	X
<i>Ceyx lecontei</i> African Dwarf Kingfisher	(once)			JA, EE	
<i>C. pictus</i> African Pygmy Kingfisher	R	1		ES, NR	
<i>Alcedo cristata</i> Malachite kingfisher	C	3		ES	
<i>Megaceryle maxima</i> Giant Kingfisher	R			ES	
<i>Ceryle rudis</i> Pied Kingfisher	F			ES	
<b>Meropidae</b>					
<i>Merops pusillus</i> Little Bee-eater				ES	V
<i>M. albicollis</i> White-throated Bee-eater†	C			ES, NR	
<i>M. apiaster</i> European Bee-eater				P, EE	V
<i>M. malimbicus</i> Rosy Bee-eater*†	F		<u>PH</u>	<u>AE</u> , ES, P	
<i>M. nubicus</i> Northern Carmine Bee-eater				ES	V
<b>Coraciidae</b>					
<i>Coracias abyssinicus</i> Abyssinian Roller				ES (once), BB	V
[ <i>C. garrulus</i> European Roller				ES (rare), P, BB (possible)	V]
<i>Eurystomus gularis</i> Blue-throated Roller*†	R			<u>AE</u> , ES	
<i>E. glaucurus</i> Broad-billed Roller†	F		<u>M</u>	<u>EE</u>	
<b>Phoeniculidae</b>					
<i>Phoeniculus bollei</i> White-headed Wood-hoopoe				ES, EE	X
<i>P. purpureus</i> Green Wood-hoopoe†	F			ES, NR, EE	
<i>Rhinopomastus aterrimus</i> Black Wood-hoopoe				W, EE	X

<sup>28</sup>Three young collected in Jan 2014.

<sup>29</sup>Last observed in IITA in 2000, a pair calling throughout the rains.

<sup>30</sup>Throughout dry season, restricted to area on west bank of main lake.

<sup>31</sup>A pair breeding, Oct 1990.



	Observed this study	Netted this study	Other recent records	Early records	Gained	Lost
<b>Bucerotidae</b>						
<i>Tropicranus albocristatus</i> White-crested Hornbill*†	U		<u>M</u>	<u>AE</u> , ES, S		
<i>Tockus camurus</i> Red-billed Dwarf Hornbill				ES		X
<i>T. fasciatus</i> African Pied Hornbill*†	A			<u>AE</u> , ES		
<i>T. nasutus</i> African Grey Hornbill†	C			ES		
<i>Bycanistes fistulator</i> Piping Hornbill				<u>PH</u> <sup>32</sup> , ES		X
<b>Capitonidae</b>						
<i>Gymnobucco peli</i> Bristle-nosed Barbet*				<u>AE</u>		X
<i>G. calvus</i> Naked-faced Barbet*†			<u>M</u>	<u>PH</u> , <u>AE</u> , ES		X <sup>33</sup>
<i>Pogoniulus scolopaceus</i> Speckled Tinkerbird*†	C	3		<u>AE</u> , <u>EE</u>		
<i>P. atroflavus</i> Red-rumped Tinkerbird*†	C			EE		
<i>P. subsulphureus</i> Yellow-throated Tinkerbird*†	C			<u>AE</u> , ES		
<i>P. bilineatus</i> Yellow-rumped Tinkerbird†	C				X	
<i>P. chrysoconus</i> Yellow-fronted Tinkerbird				EE		X
<i>Tricholaema hirsuta</i> Hairy-breasted Barbet*†	F		<u>M</u>	<u>AE</u> , ES, EE		
<i>Lybius vieilloti</i> Vieillot's Barbet†	U			ES, EE		
<i>L. bidentatus</i> Double-toothed Barbet			TAA, TEA	ES, EE		
<i>Trachyphonus purpuratus</i> Yellow-billed Barbet*†	U			<u>AE</u> , ES		
<b>Indicatoridae</b>						
<i>Prodotiscus insignis</i> Cassin's Honeyguide*				ES		X
<i>Melichneutes robustus</i> Lyre-tailed Honeyguide*				<u>AE</u>		X
<i>Indicator maculatus</i> Spotted Honeyguide*†	C	1			X	
<i>I. indicator</i> Greater Honeyguide				ES, EE		X
<i>I. minor</i> Lesser Honeyguide			TAA (2013)	<u>PH</u> <sup>34</sup> , ES		
<i>I. exilis</i> Least Honeyguide				ES		X

**Picidae**

<i>Campethera punctuligera</i> Fine-spotted Woodpecker				ES, EE	X
<i>C. cailliautii</i> Green-backed Woodpecker				<u>PH (one, May 1998)</u>	V
<i>C. nivosa</i> Buff-spotted Woodpecker*†	F	6		ES (rare), EE	
<i>Dendropicos gabonensis</i> Gabon Woodpecker*				<u>PH<sup>35</sup>, AE</u>	V
<i>D. fuscescens</i> Cardinal woodpecker				EE	X
<i>D. pyrrhogaster</i> Fire-bellied Woodpecker*†	F	2	<u>PH</u>	<u>AE</u> , ES, EE	
<i>D. goertae</i> Grey Woodpecker			TAA	<u>PH (1987, 1988)</u> , ES	

**Eurylaemidae**

<i>Smithornis rufolateralis</i> Rufous-sided Broadbill*†	F	1			X
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**Pittidae**

<i>Pitta angolensis</i> African Pitta				W	X
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**Hirundinidae**

[ <i>Riparia paludicola</i> Plain Martin				A, EE	V]
<i>R. riparia</i> Common Sand Martin	F		TAA(2013)	<u>PH(Mar 1992, Oct 1994)</u> , BB, A, EE	
[ <i>R. cincta</i> Banded Martin				A (one)	V]
<i>Hirundo semirufa</i> Rufous-chested Swallow	F			ES, NR, A, EFD	
<i>H. sengalensis</i> Mosque Swallow				<u>PH(frequent all year)</u> , ES, A, EFD, EE	X
<i>H. abyssinica</i> Lesser Striped Swallow	C			ES, A, EFD	
<i>H. fuligula</i> Rock Martin	F				X
<i>H. smithii</i> Wire-tailed Swallow				ES	X
<i>H. leucosoma</i> Pied-winged Swallow*				<u>AE</u> , ES, EE	X
<i>H. aethiopica</i> Ethiopian Swallow	C			ES, A	

<sup>32</sup>A few, Jan–Mar 1999 and Oct 2000.

<sup>33</sup>Recorded by ES as frequent and by PH as a common breeder in the 1990s. Although M found it, seems now to have disappeared from the campus.

<sup>34</sup>A pair parasitizing Naked-faced Barbet nests, Feb 1995.

<sup>35</sup>A pair feeding chicks, Aug 1999.

	Observed this study	Netted this study	Other recent records	Early records	Gained	Lost
<i>H. rustica</i> Barn Swallow	F			ES, A		
<i>Delichon urbicum</i> House Martin				ES		X
<b>Motacillidae</b>						
<i>Motacilla flava</i> Yellow Wagtail	F			ES, B, A, NR		
<i>M. aguimp</i> African Pied Wagtail	C			ES, NR		
<i>Anthus leucophrys</i> Plain-backed Pipit	C			ES, EFD		
<i>A. pallidiventris</i> Long-legged Pipit			<u>TH (2012)</u>		V	
<i>A. trivialis</i> Tree Pipit				<u>PH</u> , P, BB		X
<i>A. cervinus</i> Red-throated Pipit				<u>PH</u> , P, BB, A		X
<i>Macronyx croceus</i> Yellow-throated Longclaw	F			ES, <u>EE</u>		
<b>Campephagidae</b>						
<i>Campephaga phoenicea</i> Red-shouldered Cuckoo-shrike†	U		<u>M</u>	ES, B, BB, EFD		
<i>Coracina azurea</i> Blue Cuckoo-shrike*				AE		X
<b>Pycnonotidae</b>						
<i>Andropadus virens</i> Little Greenbul*†	A	57		ES		
<i>A. gracilis</i> Little Grey Greenbul†	U	2	<u>M</u>	ES		
<i>A. curvirostris</i> Cameroon Sombre Greenbul*†	F	15		<u>AE</u>		
<i>A. gracilirostris</i> Slender-billed Greenbul†	C			ES (rare), EE		
<i>A. latirostris</i> Yellow-whiskered Greenbul†	A	109		ES		
<i>Baeopogon indicator</i> Honeyguide Greenbul*†	F	4		<u>AE</u> , ES		
<i>Ixonotus guttatus</i> Spotted Greenbul*				<u>AE</u> , <u>EE</u>		X
<i>Chlorocichla simplex</i> Simple Leaflove*†	C	1		<u>AE</u> , ES		
<i>C. flavicollis</i> Yellow-throated Leaflove†	U <sup>36</sup>			ES		
<i>Thescelocichla leucopleura</i> Swamp-palm Bulbul*†	C			<u>AE</u> , ES		
<i>Pyrhrurus scandens</i> Leaflove*†	C	1		<u>AE</u> , ES		
<i>Phyllastrephus baumanni</i> Baumann's Greenbul*†	U	10		<u>AE</u> , ES		

<i>P. icterinus</i> Icterine Greenbul*				<u>AE</u>	X
<i>P. albigularis</i> White-throated Greenbul*†	F	26		<u>AE</u> , ES	
<i>Bleda syndactylus</i> Red-tailed Bristlebill†				P, EE	X
<i>B. canicapillus</i> Grey-headed Bristlebill*†	C	87		<u>AE</u> , ES	
<i>Criniger barbatus</i> Western Bearded Greenbul*†			<u>M</u>	Ban, <u>AE</u> , EE	
<i>C. calurus</i> Red-tailed Greenbul*	U		<u>M</u>	<u>AE</u> , ES	
<i>C. ndussumensis</i> White-bearded Greenbul*				<u>AE</u>	X
<i>Pycnonotus barbatus</i> Common Bulbul†	A	3	<u>M</u>	ES, NR	
<i>Nicator chloris</i> Western Nicator*†	F	7		ES	
<b>Turdidae</b>					
<i>Stiphornis erythrorhox</i> Forest Robin*†	C	15		<u>AE</u> , ES (rare), BB	
<i>Luscinia megarhynchos</i> Common Nightingale			<u>PH (occasional)</u>	ES, P, A, EE	
<i>L. svecica</i> Bluethroat				A	V
<i>Cossypha cyanocamptor</i> Blue-shouldered Robin Chat*†	F	5		Ban, EE	
<i>C. niveicapilla</i> Snowy-crowned Robin Chat†	C	2		ES, NR, EFD	
<i>Neocossyphus poensis</i> White-tailed Ant Thrush†	F	4			X
<i>Stizorhina finschi</i> Finsch's Flycatcher Thrush				<u>PH</u> , ES	X
<i>Phoenicurus phoenicurus</i> Common Redstart				ES, A	X
<i>Saxicola rubetra</i> Whinchat	C			ES, A	
<i>Oenanthe oenanthe</i> Northern Wheatear				ES	V
<i>Monticola solitarius</i> Blue Rock Thrush				W	V
<i>Turdus pelios</i> African Thrush†	A	5		ES, NR, EFD	
<b>Sylviidae</b>					
<i>Melocichla mentalis</i> African Moustached Warbler	F			ES	
<i>Acrocephalus schoenobaenus</i> Sedge Warbler				A, BB	X
<i>A. scirpaceus</i> European Reed Warbler				EE	V
<i>A. baeticatus</i> African Reed Warbler				AP, A, BB, EE	X

<sup>36</sup>Savanna species termed common in Ibadan area by ES, now uncommon there; one pair observed in 2011, in farmbrush by main lake.

	Observed this study	Netted this study	Other recent records	Early records	Gained	Lost
<i>A. arundinaceus</i> Great Reed Warbler	F	2		ES, AP, A, BB		
<i>Hippolais polyglotta</i> Melodious Warbler			<u>PH</u>	ES, B, A, BB		
<i>H. icterina</i> Icterine Warbler				RP, BB		X
<i>C. erythroptus</i> Red-faced Cisticola	A	2		ES, A		
<i>C. lateralis</i> Whistling Cisticola				<u>PH</u> , ES		X
<i>C. anonymus</i> Chattering Cisticola*				<u>AE</u>		X
<i>C. galactotes</i> Winding Cisticola				<u>PH</u>		X
<i>C. brachypterus</i> Short-winged Cisticola	F			ES, A		
<i>C. juncidis</i> Zitting Cisticola				<u>PH</u>		X
<i>Prinia subflava</i> Tawny-flanked Prinia	F			<u>PH</u> , ES		
<i>Heliolais erythropterus</i> Red-winged Warbler				ES		X
<i>Camaroptera brachyura</i> Grey-backed Camaroptera	A	7	<u>D</u>	ES, S		
<i>C. superciliaris</i> Yellow-browed Camaroptera*†	C	2		<u>AE</u> , ES		
<i>C. chloronota</i> Olive-green Camaroptera*†	A	49	<u>D</u>	ES		
<i>Macrosphenus kempii</i> Kemp's Longbill*†	F	5			X	
<i>M. concolor</i> Grey Longbill*†	U	2		ES		
<i>Eremomela pusilla</i> Senegal Eremomela**	U			<u>AE</u> , ES		
<i>Sylvietta brachyura</i> Northern Crombec				EE		V
<i>S. virens</i> Green Crombec*†	C	3		<u>AE</u> , ES		
<i>S. denti</i> Lemon-bellied Crombec*†	F				X	
<i>Phylloscopus trochilus</i> Willow Warbler	F		<u>PH</u>	ES, A, NR		
<i>P. sibilatrix</i> Wood Warbler†	F			ES		
<i>Hypergerus atriceps</i> Oriole Warbler**†	F			<u>AE</u> , ES		
<i>Sylvia borin</i> Garden Warbler	U			ES, A, B, RP		
<i>S. communis</i> Common Whitethroat				BB		V
<i>Hylia prasina</i> Green Hylia*†	C	9		<u>AE</u> , ES		

**Muscicapidae**

<i>Fraseria ocreata</i> Fraser's Forest Flycatcher*†				<u>M</u>			X
<i>Melaenornis edolioides</i> Northern Black Flycatcher†	U (F in 2009)					B	
<i>Muscicapa striata</i> Spotted Flycatcher						<u>PH</u> , ES	X
<i>M. olivascens</i> Olivaceous Flycatcher*†	(once)						X
<i>M. comitata</i> Dusky-blue Flycatcher*†	U	1				<u>AE</u> , ES, B	
<i>M. tessmanni</i> Tessmann's Flycatcher*						<u>AE</u>	X
<i>Ficedula hypoleuca</i> Pied Flycatcher				<u>PH</u>		ES	

**Monarchidae**

<i>Erythrocerus mccallii</i> Chestnut-capped Flycatcher*						<u>PH (several, 1999, 2000)</u> , ES	X
<i>Trochocercus nitens</i> Blue-headed Crested Flycatcher*†	F	1				<u>AE</u> , ES	
<i>Terpsiphone viridis</i> African Paradise Flycatcher†				<u>PH</u> , <u>M</u>		ES, EFD	
<i>T. rufiventer</i> Red-bellied Paradise Flycatcher*†	A	41		<u>M</u>		ES, NR	

**Platysteiridae**

<i>Megabyas flammulatus</i> Shrike Flycatcher*						ES	X
<i>Bias musicus</i> Black-and-White Flycatcher						<u>PH</u> <sup>37</sup> , ES	X
<i>Dyaphorophya castanea</i> Chestnut Wattle-eye*†	F	1				<u>AE</u> , ES	
<i>D. blissetti</i> Red-cheeked Wattle-eye*†	C	21				<u>AE</u> , ES, BB	
<i>Platysteira cyanea</i> Common Wattle-eye†	F	1				ES, NR	
<i>Batis senegalensis</i> Senegal Batis						ES	X

**Timaliidae**

<i>Illadopsis rufipennis</i> Pale-breasted Illadopsis†	U					<u>PH</u> <sup>38</sup>	
<i>I. fulvescens</i> Brown Illadopsis*†	C	14				<u>AE</u> , ES, BB	
<i>I. puveli</i> Puvel's Illadopsis						S, EE	X
<i>Turdoides plebejus</i> Brown Babbler						ES	V

<sup>37</sup>Observed on several occasions in mixed parties.

<sup>38</sup>PH regarded it as common in mixed parties, more often heard than seen, and its call may initially have been confused with that of *I. fulvescens* which is common on the site.

	Observed this study	Netted this study	Other recent records	Early records	Gained	Lost
<i>T. reinwardtii</i> Blackcap Babbler				ES		X
<i>Phyllanthus atripennis</i> Capuchin Babbler*†	F	4		<u>AE</u> , ES		
<b>Remizidae</b>						
<i>Pholidornis rushiae</i> Tit-hylia			<u>PH (several, W bank)</u>		X	
<b>Nectariniidae</b>						
<i>Anthreptes rectirostris</i> Green Sunbird*				Ban		X
<i>Cyanomitra verticalis</i> Green-headed Sunbird	U			ES, NR		
<i>C. cyanolaema</i> Blue-throated Brown Sunbird*	U <sup>39</sup>	1		<u>PH</u> , <u>AE</u> , ES, B		
<i>C. obscura</i> Western Olive Sunbird†	C	75		ES		
<i>Chalcomitra adelberti</i> Buff-throated Sunbird*†	U			<u>AE</u> , ES		
<i>C. senegalensis</i> Scarlet-chested Sunbird	R				X	
<i>Hedydipna collaris</i> Collared Sunbird†	A	32	<u>M</u>	ES		
<i>Cinnyris chloropygius</i> Olive-bellied Sunbird†	F	1		ES, NR		
<i>C. minullus</i> Tiny Sunbird*†	U	5			X	
<i>C. venustus</i> Variable Sunbird	F			ES, NR, EFD		
<i>C. superbis</i> Superb sunbird*				<u>AE</u> , ES		X
<i>C. coccinigastrus</i> Splendid Sunbird*†	C	5		<u>AE</u> , ES, EFD		
<i>C. cupreus</i> Copper Sunbird	C	2		ES, NR		
<b>Zosteropidae</b>						
<i>Zosterops senegalensis</i> Yellow White-eye				<u>PH</u> & ES (common), NR		X
<b>Laniidae</b>						
<i>Lanius senator</i> Woodchat Shrike				<u>PH</u> , ES		X
<i>Corvinella corvina</i> Yellow-billed Shrike*	F			<u>AE</u> , ES, A, <u>EE</u>		
<b>Malaconotidae</b>						
<i>Malaconotus cruentus</i> Fiery-breasted Bush-Shrike*† (one group)			<u>PH (common)</u> ,	<u>AE</u> , ES, B, NR		
<i>M. multicolor</i> Many-coloured Bush-Shrike†	U		<u>D</u>	ES, NR, <u>EE</u>		

<i>M. sulfureopectus</i> Sulphur-breasted Bush-shrike†			<u>GH (2013)</u>	ES, EFD			
<i>Antichromus minutus</i> Marsh Tchagra				ES, EE		X	
<i>Tchagra senegalus</i> Black-crowned Tchagra				ES, B		X	
<i>Dryoscopus sabinii</i> Sabine's Puffback*†	U		<u>M</u>	<u>AE</u> , ES			
<i>D. gambensis</i> Northern Puffback			TAA (2013)	ES, NR			
<i>Laniarius aethiopicus</i> Tropical Boubou†	F			<u>EE</u>			
<b>Prionopidae</b>							
<i>Prionops plumatus</i> White Helmet-shrike				ES		X	
<i>P. caniceps</i> Red-billed Helmet-shrike*†	U		<u>M</u>	<u>AE</u> , EE			
<b>Oriolidae</b>							
<i>Oriolus nigrispennis</i> Black-winged Oriole*†	F		<u>M</u>	<u>AE</u> , ES			
<i>O. brachyrhynchus</i> Western Black-headed Oriole*†	F		<u>M</u>				
<i>O. auratus</i> African Golden Oriole			<u>PH (fairly common)</u>	ES, EFD			
<i>O. oriolus</i> Eurasian Golden Oriole				JA		V	
<b>Dicruridae</b>							
<i>Dicrurus ludwigii</i> Square-tailed Drongo†	F	2		ES			
<i>D. atripennis</i> Shining Drongo*†	F					X	
<i>D. adsimilis</i> Fork-tailed Drongo				JA			X
<i>D. modestus</i> Velvet-mantled Drongo† <sup>40</sup>	C	1	<u>M</u>	ES, NR			
<b>Corvidae</b>							
<i>Corvus albus</i> Pied Crow	A			ES, EFD			
<i>Ptilostomus afer</i> Piapiac**			TAA			V	
<b>Sturnidae</b>							
<i>Poeoptera lugubris</i> Narrow-tailed Starling†	F					X	
<i>Onychognathus fulgidus</i> Forest Chestnut-winged Starling*†	F			<u>AE</u> , ES, NR			

<sup>39</sup>PH recorded it as fairly common on west bank of main lake, though seems much less common now; one juvenile trapped.

<sup>40</sup>Many records were originally wrongly referred to the savanna species *D. adsimilis*, whereas the forest records should refer to *D. modestus*.



	Observed this study	Netted this study	Other recent records	Early records	Gained	Lost
<i>Lamprotornis purpureus</i> Purple Glossy Starling				ES		X
<i>L. splendidus</i> Splendid Glossy Starling	C			ES		
<i>L. caudatus</i> Long-tailed Glossy Starling	V (2009)				V	
<i>Cinnyricinclus leucogaster</i> Violet-backed Starling				<u>PH (dry season 1999)</u> , ES (once)		V
<b>Passeridae</b>						
<i>Passer griseus</i> Northern Grey-headed Sparrow	C			ES, NR		
<b>Ploecidae</b>						
<i>Plocepasser superciliosus</i> Chestnut-crowned Sparrow-Weaver*				Ban		X
<i>Ploceus nigricollis</i> Black-necked Weaver	C	38		NR		
<i>P. nigerrimus</i> Vieillot's Black Weaver*	U			<u>AE</u>		
<i>P. cucullatus</i> Village Weaver†	VA	50		ES		
<i>P. tricolor</i> Yellow-mantled Weaver*†	C		<u>D</u> , <u>M</u>	<u>AE</u> , ES		
<i>Malimbus nitens</i> Blue-billed Malimbe*†	A	17	<u>M</u>	<u>AE</u> , ES		
<i>M. malimbicus</i> Crested Malimbe*†			<u>PH (frequent)</u> , <u>M</u> , TAA (2013)	<u>AE</u> , ES		
<i>M. ibadanensis</i> Ibadan Malimbe*†	R		<u>M</u>	<u>PH</u> , <u>AE</u> , ES, <u>JA</u>		
<i>M. scutatus</i> Red-vented Malimbe*†	C		<u>M</u>	<u>AE</u> , ES, NR		
<i>M. rubricollis</i> Red-headed Malimbe*†	C		<u>M</u>	<u>AE</u> , ES, B		
<i>Quelea erythrops</i> Red-headed Quelea	F	10		ES, BB		
<i>Euplectes hordeaceus</i> Black-winged Bishop				Ban		X
<i>E. franciscanus</i> Northern Red Bishop	R			EE		
<i>E. macroura</i> Yellow-mantled Widowbird	U			ES, EFD, EE		
<i>Amblyospiza albifrons</i> Grosbeak Weaver	R			ES, B, BB		
<b>Estrildidae</b>						
<i>Nigrita canicapillus</i> Grey-crowned Negrofinch†	F		<u>M</u>	ES		
<i>N. luteifrons</i> Pale-fronted Negrofinch*				ES		X
<i>N. bicolor</i> Chestnut-breasted Negrofinch*†	F	1		<u>AE</u> , ES		

<i>N. fusconotus</i> White-breasted Negrofinch*†	F					X	
<i>Pyrenestes ostrinus</i> Black-bellied Seedcracker	U	1			ES, EE		
<i>Spermophaga haematina</i> Western Bluebill*†	C	38			<u>AE</u> , ES, BB		
<i>Mandingoa nitidula</i> Green Twinspot					Ban	X	
<i>Lagonosticta rufopicta</i> Bar-breasted Firefinch*†	U				<u>AE</u> , ES		
<i>L. rubricata</i> Blue-billed Firefinch					<u>PH (frequent)</u>	X	
<i>Estrilda melpoda</i> Orange-cheeked Waxbill†	A				ES, B, BB, EFD		
<i>Spermestes cucullatus</i> Bronze Mannikin†	C	10			ES		
<i>S. bicolor</i> Black-and-White Mannikin†	F				ES		
<b>Viduidae</b>							
<i>Vidua chalybeata</i> Village Indigobird				<u>PH (frequent)</u>	ES		
<i>V. macroura</i> Pin-tailed Whydah	C				ES		
<b>Fringillidae</b>							
<i>Serinus mozambicus</i> Yellow-fronted Canary				<u>PH (uncommon)</u>	<u>EE</u>		
<b>Emberizidae</b>							
<i>Emberiza cabanisi</i> Cabanis's Bunting					ES	X	
<b>Totals:</b> 71 families, 398 species (269 in IITA campus IBA; 138 in forest reserve)		233	75	74	361	25(13) 68(62)	

## Discussion

A total of 398 bird species from at least 71 families is now recorded for the Ibadan area, of which the IITA campus IBA holds at least 269 species (68 %) from 64 families, of which 75 species have been mist-netted during our study, while the forest reserve holds at least 138 species, of which 36 species were mist-netted there during our study. Twenty-five species plus 13 vagrants are new to the IITA campus IBA, having not been detected on the site prior to 2002. However, 68 species plus an additional 62 vagrant species reported in the Ibadan area or in IITA by earlier studies have not been detected on the site recently. In general, the diversity of some groups of large birds (*e.g.* Anatidae) has declined, although many of these were vagrants, whereas many forest edge or generalist species (*e.g.* *Francolinus bicalcaratus*) have increased in abundance and range. Forest specialists, including many Pycnonotidae and Bucerotidae, appear to have declined. The use of mist-nets aided the detection of several species previously unknown from the IITA campus, including *Indicator maculatus*, *Campethera nivosus*, *Smithornis rufolateralis*, *Andropadus gracilis*, *Neocossyphus poensis*, *Macrosphenus kempii*, *M. concolor* and *Cinnyris minullus*.

For the IBA, Ezealor (2001) listed 67 species restricted to the Guinea Congo Rainforest (GCR) biome and seven restricted to the Sudan Guinea Savanna (SGS) biome, with “restricted” meaning having 70 % or more of their range within a particular biome (Fishpool & Evans 2001). We report an additional 29 biome-restricted species of which 27 belong to the GCR (17 of which occur in the forest reserve) and two to the SGS, bringing the total GCR species in the Ibadan area to 94 (84 in the IBA plus 10 without), although nine (plus five classed as vagrants) of the biome-restricted species mentioned by Ezealor (2001) as occurring in the IBA have not been sighted recently (*i.e.* the GCR species *Pteronetta hartlaubii*, *Gymnobucco peli*, *G. calvus*, *Melichneutes robustus*, *Dendropicos gabonensis*, *Coracina azurea*, *Ixonotus guttatus*, *Phyllastrephus icterinus*, *Criniger ndussumensis*, *Cisticola anonymus*, *Muscicapa tessmanni* and *Cinnyris superbus*, and the SGS species *Musophaga violacea* and *Hirundo leucosoma*). These changes, if genuine losses, have occurred over little more than a decade. Ten GCR species, observed in Ibadan by earlier studies but not at the IBA by Ezealor (2001), have not been sighted recently in Ibadan either, *i.e.* *Francolinus lathami*, *Columba iriditorques*, *Prodotiscus insignis*, *Erythrocerus mcallii*, *Megabyas flammulatus*, *Illadopsis puveli*, *Turdoides reinwardtii*, *Anthreptes rectirostris*, *Plocepasser superciliosus* and *Nigrita luteifrons*. Nonetheless, the loss of these species depicts the importance of conserving sites such as IITA where their forest habitat is being preserved and now extended. Many of the forest fragments mentioned by Elgood & Sibley (1964) are now a shadow of their former selves, with some now occupied by plantations of fast-growing exotics such as *Gmelina*, *Tectona* and *Eucalyptus* species.

The 17 new GCR species now occurring at the IBA are *Bubo poensis*, *Pogoniulus atroflavus*, *Indicator maculatus*, *Campethera nivosus*, *Smithornis rufolateralis*, *Andropadus*

*gracilis*, *Cossypha cyanocampter*, *Neocossyphus poensis*, *Macrosphenus kempii*, *M. concolor*, *Sylvietta denti*, *Fraseria ocreata*, *Muscicapa olicascens*, *Cinnyris minullus*, *Oriolus brachyrhynchus*, *Dicrurus atripennis* and *Nigrita fusconotus*. The two new SGS species are *Eremomela pusilla* and *Ptilostomus afer*. The apparent arrival of these species at the site might be attributed to genuine colonisation or to their having been overlooked in previous surveys. The identification of most of these species was confirmed by mist netting, with ringing data available for verification.

The Ibadan area still holds many bird species, although some 68 species (plus 62 vagrants) recorded prior to 2002 have not been recorded recently and now appear to be missing from the area. Reasons may include the fact that some of these are inconspicuous species of high forest, not usually found outside this habitat. However, many others are conspicuous and would therefore not be easily overlooked. A few others may return as vagrants, while a good number are migrants and therefore recorded seasonally.

The comparison of recent with earlier records reveals significant changes in the avifauna of the IITA campus and the surrounding Ibadan area. Some of these changes might not be directly attributed to changes within the campus but rather to the ongoing destruction of forest patches outside it. The city of Ibadan is expanding and many of the patches of forest around the reserve have now been replaced by housing, and natural corridors are thinning out. On the other hand, the extension of the derived savanna up to the edges of the campus IBA, as a result of farmland degradation and clearance of forest and bush, has permitted colonization by an increasing number of birds formerly unknown to the area when it was forested.

Although the IITA campus IBA is protected by a fence from cattle grazers and loggers, the farming activities of the research institute itself are beginning to encroach into its forest reserve areas. Reasons given for this include low productivity from old farm plots, therefore new sites for farm plots are often taken from areas formerly covered by secondary forest. In support of conservation on the site, reforestation over the last four years has begun increasing the area covered by forest though it has not been made clear whether the forest is primarily managed to improve the productivity of soils for agriculture or to conserve soil and wildlife. A balance between land use and biological diversity needs to be agreed upon. Further studies are needed to monitor changes in avifaunal diversity along land use gradients including outside the IITA campus, and longer-term studies are required to monitor bird populations within the IBA.

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