

# **NIGERIAN CONSERVATION FOUNDATION**



**African Biosphere Reserves as pilot sites for monitoring and conservation of  
migratory birds (AfriBiRds)**

**First Afribird Monitoring Report**

## **SUMMARY**

The Afribird monitoring scheme is designed to monitor the trends of both resident and Palearctic bird species trend in Nigeria. To achieve this objective, Omo forest reserve was selected as one of the sights for the pilot surveys in West Africa. The first phase of the bird monitoring scheme began from the 22<sup>nd</sup> of July -1<sup>st</sup> of August, 2018. The team constituted six members from Nigerian Conservation Foundation (NCF), A. P Leventis Ornithological Research Institute and the Forestry Research Institute of Nigeria (FRIN). The team was divided into two groups and they covered twenty-one pentads and both Obsmapp and Birdlasser applications were used to collect data on the field. Locus map was also used to store the trails of transects covered. Two accounts were registered on observation.org and data was stored by both teams on each of these accounts. A total of ninety-three species belonging to thirty families were recorded in the twenty-one transects surveyed.

## **INTRODUCTION**

The first phase which targeted resident African resident species began from the 22<sup>nd</sup> of July through the 1<sup>st</sup> of August, 2018. Twenty-one pentads were surveyed out of the twenty-two proposed. Bird survey was carried out using point counts while data was collected using mobile phone applications. The participants made up of six persons were divided into two groups. Each group was tasked with surveying eleven pentads a total of twenty-two pentads. The team of six arrived at Omo forest on the 20<sup>th</sup> of July and after a day of trial, began surveying on the 22<sup>nd</sup> of July.

## 2.0 METHODOLOGY

### 2.1 Survey Area

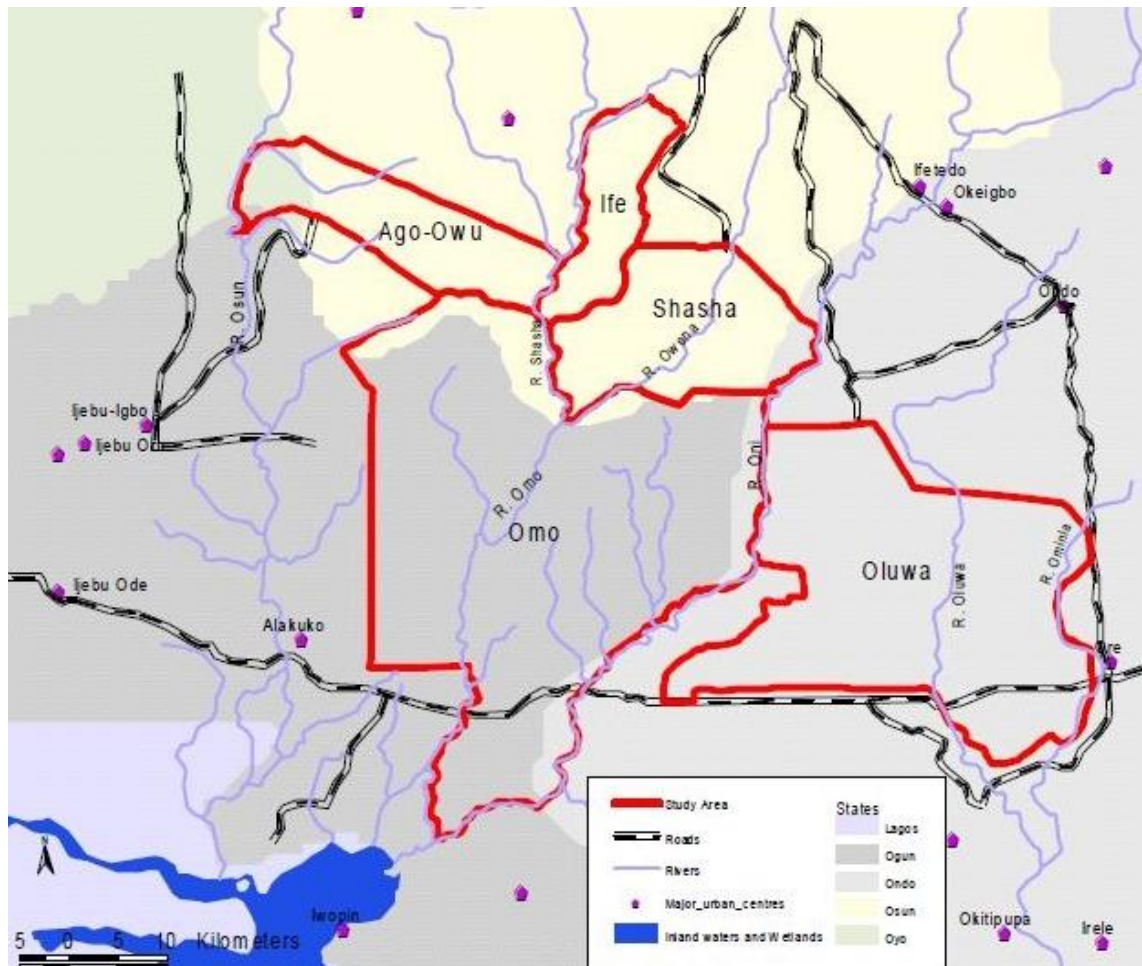


Figure 1: Omo forest reserve and other contiguous forest

Omo forest is one of the three semi-contiguous forest blocks covering about 3000km<sup>2</sup>, forming common boundaries with *Shasha* Forest Reserves in *Osun* State and *Oluwa* Forest Reserve in *Ondo* State. this forest is located between Latitudes 6° 35' - 7°05'N and Longitudes 4° 19' - 4° 40'E in the Ijebu-east and Ijebu - north Local Government Areas both of *Ogun* State, south-western *Nigeria* (Isichei, 1995). It covers a land mass of about 1300km<sup>2</sup>. In 1946, the government established a 4km<sup>2</sup> Strict Nature Reserve (SNR) within Omo Forest Reserve, which was upgraded to a Biosphere Reserve in 1977 by UNESCO (Okali and Ola-Adams, 1987). The terrain is undulating and elevation reaches about 300m above sea level (Ezealor, 2003). The Omo River is on the eastern border which has many tributaries draining into the reserve (Ezealor, 2003). The driest months of the year vary from November to March while rainfall begins from March to October, sometimes reaching November. The vegetation includes economic plantations of *Tectonagrandis*, *Gmelinaarborea* as well as amixed moist semi-evergreen rainforest which is largely secondary. There also exist within Omo forest, pockets of human enclaves that are involved in various forms of land use which includes farmlands (mostly *Theobroma cacao*), housing and other anthropogenic activities.

The Afribird project collaborated with the Nigerian Bird Atlas Project to divide the survey area into pentads. A total of twenty-two pentads were systematically selected within Omo and around its surrounding areas for this monitoring phase. Twenty-two pentads were selected and this depended on the manpower and resources available. The team surveyed one pentad daily between the hours of 06:30-11:00 daily. After each survey, the team travelled to the next pentad, this helped to reduce the distance travelled each morning. It also helped participants familiarize with new areas and surmount any challenge in terms of accessibility.

## **2.2 Bird Survey Method**

A modified 4.5km by 4.5km grid system was adapted from the 9km \* 9 km of the Nigerian Bird Atlas scheme. Point count was the main bird survey method (Bibby et al., 2000). A total transect length 2800m subdivided into 400m sections was surveyed for birds. Duration of fifteen minutes was spent at each point and bird species seen and heard were recorded on Obsmap and Birdlasser applications. This bird survey method was selected in order to standardize the time of survey and reduce the error that can arise from the difference in bird identification skills amongst participants. See table 1 for the list of pentads accessed during the exercise.

### **2.2.1 Habitat types**

There were four major habitat types encountered during the survey, these are: Secondary forest, *Gmelinaarborea* plantations, *Tectonagrandis* plantations, *Theobroma Cacao* farms, small holder farms (which includes small mixed cropped farms) and human settlements. The GPS points of these areas are all captured on Observation.org.

Table 1: Pentads accessed during the first phase of the Afribird monitoring exercise.

latSouth	latNorth	Pentad2	Pentad No.	Priority	Quadrant	Map name	Accessed/team leader	Order	Zone
6.9166666700000000	7.0000000000000000	0700c0425	9202	1	2	Abeku	Yes/Stella	1	Core
6.7500000000000000	6.8333333300000000	0650c0410	9394	3	2	Around J3	Yes/Stella	2	Core
6.7500000000000000	6.8333333300000000	0650c0420	9392	5	4	Orita/Ajebandele	Yes/Stella	3	Core
6.7500000000000000	6.8333333300000000	0650c0425	9391	6	1	OKO RICE RD, j4	Yes/Stella	4	Core
6.6666666700000000	6.7500000000000000	0645c0415	9484	7	2	Orita	Yes/Stella	5	Core
6.6666666700000000	6.7500000000000000	0645c0420	9483	8	4	Orita	Yes/Stella	6	Core
6.9166666700000000	7.0000000000000000	0700c0415	9204	10	4	AFTER TAUNGYA	Yes/Omo	7	Core
6.8333333300000000	6.9166666700000000	0655c0430	9297	12	4	Kajola/Lepete	Yes/Stella	8	Core
6.8333333300000000	6.9166666700000000	0655c0415	9300	13	2	Around Arija	Yes/Stella	9	Core
6.7500000000000000	6.8333333300000000	0650c0415	9393	14	4	Omo wood	Yes/Stella	10	Core
6.8333333300000000	6.9166666700000000	0655c0410	9301	15	3	Around J3	Yes/Omo	11	Core
6.8333333300000000	6.9166666700000000	0655c0420	9299	18	4	Mile 1	Yes/Omo	12	Core
6.7500000000000000	6.8333333300000000	0650c0405	9395	2	2	Around Hallmark	Yes/Stella	13	Sorrounding
6.5833333300000000	6.6666666700000000	0640c0430	9570	4	2	Ajebandele-kajola	Yes/Omo	14	Sorrounding
6.6666666700000000	6.7500000000000000	0645c0435	9480	5	4	Omotosho	Yes/Omo	15	Sorrounding
6.8333333300000000	6.9166666700000000	0655c0405	9302	11	1	Igbodu	Yes/Stella	16	Sorrounding
6.4166666700000000	6.5000000000000000	0630c0420	9742	14	1	Ibiadewatersside	Yes/Stella	17	Sorrounding
6.5000000000000000	6.5833333300000000	0635c0425	9659	15	3	Aiye	Yes/Omo	18	Sorrounding
6.7500000000000000	6.8333333300000000	0650c0400	9396	25	1	Ajebandele	Yes/Omo	19	Sorrounding
6.6666666700000000	6.7500000000000000	0645c0410	9485		1	Alakuko 1	Yes/Omo	20	Sorrounding
6.5000000000000000	6.5833333300000000	0635c0415	9661		1	Imobi-waterside	Yes/Omo	21	Sorrounding

### 2.3 Data Collection Tools

Birds were viewed using pairs of binoculars while data was entered into Birdlasser (Bird atlas app), Obsmap (observation.org app) and Locus Map. The three applications were downloaded from the Google play store. Data was shared between the Afribird and Nigerian Bird Atlas.

### 3.1 Result

Data was uploaded to observation.org where accounts have already been created. A total of Ninety-three species belonging to thirty families were recorded. See the list of species recorded in table 2. The second phase of the survey will be carried out at the dry season with Palearctic migrants and resident birds targeted.

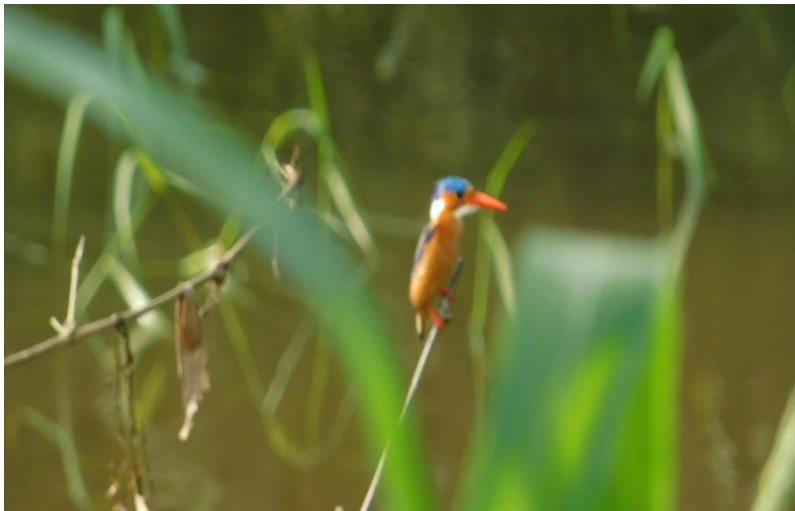


Figure 2: African Pygmy Kingfisher ( *CeyxPictus*)





Figure 3:African Harrier Hawk (*Polyboroides typus*)



Figure 4:African green Pigeon (*Treron calvus*)



Figure 5: Olive-bellied Sunbird (*Cinnyris chloropygius*)



Figure 6: Team crossing a pentad around Igboodu



Figure 7: Team crossing a pentad around Ajebandele



Table 1: Bird Species Recorded During the First Monitoring Exercise

Family	Common name	Scientific name
ACCIPITRIDAE	African Harrier hawk	<i>Polyboroidestypus</i>
	Yellow-billed Kite	<i>Milvus migrans</i>
	Black sparrowhawk	<i>Accipiter melanoleucus</i>
FALCONIDAE	Common Kestrel	<i>Falco tinnunculus</i>
ARDEIDAE	Cattle Egret	<i>Bubulcus ibis</i>
	Intermediate Egret	<i>Egretta intermedia</i>
PHASIANIDAE	Double-spurred Francolin	<i>Pternistis bicalcaratus</i>
COLUMBIDAE	African Green Pigeon	<i>Treron calvus</i>
	Tambourine Dove	<i>Turtur tympanistria</i>
	Blue-headed Wood Dove	<i>Turtur brehmeri</i>
	Blue-Spotted Wood Dove	<i>Turtur eifer</i>
	Red-Eyed Dove	<i>Streptopelia semitorquata</i>
PSITTACIDAE	African grey Parrot	<i>Psittacus erithacus</i>
MUSOPHAGIDAE	Yellow-Billed Turaco	<i>Tauracomacrorhynchus</i>
CUCULIDAE	Klass's Cuckoo	<i>Chrysococcyx klaas</i>
	African Emerald Cuckoo	<i>Chrysococcyx cupreus</i>
	Yellowbill	<i>Ceuthmochares aereus</i>
	Senegal Coucal	<i>Centropus senegalensis</i>
	Blue-headed Coucal	<i>Centropus monachus</i>
	Black-Throated Coucal	<i>Centropus leucogaster</i>
	Didric Cuckoo	<i>Chrysococcyx caprius</i>
	African Pygmy Kingfisher	<i>Ceyx pictus</i>
	Woodland Kingfisher	<i>Halcyon senegalensis</i>
ALCEDINIDAE	Blue breasted Kingfisher	<i>Halcyon malimbica</i>
	Chocolate-backed Kingfisher	<i>Halcyon badia</i>
	Red-Billed Dwarf Hornbill	<i>Tockus camurus</i>
	African Pied Hornbill	<i>Tockus fasciatus</i>
BUCEROTIDAE	Piping Hornbill	<i>Bycanistes fistulator</i>
	White-thighed Hornbill	<i>Bycanistes albotibialis</i>
	Speckled Tinkerbird	<i>Pogoniulus scolopaceus</i>
CAPITONIDAE	Yellow-rumped Tinkerbird	<i>Pogoniulus bilineatus</i>
	Yellow-throated Tinkerbird	<i>Pogoniulus subsulphureus</i>
	Hairy-breasted Barbet	<i>Tricholaema hirsuta</i>
	Red-rumped Tinkerbird	<i>Pogoniulus atroflavus</i>
	Naked-faced Barbet	<i>Gymnobucco calvus</i>
	Bristle-nosed Barbet	<i>Gymnobucco peli</i>
	Yellow-billed Barbet	<i>Trachylaemus purpuratus</i>
PICIDAE	Fire-bellied Woodpecker	<i>Dendropicos pyrrhogaster</i>
HIRUNDINIDAE	Mosque Swallow	<i>Hirundo senegalensis</i>
	Ethiopian Swallow	<i>Hirundo aethiopica</i>
MOTACILLIDAE	African Pied Wagtail	<i>Motacilla aguimp</i>
	Yellow Wagtail	<i>Motacilla flava</i>
APODIDAE	Little Swift	<i>Apus affinis</i>
PYCNONOTIDAE	African Palm Swift	<i>Cypsiurus parvus</i>
	Common Bulbul	<i>Pycnonotus barbatus</i>

	Swamp palm Bulbul	<i>Thescelocichlaleucopleura</i>
	Little Grey Greenbul	<i>Andropadusgracilis</i>
	Little Greenbul	<i>Andropadusvirens</i>
	Yellow-whiskered Greenbul	<i>Andropaduslatirostris</i>
	Red-tailed Greenbul	<i>Crinigercalurus</i>
	Spotted Greenbul	<i>Ixonotusguttatus</i>
	Slender-billed Greenbul	<i>Stelgidillasgracilirostris</i>
	Bauman's Olive Greenbul	<i>Phyllastrephusbaumanni</i>
NICATORIDAE	Western Nicator	<i>Nicatorchloris</i>
TURDIDAE	Forest Robin	<i>Striphrorniserythrorax</i>
	Fire-crested Alethe	<i>Alethe (diademata) castanea</i>
	Brown-chested Alethe	<i>Alethepoliocephala</i>
SYLVIIDAE	African thrush	<i>Turduspelios</i>
	Northern Crombec	<i>Sylvietta brachyuran</i>
	Green Crombec	<i>Sylvietaavirens</i>
	Kemp's longbill	<i>Macrosphenuskempi</i>
	Grey longbill	<i>Macrosphenusconcolor</i>
CISTICOLIDAE	Green Hylia	<i>Hyliaprasina</i>
	Grey-backed camaroptera	<i>Camaropteraabbrevicaudata</i>
	Yellow-browed camaroptera	<i>Camaropterasuperciliaris</i>
	Olive-green camaroptera	<i>Camaropteraachloronota</i>
PLATYSTEIRIDAE	Tawny-flanked prinia	<i>Priniasubflava</i>
	Chestnut wattle-eye	<i>Platysteiracastanea</i>
	Common wattle-eye	<i>Platysteiracyanea</i>
MONARCHIDAE	African Paradise Flycatcher	<i>Tersiphoneviridis</i>
	Red-bellied Paradise Flycatcher	<i>Tersiphonerufiventer</i>
	Dusky Crested Flycatcher	<i>Elminianigromitrata</i>
PELLORNEIDAE	Brown Illadopsis	<i>Illadopsisfulvescens</i>
	Puvel's Illadopsis	<i>Illadopsispuveli</i>
	Pale-breasted Illadopsis	<i>Illadopsisrufipennis</i>
NECTARINIDAE	Collared Sunbird	<i>Hedydipnacollaris</i>
	Blue-throated Brown Sunbird	<i>Cyanomitracyanolaema</i>
	Olive-bellied Sunbird	<i>Cinnyrischloropygius</i>
	Olive Sunbird	<i>Cyanomitraolivacea</i>
	Buff-throated Sunbird	<i>Chalcomitraadelderti</i>
MALACONOTIDAE	Tropical boubou	<i>Laniariusleucorhynchus</i>
ORIOOLIDAE	Western Black Headed Oriole	<i>Oriolusbracchyrhynchus</i>
	Black-winged Oriole	<i>Orioles nigripennis</i>
DICRUDIDAE	Pied Crow	<i>Corvus albus</i>
PLOCEIDAE	Blue-billed Malimbe	<i>Malimbusnitens</i>
	Village Weaver	<i>Ploceuscucullatus</i>
	Viellot's black Weaver	<i>Ploceusnigerrimus</i>
	Red-headed Malimbe	<i>Malimbusrubricollis</i>
	Red vented Malimbe	<i>Malimbusscutatus</i>
ESTRILDIDAE	Grey-headedNegrofinch	<i>Nigritacanicapillus</i>
	Chestnut-breasted Negrofinch	<i>Nigritabicolor</i>
	Pale-fronted Negrofinch	<i>Nigritaluteifrons</i>
VIDUIDAE	Pin-tailed whydah	<i>Viduamacroura</i>

#### **4.1 Observations and Recommendations**

1. Some pentads were not accessible due to heavy rainfall, rugged terrains and hostility of some communities. Some of these pentads will be substituted during future surveys to avoid altering the long-term standard protocols
2. Safe transportation mode proved challenging as movements were largely on motorbikes, fortunately, this was managed without any incidence.

#### **Winter Period Survey**

The next survey will target both wintering birds and local breeding birds between from the 14<sup>th</sup> of January through the 23<sup>rd</sup> of February, 2019.

#### **REFERENCES**

- Ezealor, A.U. (2003) Important Bird Areas in Africa and associated islands. Nigeria Birdlife report/Nigeria. pp 673-692.
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