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**CHECKLIST OF BIRD SPECIES OF JOS WILDLIFE PARK, NIGERIA**

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**ABSTRACT**

A research was undertaken to present the list of avifauna (bird) species in Jos Wildlife Park, Plateau State, Nigeria. The study area was divided into 3 basic habitats (Gallery, Savanna and Rocky). Five (5) transects of 200m long were located in each of the habitats. Results obtained gave 136 bird species belonging to 42 families (Ardeidae, Scopidae, Falconidae, Numididae, Phasianidae, Charadriidae, Columbidae, Musophagidae, Cuculidae, Caprimiqidae, Apodidae, Coludae, Alcedinidae and Meropidae among others. The birds were classified into the Non Passeriformes (54 bird species) having two or three toes forward with none at the back: *Bulbucus ibis* (cattle egret), *Scopus umbre eta* (Hamerkop), *falco tinnuncus* (common kestrel), *Francolinus bicalcaratus* (doubled-spurred francolin), *Burhinus senegalensis* (Senegal thick-knee), *Streptopelia hypopyrrha* (Adamawa turtle dove), *Streptopelia senegalensis* (laughing dove), *Ciculus gularis* (African cuckoo), *Dendropicos fuscescens* (cardinal woodpecker) among others. While the Passeriformes (82 bird's species) birds having three toes pointing forward and one back included *Hirundo rustica* (Barn swallow), *Cossypha polioptera* (grey-winged robin chat), *Myrmecocichla albifrons* (white-fronted black chat), *Sylvia communis* (Common white throat), *Cisticola cantans* (singing cisticola), *Terpsiphone viridis* (African paradise flycatcher), and *Batis senegalensis* (Senegal batis) The savanna and the Rocky habitats have more bird species than the Gallery habitat. The most common families among non passeriformes are the Columbidae and Indicatoridae (5) having five (5) species each respectively. While the most common families among the Passeriformes and the Sylviidae (21) with 21 species and the Turnidae with eight (8) species respectively. The study therefore, recommends that environmental gardening and the encouragement of tree planting in human inhabited areas of the bird be taken seriously in order to improve bird diversity.

**Keywords:** Check list, habitat, Passeriformes, non Passeriformes, Jos Wildlife Park

**Introduction**

In many bird monitoring surveys, no attempt is made to estimate bird densities or abundance. Instead, counts of one form or another are made, and these are assumed to correlate with bird density. Unless complete counts on sample plots are feasible, this approach can easily lead to false conclusions, because detectability of birds varies by species, habitat, observer and many

other factors. Trends in time of counts often reflect trends in detectability, rather than trends in abundance. Conclusions are further compromised when surveys are conducted at unrepresentative sites (Buckland *et al.*, 2008).

Birds and their diversity constitute a main part of the natural environment and play a functional role as agents of flower pollination, seed dispersal, source of food chain and agents in breaking seed dormancy (Nason, 1992; Ramchandra, 2013). Birds are good environmental indicators revealing the state of the ecosystems such as forest edges, wetlands and major river basins. They also act as dispersal agents in transferring nutrients and spores from one place to another during their migration and local movements (Niemi, 1985).

Birds constitute one of the common fauna of all habitat types, and because they are responsive to change, their diversity and abundance can reflect ecological trends in other biodiversity (Furness and Greenwood, 1993). Birds are among the most easily defined and readily recognized categories of animals, due to the presence of feather, which is unique to them. In addition to feathers, the development of forelimbs as wings, mostly for flight; feathered tail that serves for balancing, steering and lifting; toothless horny beak and skeleton exhibiting unique adaptations, mainly for flight and bipedal locomotion are characteristics of birds [Wallace and Mahan, 1975; Padian and Chiappe, 1998].

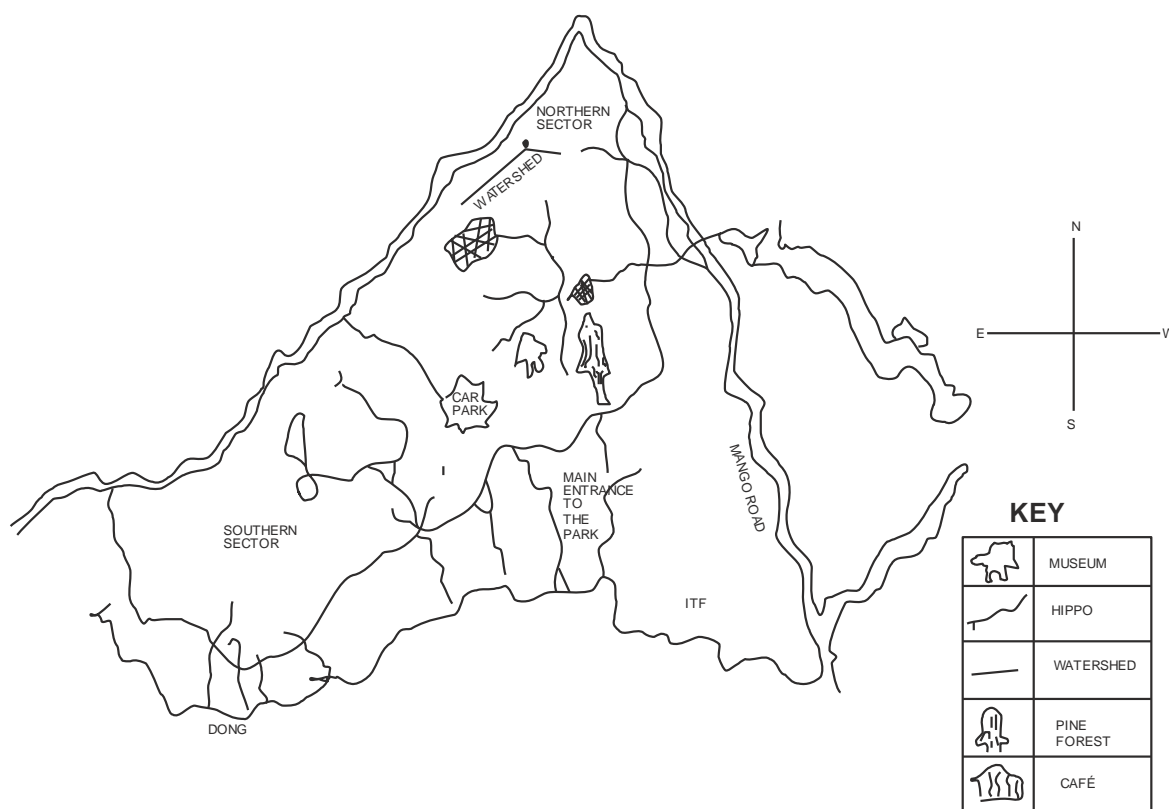
Birds are both visually and acoustically conspicuous organisms of most ecosystems. Because they are comparatively easy to identify, birds have received considerable attention of humans (Mclay, 1974; Whelan *et al.*, 2008). Although they occupy most of the earth's surface, most species are found only in particular regions and habitats, whereas others are cosmopolitan (Van Tyne and Begger, 1959). Patterns of abundance and distribution of birds are strongly related to environmental factors, which determine their presence and activity. The power of flight allows them to move easily through the air and yet they are perfectly adapted to every environment that fit their requirements for successful reproduction and survival (Welty, 1975; Estrella, 2007).

This study presents the list of species of birds in the three habitats of Jos Wildlife Park, Nigeria. This study assessed the abundance and diversity of avifauna species in Jos Wildlife Park, Nigeria.

## **MATERIALS AND METHODS**

### ***Location***

The study was conducted at Jos Wildlife Park, Plateau State, Nigeria. The park is located at the south west of Jos, on latitude 52°N and longitude 8° 53'E and covers an area of 8km<sup>2</sup> (Fig.1) (Jos Wildlife Park, 2014).



**Fig. 1. Map of Jos Wildlife Park, Nigeria**

Source: Jos Wildlife Park (2014)

### Study Design and Data collection

Reconnaissance survey was carried out in order to ascertain distances, width and birds' identification in the area following Marsden *et al.* (1999) and Marsden *et al.* (2001) guides. Five (5) transects of 200m long were located in within the Park. All bird surveying was aided by a

pair of binoculars and on the spot observation following Reynolds *et al.* (1980), Marsden *et al.* (2001) and Akosim *et al.* (2007) and Kwaga *et al.* (2016) methods.

Bird surveys were carried out between 06:30am and 09:30am and 4:00pm - 6:00pm. This period was seen as appropriate, because during the practical surveys, birds' activities tend to be high during morning and late afternoon. Birds were counted at each census station for a period of 3-10 minutes depending on the species, number and habitat involved. The distance from the recorder to each bird encountered by sight or by sound was estimated. The number of individuals in each encounter was recorded, where ascertainable. Records of birds in flight at census stations were omitted from the density because flying birds violate an assumption of the census method used based on Marsden *et al.* (2001)

## **Bird checklist**

A checklist of bird species was compiled in MS Word showing Families, species and habitat type in which the birds occur.

## **Results and Discussion**

The result of the species list of bird species is presented in Table 1. Results obtained indicated a total number of one hundred and thirty-six (136) bird species and 42 families. The family with the abundant species is Sylviidae while the families with fewer species consisted of the Ardadae, scorpidae and corvidae among others. The majority of the birds were observed during the morning session. This is an indication that birds' activities tends to be more in the morning than at any other time of the day. From the Table, the number of birds observed was more during the morning session than in the evening session. This is an indication that birds' activities tends to be more in the morning than at any other time of the day. Mayntz (2017) observed that birds spend most of their time [foraging](#), either finding food for themselves or to offer to a mate or growing hatchlings. One of the most active feeding times is early morning as the sun rises and warms up insects, making it easier for [insectivorous](#) birds to forage. At the same time, other species are also refueling after a long night. Late evening is similarly active for feeding birds as they store energy for the night.

Table 1: Bird species list in the study area

S/N	Family	Common Name	Scientific Name	Sessions	
				Mornin g	Evening
	<i>Non Passeriformes</i>				
1.	Ardeidae	Cattle egret	<i>Bulbulcus ibis</i>	x	-
2.	Scorpidae	Hamerkop	<i>Scorpus umbreta</i>	-	x
3.	Acctric	Hooded vulture	<i>Necrosyrte monachus</i>	x	-
		Black kite	<i>Milvus migis</i>	x	x
		Black-shouldered kite	<i>Elanus coerdeus</i>	-	x
		Shikra	<i>Accipiter bit</i>	x	x
4.	Falconidae	Common kestrel	<i>Falco tinnuncus</i>	x	x
		Foster kestrel	<i>Falco alopex</i>	x	-
		Lanner falcon	<i>Falco biarmicus</i>	x	x
		Grey kestrel	<i>Falco ardosiaces</i>	x	x
		Eurasion hobby	<i>Falco subbuteo</i>	x	x
5.	Numididae	Helmeted guinea fowl	<i>Numida meleagris</i>	x	x
6.	Phasianidae	Double-spurred francolin	<i>Francolinus bicalcaratus</i>	x	-
		Stone partridge	<i>Ptilopachus petrosus</i>	x	-
		Senegal thick-knee	<i>Burhinus senegalensis</i>	x	-
7.	Charadridae	Spur-winged plover	<i>Venellus spinosus</i>	x	x

		Africal wartlelover	<i>Venellus senegalensis</i>	-	x
8.	Columbidae	Speckled pigeon	<i>Columba guinea</i>	x	x
		Adamawa turtle dove	<i>Streptopelia hypopyrrha</i>	x	-
		Red-eyed dove	<i>Streptopelia semitorquata</i>	x	x
		Vinaceous dove	<i>Streptopelia vinacea</i>	x	-
		Laughing dove	<i>Streptopelia senegalensis</i>	x	-
9.	Psittacidae	Black-billed wood dove	<i>Turtue abyssinicus</i>	x	-
		Senegal parrot	<i>Poicephalus senegalus</i>	x	x
10.	Musophagidae	Western grey plantain-eater	<i>Crinifer piscator</i>	x	-
		Violet turaco	<i>Musopgaga violacea</i>	x	x
11.	Cuculiade	Klass cuckoo	<i>Crhysococcyx klass</i>	x	x
		Levailant's cuckoo	<i>Oxylophus levailanti</i>	-	x
		African cuckoo	<i>Cuculus gularis</i>	x	-
		Red-chested cuckoo	<i>Cuculus solitarius</i>	x	x
		Tytoni stingiure	<i>Centropis senegalensis</i>	x	x
		Barn owl	<i>Tyto aiha</i>	-	x
		Greyish eagle owl	<i>Bubolinus cinerascens</i>	-	x
12.	Caprimigidae	Long-tailed nightjar		-	x
		Freckled nightjar	<i>Caprimulgus stigma</i>	x	x

		Plain nightjar	<i>Caprimulgus inomatus</i>	-	x
		Standard-winged nightjar	<i>Caprimulgus longipennis</i>	x	x
13.	Apodidae	African palm shift	<i>Cypsiurus parvus</i>	-	x
14.	Coludae	Speckled mouse bird	<i>Callus striafus</i>	x	x
15.	Alcedinidae	African pygmy kin fisher	<i>Ceyx pictus</i>	x	x
		Grey-headed kingfisher	<i>Halcyon leucophala</i>	x	x
16.	Meropidae	Little bee-eater	<i>Merops pusillus</i>	x	-
		Red-throated bee-eater	<i>Merops bulocti</i>	x	x
		White-throated bee-eater	<i>Merops albicolits</i>	x	-
17.	Upupidae	Hoopoe	<i>Upupae pups</i>	x	-
18.	Bucerotdae	African grey hornbill	<i>Tockus nasutus</i>	x	-
		Red-billed hornbill	<i>Tockus erythothynchus</i>	x	-
19.	Capitonidae	Yellow-fronted tinker-bird	<i>Pogoniulus chrysoconus</i>	x	-
		Vieillot barbet	<i>Lyhius vieilloti</i>	x	-
20.	Indicatoridae	Bearded barbet	<i>Lybius rolleti</i>	x	-
		Greater honeyguide	<i>Indicator indicator</i>	x	-
		Fins-spotted woodpecker	<i>Campethera punctuigera</i>	x	x
		Grey woodpecker	<i>Dendropicus goertae</i>	x	-
		Cardinal woodpecker	<i>Dendropicus fuscescens</i>	x	x

	<b>Passeriformes</b>				
1.	Ijaudidae	Flapped lark		x	x
		Sun lark		x	x
		Crested lark		x	-
2.	Hirundinidae	Barn swallow	<i>Hirundo rustica</i>	x	-
		Ethiopian swallow	<i>Hirundo aethiopica</i>	x	-
		Red-rumped sawllow	<i>Hirundo daurica</i>	x	x
		Fanti saw-wing	<i>Psalidoprone obscure</i>	x	x
3.	Mihidae	Plain-blacked pipit	<i>Anthus leucophrys</i>	-	x
4.	Campephagidae	Yellowthroated long claw	<i>Macronyx croceus</i>	x	x
		Shouldered cuckoo-shrike	<i>Campephaga phoenica</i>	x	x
5.	Pycnonotidae	Common bulbul	<i>Pycnonotus barbatus</i>	x	x
		Yellow-throated leaf-ove	<i>Chiorocichia flavicos</i>	x	-
		Leaflove	<i>Pyrrhurus scandens</i>	x	-
6.	Turdidae	African thrush	<i>Turdus pelios</i>	x	x
		Grey-winged robin chat	<i>Cossypha polioptera</i>	x	-
		Snow-crowned robin chat	<i>Cossypha niveicapilla</i>	x	-
		White-crowned robin chat	<i>Cossypha albicapilla</i>	x	x
		Whinchat	<i>Saxicola rubetra</i>	x	-
		White-fronted black chat	<i>Myrmecocichla albifrons</i>	x	-



		Familiar chat	<i>Cercomela familiaris</i>	x	-
		Northern ant-eater chat	<i>Myrmecocichla aethiops</i>	x	-
7.	Sylviidae	African mustached warbler	<i>Melocichla mentalis</i>	x	-
		Icterine warbler	<i>Hippolais icterina</i>	x	-
		Garden warbler	<i>Sylvia bonn</i>	x	-
		Common white throat	<i>Sylvia communis</i>	x	-
		Black cap	<i>Sylvia africapila</i>	x	x
		Wood warbler	<i>Phylloscopus sibilatrix</i>	x	x
		Willow warbler	<i>Phylloscopus trochilus</i>	x	-
		Senegal eremomela	<i>Eremomela pusiha</i>	x	-
		Northern crombec	<i>Sylvietta brachyuran</i>	x	x
		Oriole warbler	<i>Hypergerus atriceps</i>	x	x
		Grey-backed cametroptera	<i>Cametroptera brachyuran</i>	x	x
		Tawny-flnaked prinia	<i>Prinia subflava</i>	x	-
		Zitting cisticola	-	x	-
		Short-winged cisticola	<i>Cisticola aberans</i>	x	x
		Rock-loving cisticola	<i>Cistocola brachypterus</i>	x	x
		Singing cisticola	<i>Cisticola cantans</i>	x	-
		Winding cisticola	<i>Cisticola galactofes</i>	x	-
		Cracking cisticola	<i>Cisticola natalensis</i>	x	-
		Spotted flycatcher	<i>Muscicapa striata</i>	x	x

		Pale flycatcher	<i>Mlaenormis pallidus</i>	x	x
		Pied flycatcher	<i>Ficedula hypoleuca</i>	x	x
8.	Monarchidae	African paradise flycatcher	<i>Terpsiphone viridis</i>	x	-
		African blue flycatcher	<i>Elmina ion gicauda</i>	x	-
9.	Platysteiridae	Senegal batis	<i>Batis senegalensis</i>	x	-
		Common wartle-eye	<i>Platysteira cyanea</i>	-	x
		White-shouldered black tit	<i>Parus (lecomelas) guineensis</i>	x	-
10.	Zosteropidae	Yellow white-eye	<i>Zosterops senegalensis</i>	x	-
11.	Timalidae	Black cap babbler	<i>Turdoides reinwardtii</i>	x	-
		Brown barbiers	<i>Turdoides plebejus</i>	x	-
12.	Nectarinidae	Scarlet-chested sunbird	<i>Chalcomira senegalensis</i>	x	-
		Variable sunbird	<i>Cinnyris venustus</i>	x	-
		Copper sunbird	<i>Cinnyris cupreus</i>	x	-
13.	Lanidae	Yellow-billed shrike	<i>Corvinella corvine</i>	x	-
14.	Malaconotidae	Sulphur-breasted shrike	<i>Malaconotus sulfureopecturs</i>	x	x
		Grey-headed bush shrike	<i>Malaconotus blanchoti</i>	x	x
		Northern puff back	<i>Drysocopus gambensis</i>	x	-
		Tropical boubou	<i>Laniarius aethipicus</i>	x	x
		Yellow-crowned gonolek	<i>Lanlanus babarus</i>	x	x
		Black-crowned tchagr	<i>Tchagra senegalensis</i>	x	x

15.	Oriolidae	African golden oriole	<i>Orblus auratus</i>	x	x
16.	Corvidae	Piapiac	<i>Ptliostomus afer</i>	-	-
		Peid crow	<i>Carvus albus</i>	x	x
17.	Sturnidae	Neumann's starling	<i>Onchognathus Neumann</i>	x	x
		Purple glossy starling	<i>Lampotornis purpureus</i>	x	-
18.	Buphagidae	Yellow-gilled ox-pecker	<i>Buphagus africanus</i>	x	-
19.	Passeridae	Bush petronia	<i>Petronia dentata</i>	x	-
		Chestnut-crowned sparrow weaver	<i>Plocepasser superciliosus</i>	x	-
20.	Ploceidae	Little weaver	<i>Ploceus luteolus</i>	x	-
		Heuglins masked weaver	<i>Ploceus auratium</i>	-	x
		Village weaver	<i>Ploceus cucullatus</i>	x	-
		Black-necked weaver	<i>Ploceus nigricollis</i>	x	x
		Black-winged bishop	<i>Euplectes hordeaceus</i>	x	x
		Northen red bishop	<i>Euplectus franciscanus</i>	x	-
		Yellow-mantled widow bird	<i>Euplectus macroura</i>	x	x
21.	Estrildidae	Lavender waxbill	<i>Estrilda caeruslescens</i>	x	x
		Red-cheeked codoibleu	<i>Uraeginthus bengalus</i>	x	-
		Agfrican qulal finch	<i>Ortysgospiza atricollis</i>	-	x
		Red-billed firefinch	<i>Lagonosticta sanguinodorsalis</i>	x	-

		Rock firrefinch	<i>Lagonosticta sanguinodorsalis</i>	x	-
		Bronze manniki	<i>Spermestes cucullata</i>	x	-
22.	Emberizidae	Cinnamon-breasted rock bunting	<i>Emberiza tahapisi</i>	x	x

Source: Field Survey, 2016

### CONCLUSION

The study presented a list bird species in Jos wildlife Park, Nigeria. One hundred and thirty-six (136) bird species belonging to 42 families were observed during the morning and evening session. The birds were classified into the Non Passeriformes (54 bird species) having two or three toes forward with none at the back and the Passeriformes (82 birds species) birds having three toes pointing forward and one back. A hundred and thirty-four bird species were sighted in the morning while sixty-eight were observed in the evening. The trend of bird species at the Park shows a decline in the species due to indiscriminate fire, overgrazing, industrial pollution, deforestation and industrialisation. If the Park is to achieve it full potentials, proper management and enforcement of laws must be paramount for success.

### RECOMMENDATIONS

In view of the foregoing, the following recommendations are made:

- i. Proper management plan that should take into consideration the need to improve bird number and species should be developed.
- ii. Functional laws and effective surveillance should be put in place to control illegal encroachment by farmers, herders and urbanisation.

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