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## A Check list of the Avifauna of Loi-Bher Wildlife Park Islamabad

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## A CHECK LIST OF THE AVIFAUNA OF LOI-BHER WILDLIFE PARK ISLAMABAD

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### ABSTRACT

Despite its relatively small area, Loi-Bher wild life park is quite diverse with respect to the avifauna. The common bird species found in the area are: bulbuls, pies, pigeons, parakeets, mynas, babblers, warblers, rollers, bee-eaters, doves, crows and pheasants. Over 40 species of Broad-leaved trees, shrubs and woody climbers have been identified in this zone e.g. *Acacia modesta*, *Morus alba*, *Bauhinia variegata*, *Punica granatum*, *Aristida cynnantha*, *Acacia nilotica*, *Dalbergia sisso*, etc. Human settlements in designated natural areas of the Loi-Bher wild life park constitute the most serious threat to the park resources.

**Keywords:** Wildlife, Avifauna, Biodiversity, Passerines

### INTRODUCTION

Biodiversity may be referred to as the “Sum total of genotypes of organisms” (Wilson, 1992). The term includes all species of plants, animals and microorganisms, their genetic material and the ecosystem of which they are part. Flora (plants) and fauna (animals) of any region are of great importance (Trivedi and Sharma, 2003). The study of birds is called “*Ornithology*”. Avifauna that includes birds is of great importance.

Wildlife Park, Loi-Bher, Rawalpindi was established in 1996. The park has been created in the natural forest. The total area is 887 acres which constitutes a remarkable diversity of ecological, cultural, and recreational environments. Despite its relatively small area, Loi-Bher wild life park is quite diverse with respect to the avifauna. The common bird species found in the area are: bulbuls, pies, pigeons, parakeets, mynas, babblers, warblers, rollers, bee-eaters, doves, crows, pheasants. Perhaps the most interesting ecological zone in Pakistan, this zone includes Karot valley, Kahuta, the lower of Lehtrar valley and many of the side ravines in the Margalla hills to the west of Islamabad. Over 40 species of broad-leaved trees, shrubs and woody climbers have been

identified in this zone e.g. *Acacia modesta*, *Morus alba*, *Bauhinia variegata*, *Punica granatum*, *Aristida cynnantha*, *Acacia nilotica*, *Dalbergia sisso*, etc.

Human settlements in designated natural areas of the Loi-Bher wild life park constitute the most serious threat to the park resources. Besides this, livestock grazing, cutting of trees, gathering of fodder for animals, capturing and killing of birds and native animals for hunting and for sport. Expansion of villages and settlements in park area are also one of the threats to the park. Encroachments from these urban areas pose serious threats to the integrity of the wilderness environment. Similarly, construction of roads, expansion of Bahria Town, Doctor Colony, and several other housing schemes are serious threats to the stability of the park. Birds are shy in nature. Hence, even a little change in the environment results in the disturbance of their habitat as they migrate to different places. In this way, many species become extinct or migrate to the other areas.

### MATERIALS AND METHODS

Loi Bher wild life park was selected as the study area. Field visits were carried out for two months, three days a week. Surveyed area was divided into 18 different spots. Each spot was 200 meters apart from

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other. Binoculars and Cameras (Still & Movie) were used to study the birds. Birds were identified by following Roberts (1991). Point count method was used to estimate the bird density.

### POINT COUNT METHOD

Birds were surveyed using 10-minute point count located 200 m apart. Point counts of a fixed 25 m

**TABLE: 1 Point count method**

| Birds        | No. | Birds             | No. |
|--------------|-----|-------------------|-----|
| Crow         | 16  | small sparrow     | 5   |
| Cattle egret | 7   | Partridge         | 1   |
| Drongo       | 5   | spotted dove      | 3   |
| Black quail  | 3   | Tree pie          | 1   |
| Myna         | 10  | Bulbul red wented | 3   |
| Owl          | 1   | Common dove       | 2   |
| Eagle        | 1   | Kite              | 4   |
| Shrike black | 2   | Red turtle dove   | 4   |
| Pond heron   | 1   | White stork       | 1   |

radius were taken to allow comparability among widely different habitat types and to maximize the probability that bird count reflect vegetation at the point. However, all birds detected beyond 25 m were also recorded to allow total detection of species. Record male, female, or unknown for each individual bird was detected. Care was taken to distinguish between birds inside and the area was divided into following 18 plots for management/data collection point of view:

#### Plots / Spots:

1. Fields
2. Railway track
3. Nala Korang
4. Main gate
5. Near nalka
6. Para deer
7. Lake

8. Café area
9. Meadow area
10. Rest view
11. Near steepness
12. Near top
13. Neil guy area
14. Bulbul area
15. Mid lion safari
16. Turn to safari
17. Doctor colony
18. End of safari

The following information was recorded once for each point count on prescribed sheet:

Name of the plot in which the point count was conducted. The radius in meters of the point count circles used (once for each point count). Date upon which the point count was conducted in the format: *first digit = month, second and third digit = day* (e.g. August 2, 2006 would be recorded as 802). Density was calculated (ref) by the Formula:

$$\text{DENSITY} = n_1 + n_2 / \pi r^2 m [\log_e (n_1 + n_2 / n_2)]$$

Where,

r = radius of first zone

n<sub>1</sub> = number of birds counted within r

n<sub>2</sub> = number of birds counted beyond r

m = number of replicate points in the set

Survey was carried out and point count method was adopted as explained earlier. Following is the sketch of one survey.

#### Method: Point count method

Date 816 Wednesday Plot 1: Fields Radius: 25 / 50m Time 06:12 am

### RESULTS AND DISCUSSION

Seventy birds were recorded during the study period in Loi Bher Wildlife Park. Following are the results of the study with regard to the formulation of checklist of avifauna of Loi-Bher wildlife park, Islamabad. They were identified on the basis of basis of photos, field notes and consulting with the field guides of T.J. Roberts.

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## Non-Passerines

### 1. Family *Podicipedidae*

*Podiceps cristatus* (Great crested grebe)

It has not been found in this area but was observed by (Roberts, 1991).

### 2. Family *Phalacrocoracidae*

*Phalacrocorax carbo sinensis* (Great Eurasian cormorant)

It has not been found in the area but was reported by (Roberts, 1991).

### 3. Family *Aredidae*

*Ixobrychus cinnamomeus* (Chestnut bittern)

It has not been found in the area but was reported by (Roberts, 1991; Corfield, 1983).

*Ardeola grayii* (Indian pond heron)

It is commonly found in the area and was also confirmed by (Waite, 1938; Whistler, 1916).

*Bubulcus ibis* (Cattle egret)

It is abundantly found in the study area and was also reported by (Roberts, 1991; Waite, 1938).

*Egretta garzetta* (Little egret)

It is commonly found in the area and was also reported by (Roberts, 1991; Holmes, 1983).

*Egretta intermedia* (Intermediate egret)

It has not been found in the study area but was reported by (Corfield, 1983; Waite, 1938).

*Egretta Alba* (Large egret)

It has not been found in the area but was reported by (Whistler, 1938).

*Area cindered* (Grey heron)

It has been found in the area but was reported by (Roberts, 1991; Corfield, 1983).

### 4. Family *Ciconiidae*

*Ciconia nigra* (Black stork)

It has not been found in the area but was reported by (Roberts, 1991; Corfield, 1983).

*Ciconiia episcopus* (White necked stork)

It has not been found in the area but was reported by (Waite, 1938).

### 5. Family *Threskiomithidae*

*Platalea leucorodia* (Spoonbill)

It has not been found in the area but was reported by (Corfield, 1983).

### 6. Family *Anatidae*

*Anas strepera* (Gadwall)

It is a migratory bird and has not been found in the area but was reported by (Roberts, 1991; Corfield, 1983).

*Anas platyrhynchos* (Mallard)

It has been found in the area and was also reported by (Roberts, 1991; Corfield, 1983).

*Anas acuta* (Northern pintail)

It is a winter visitor and has not been found in the area but was reported by (Roberts, 1991; Corfield, 1983).

*Aythya ferina* (Common pochard)

It has not been found in the area but was seen by (Roberts, 1991; Corfield, 1983).

*Anas clypeata* (Northern shoveler)

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Winter migrant and has not been found in the area but was observed by (Roberts, 1991; Corfield, 1983).

*Aythya fuligula* (Tufted duck)

It has not been found in the area but was reported by (Roberts, 1991; Corfield, 1983).

*Mergus merganser* (Common merganser)

It has not been found in the area but was reported by (Waite, 1938; Whistler, 1916).

## 7. Family *Accipetridae*

*Pernis apivorus* (Honey buzzard)

Summer breeder and was observed both during the study and by Waite (1938).

*Elanus caeruleus* (Black shouldred kite)

It has been observed in the park and was also reported by (Roberts, 1991; Corfield, 1983).

*Milvis migrans govinda* (Pariah kite)

Commonly found in the park and also seen by (Whistler, 1916).

*Neophron pecnopterus* (Scavenger vulture)

Resident species of the area and was also reported by (Holmes, 1983; Waite, 1938).

*Gyps bengalensis* (Oriental white backed vulture)

It has not been found in the area but was reported by (Roberts, 1991).

*Circus macrourus* (Pallied harrier)

It has not been found in the area but was reported by (Roberts, 1991; Corfield, 1983).

*Circus aerieginosus* (Marsh harrier)

It has not been found in the area but was reported by (Waite, 1938; Whistler, 1916).

*Accipiter gentillis* (Goshawk)

It has not been found in the area but was reported by (Roberts, 1991).

*Buteo rufinus* (Long legged buzzard)

It has not been found in the area but was reported by (Roberts, 1991; Mallalieu, 1988).

*Aquila pomarina* (Lesser spotted eagle)

Commonly found in the park and was also seen by (Corfield, 1983).

*Aquila rapax nipalensis* (Steppe eagle)

Resident of the area and was also seen by Holmes (1983).

## 8. Family *Falconidae*

*Falco tinnunculus* (Eurasian kestrel)

Resident bird of the area and also reported by (Roberts, 1991; Mallalieu, 1988).

*Falco chiequera* (Red headed merlin)

It has been found in the area and was also reported by (Whistler, 1916).

*Falco peregrinus peregrinator* (Shaheen falcon)

Resident specie of the park and also seen by (Roberts, 1991; Waite, 1938).

*Falco pelegrinoides babylonicus* (Red capped falcon) (Robert, 1991).

## Sub- family *Phasianidae*

*Coturnix coturnix* (Grey quail)

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It has not been found in the area but was reported by (Roberts, 1991; Mallalieu, 1988).

### **9. Family *Turnicidae***

*Turnix sylvatica* (Little bustard quail)

It has not been found in the area but was reported by (Waite, 1938).

### **10. Family *Rallidae***

*Porzana pusilla* (Billon's crake)

It has not been found in the area but was reported by (Whistler, 1916).

*Porzana fusca* (Ruddy crake)

It has not been found in the area but was reported by (Roberts, 1991; Mallalieu, 1988).

*Amaurornis akool* (Brown crake)

It has not been found in the area but was reported by (Waite, 1938).

*Fulica atra* (Black coot)

It has not been found in the area but was reported by (Robert, 1991; Mallalieu, 1988).

*Gallinule cluloropus* (Moorhen)

It has not been found in the area but was reported by (Whistler, 1916).

*Amaurornis phoenicurus* (White breasted water hen)

Commonly found in the area and also seen by (Roberts, 1991).

### **11. Family *Rostratulidae***

*Rostratula benghalensis* (Painted snipe)

Resident bird found in the area and also seen by (Roberts, 1991).

### **12. Family *Recurvirostridae***

*Himantopus himantopus* (Back winged stilt)

It has been found in the park and was also reported by (Waite, 1938).

*Recurvirostra avosetta* (Pied avocet)

It has not been found in the area but was reported by (Roberts, 1991; Whistler, 1916).

### **13. Family *Glareolidae***

*Cursorivs cursor* (Cream colored courser)

It has not been found in the area but was reported by (Roberts, 1991 Whistler, 1916).

*Glareola lacteal* (Small Indian pratincole)

It has not been found in the area but was reported by (Corfield, 1983; Waite, 1938).

### **14. Family *Charadriidae***

*Charadrius dubius* (Little ringed plover)

It has not been found in the area but was reported by (Roberts, 1991; Whistler, 1916).

*Hoplopetrus indicus* (Red watted lap wing)

It has been found in the area and was also reported by (Roberts, 1991; Whistler, 1916).

### **15. Family *Scolopacidae***

*Calidris ferruginea* (Curlew stint)

It has not been found in the area but was reported by (Waite, 1938).

*Calidris alpina* (Dunlin)

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It has not been found in the area but was reported by (Roberts, 1991; Whistler, 1916).

#### **Sub family Gallinaginae**

*Lymnocrptor minimus* (Jack snipe)

It has not been found in the area but was reported by (Roberts, 1991; Whistler, 1916).

#### **Sub family Tringinae**

*Limosa limosa* (Black tailed godwit)

It has not been found in the area but was reported by (Corfield, 1983).

*Tringa nivalis* (Greenshank)

It has not been found in the area but was reported by (Roberts, 1991).

*Xenos cinererus* (Treek sand piper)

It has not been found in the area but was reported by (Roberts, 1991; Mallalieu, 1988).

*Phalaropus lobatus* (Red necked phalarope)

It has not been found in the area but was reported by (Roberts, 1991; Mallalieu, 1988).

#### **16. Family Sternidae**

*Sterna caspia* (Caspian tern)

It has not been found in the area but was reported by (Whistler, 1916).

*Sterna hirundo hirundo* (Common tern)

It has not been found in the area but was reported by (Waite, 1938; Whistler, 1916).

#### **17. Family Rynchopidae**

*Rynchops albicollis* (Indian skimmer)

It has not been found in the area but was reported by (Roberts, 1991; Holmes, 1983).

#### **18. Family Columbidae**

*Columba livia* (Rock dove)

Commonly found in the area and was also reported by (Roberts, 1991; Waite, 1938).

*Streptopelia decaocto* (Collared dove)

Resident specie of the park and was also seen by (Roberts, 1991; Waite, 1938).

*Streptopelia senegalensis* (Little brown dove)

Commonly found in the area and was also reported by (Mallalieu, 1988; Waite, 1938).

#### **19. Family Psittacidae**

*Psittacula eupatria* (Larger Indian parakeet)

It has been found in the area and was also reported by (Whistler, 1916; Jones, 1912).

*Psittacula cyanocephala* (Blossom headed parakeet)

It has been observed by me in the park and also seen by (Roberts, 1991).

#### **20. Family Cuculidae**

*Hierococcyx varius* (Common hawk cuckoo)

It has been found in the area and was also reported by (Roberts, 1991; Waite, 1938).

*Cacomantis passerinus* (Plaintive cuckoo)

It has not been found in the area but was reported by (Corfield, 1983).

*Cuculus micropetrus* (Indian cuckoo)

It has not been found in the area but was reported by (Corfield, 1983).



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*Cuculus canorus* (Eurasian cuckoo)

It has been found in the area and was also reported by (Roberts, 1991; Waite, 1938; Jones, 1912).

*Centropus sinensis* (Greater coucal)

It has been found in the area and was also reported by (Roberts, 1991; Corfield, 1983; Waite, 1938).

## 21. Family Tytonidae

*Tyto alba* (Barn owl)

Resident bird of this area confirmed by (Waite, 1938; Whistler, 1916).

*Otus sunia* (Asian scops owl)

It has been found in the area and was also reported by (Roberts, 1991).

*Glaucidium cuculoides* (Himalayan burred owl)

It has been found in the area and was also reported by (Waite, 1938).

## 22. Family Carprimulgidae

*Aprimulgus europaeus* (European nightjar) (Whistler, 1916).

## 23. Family Apodidae

*Apis affinis* (House swift)

It has been found in the area and was also reported by (Roberts, 1991; Waite, 1938).

## 24. Family Alcedinidae

*Ceryle rudis* (Pied kingfisher)

It has been found in the area and was also reported by (Corfield, 1983).

*Halcyon smyrenensis* (White breasted kingfisher)

It has been found in the area and was also reported by (Roberts, 1991; Waite, 1938).

*Ceryle lugubris* (Crested kingfisher)

It has not been found in the area but was also reported by (Waite, 1938).

## Passerines

### 1. Family Alaudidae

*Melanocorypha bimaculata* (Eastern calandra lark)

It has not been found in the area but was reported by (Whistler, 1916; Waite, 1938).

### 2. Family Hirundidae

*Riparia riparia* (Collared sand martin)

It has not been found in the area and was reported by (Whistler, 1916).

*Hirundo daurica* (Red rumped swallow)

It has not been found in the area and was reported by (Corfield, 1983; Whistler, 1916).

### 3. Family Passeridae

*Anthus cervinus* (Red throated pipit)

It has been found in the area and was also reported by (Roberts, 1991; Mallalieu, 1988).

*Anthus spinoletta* (Water pipit)

It has not been found in the area and was reported by (Whistler, 1938).

*Motacilla flava* (Yellow wagtail)

### Sub-species:

*M. flava thunbergi* (Grey headed wagtail)

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Resident species of the park and was also observed by (Waite, 1938; Whistler, 1916).

***M. flava melanogrisea*** (Black headed wagtail)

Resident species of the park and was also observed by (Waite, 1938; Whistler, 1916).

***M. flava leucocephala*** (White headed wagtail)

Resident species of the park and was also observed by (Waite, 1938; Whistler, 1916).

***Motacilla citreola werea*** (Yellow headed wagtail)

Resident species of the park and was also observed by (Waite, 1938).

***Motacilla alba alboides*** (Hodgson pied wagtail) (Whistler, 1916).

***Motacilla maderaspatensis*** (Larger pied wagtail)

Resident species of the park and was also observed by (Roberts, 1991; Waite, 1938).

#### **4. Family Campephagidae**

***Tephrodornis pondicerianus*** (Common wood shrike)

Resident species of the park and was also observed by (Roberts, 1991).

***Coracina novaehollandiae*** (Larger cuckoo shrike)

It has not been found in the area and was reported by (Jones, 1912).

***Pericrocotus cinnamomeus*** (Wandering minivet)

Resident species of the park and was also observed by (Waite, 1938).

#### **5. Family Pycnonotidae**

***Pycnonotus cafer*** (Red wented bulbul)

Resident species of the park and was also observed by (Roberts, 1991; Waite, 1938).

#### **6. Family Turdidae**

***Tarsiger cyanurus*** (Orange flanked bush robin)

It has not been found in the area and was reported by (Whistler, 1916; Roberts, 1991).

***Turdus naumanni*** (Dusky thrush)

It has not been found in the area and was reported by (Corfield, 1983).

***Copsychus saularis*** (Indian magpie robin)

It has not been found in the area and was reported by (Roberts, 1991; Waite, 1938).

***Rhyacornis fuliginosus*** (Plumbeous redstart)

It has not been found in the area and was reported by (Mallalieu, 1988; Waite, 1938).

***Saxicola leucura*** (White tailed bush chat)

It has not been found in the area and was reported by (Roberts, 1991; Mallalieu, 1988).

***Chaimarrornis leucocephalus*** (White capped red start)

It has not been found in the area and was reported by (Corfield, 1983).

***Monticola sautilis*** (Rock thrush)

It has been found in the area and was also reported by (Roberts, 1991; Mallalieu, 1988; Waite, 1938).

***Turdus boulboul*** (Grey winged black bird)

It has been found in the area and was also reported by (Corfield, 1983; Jones, 1912).

***Turdus ruficollis atrogularis*** (Black throated thrush)

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It has not been found in the area but was reported by (Roberts, 1991).

***Turdus viscivorus*** (Mistle thrush)

It has not been found in the area but was reported by (Roberts, 1991; Waite, 1938; Whistler, 1916).

**Sub Family *Enicurinae***

***Enicurus scouleri*** (Little fork tail)

It has not been found in the area but was reported by (Roberts, 1991).

**7. Family *Sylviidae***

**Sub Family *Sylviinae***

***Cettia fortipes*** (Pale strong footed bush warbler)

It has not been found in the area but was reported by (Whistler, 1916; Jones, 1912).

***Prinia flaviventris*** (Yellow wren warbler)

It has been found in the area and was also reported by (Roberts, 1991).

***Cisticola junicidis*** (Fan tailed warbler)

It has not been found in the area but was reported by (Whistler, 1916; Waite, 1938).

***Prinia hodgsonii*** (Ashy grey wren warbler)

It has not been found in the area but was reported by (Roberts, 1991).

***Prinia criniger*** (Brown hill warbler)

It has not been found in the area but was reported by (Holmes, 1983).

***Acrocephalus melanopogon*** (Moustached sedge warbler)

It has not been found in the area but was reported by (Whistler, 1938).

***Phylloscopus occipitalis*** (Large crowned leaf warbler)

It has not been found in the area but was reported by (Roberts, 1991).

***Phylloscopus nitidus*** (Green warbler)

It has been found in the area and was also reported by (Roberts, 1991; Waite, 1938).

***Phylloscopus griseolus*** (Sulphur bellied warbler)

It has been found in the area and was also reported by (Whistler, 1916).

**8. Family *Muscicapidae***

***Cyronis rubeculoides*** (Blue throated flycatcher)

It has not been found in the area but was reported by (Roberts, 1991).

**9. Family *Timaliidae***

***Pomatoorhinus erythrogenys*** (Rusty cheeked scimitar babbler)

It has not been found in the area but was reported by (Roberts, 1991; Mallalieu, 1988).

***Turdoides caudatus*** (Common babbler)

Commonly found in the park and was also reported by (Roberts, 1991; Porter, 1974).

**10. Family *Paridae***

***Parus melanolophus*** (Crested black tit)

It has not been found in the area but was reported by (Jones, 1912).

**11. Family *Tichodromadidae***

***Tichodroma mauraria*** (Wall creeper)

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Commonly found in the park and was also reported by (Roberts, 1991).

#### **12. Family Nectariniidae**

*Nectarinia asiatica* (Purple sunbird)

Commonly found in the park and was also reported by (Roberts, 1991; Corfield, 1983).

#### **13. Family Oriolidae**

*Oriolus oriolus* (Golden oriole)

It has not been found in the area but was reported by (Roberts, 1991; Waite, 1938; Currie, 1909).

#### **14. Family Laniidae**

*Lanius isabellinus* (Pale brown shrike)

It has not been found in the area but was reported by (Roberts, 1991; Corfield, 1983).

#### **15. Family Dicruidae**

*Dicrurus leucephaeus* (Grey drongo)

Commonly found in the park and was also reported by (Roberts, 1991; Porter, 1974).

#### **16. Family Corvidae**

*Corvus splendens* (Indian house crow)

Commonly found in the park and was also reported by (Roberts, 1991; Corfield, 1983).

*Corvus monedula* (Jackdaw)

It has been found in the area and was also reported by (Roberts, 1991; Corfield, 1983).

*Dendrocitta formosae* (Grey tree pie)

Commonly found in the park and was also reported by (Roberts, 1991; Waite, 1938).

#### **17. Family Sturnidae**

*Sturnus pagodrum* (Brahminy sturling)

It has not been found in the area but was reported by (Roberts, 1991; Corfield, 1983).

*Acridoheres tristis* (Indian myna)

Commonly found in the park and was also reported by (Roberts, 1991; Corfield, 1983).

#### **18. Family Passeridae**

*Passer domesticus* (Indian house sparrow)

Commonly found in the park and was also reported by (Roberts, 1991; Corfield, 1983).

*Passer hispaniolensis* (Willow sparrow)

It has not been found in the area but was reported by (Roberts, 1991; Waite, 1938).

#### **19. Family Ploceidae**

*Ploceus beghalensis* (Black breasted weaver)

It has not been found in the area but was reported by (Roberts, 1991; Mallalieu, 1988).

#### **20. Family Estrildidae**

*Estrilda amandava* (Red munia)

Commonly found in the park and was also reported by (Roberts, 1991; Waite, 1938).

#### **Sub Family Fringillinae**

*Fringilla coelebs* (Chaffinch)

It has been found in the area and was also reported by (Roberts, 1991).

#### **Sub Family Emberizinae**

*Emberiza stewari* (White capped bunting)

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It has been found in the area and was also reported by (Roberts, 1991; Corfield, 1983).

### POPULATION AND DENSITY ANALYSIS

On the basis of the study, following results were deduced, showing population and density of various bird species. The data was also helpful in protecting nests of various species where they were found in abundance.

**TABLE: 2 Calculations of Population and Density of Birds**

| Sr. no | Scientific name                   | Common name       | Density(D) = birds / hac or birds / m <sup>2</sup> | Population= D x A in hac |
|--------|-----------------------------------|-------------------|--|--------------------------|
| 1.     | <i>Corvus splendens</i>           | Crow              | 64.1 / 6.41 x 10 <sup>-3</sup>                     | 87.817 / hac             |
| 2.     | <i>Acridotheres fuscus</i>        | Common Myna       | 35.5 / 3.55 x 10 <sup>-3</sup>                     | 48.63                    |
| 3.     | <i>Francolinus pondicerianus</i>  | Partridge         | 19.90 / 1.990 x 10 <sup>-3</sup>                   | 27.26                    |
| 4.     | <i>Pycnonotus cafer</i>           | Red wented bulbul | 12.10 / 1.210 x 10 <sup>-3</sup>                   | 16.57                    |
| 5.     | <i>Streptopelia tranquebarica</i> | Red turtle dove   | 14.5 / 1.45 x 10 <sup>-3</sup>                     | 19.86                    |
| 6.     | <i>Streptopelia chinensis</i>     | Spotted dove      | 11.68 / 1.168 x 10 <sup>-3</sup>                   | 16.00                    |
| 7.     | <i>Turdoides striatus</i>         | Jungle babbler    | 21.86 / 2.186 x 10 <sup>-3</sup>                   | 29.94                    |
| 8.     | <i>Bubulcus ibis</i>              | Cattle egret      | 14.55 / 1.455 x 10 <sup>-3</sup>                   | 19.93                    |
| 9.     | <i>Ardeola grayii</i>             | Pond heron        | 11.78 / 1.178 x 10 <sup>-3</sup>                   | 16.13                    |
| 10.    | <i>Milvus migrans</i>             | Pariah kite       | 21.38 / 2.138 x 10 <sup>-3</sup>                   | 29.29                    |
| 11.    | <i>Phylloscopus collybita</i>     | Chiff chaff       | 16.10 / 1.610 x 10 <sup>-3</sup>                   | 22.057                   |
| 12.    | <i>Nectarinia asiatica</i>        | Purple Sunbird    | 11.95 / 1.195 x 10 <sup>-3</sup>                   | 16.37                    |
| 13.    | <i>Passer domesticus</i>          | House sparrow     | 15.5 / 1.55 x 10 <sup>-3</sup>                     | 21.23                    |
| 14.    | <i>Eudynamys scolopacea</i>       | Black koel        | 9.64 / 9.64 x 10 <sup>-4</sup>                     | 13.20                    |
| 15.    | <i>Copsychus saularis</i>         | Robin             | 1.25 / 1.25 x 10 <sup>-4</sup>                     | 1.175                    |

|     |                                  |                          |                                |       |
|-----|----------------------------------|--------------------------|--------------------------------|-------|
| 16. | <i>Dicrurus adsimilis</i>        | Drongo                   | 6.94 / $6.94 \times 10^{-4}$   | 9.50  |
| 17. | <i>Dendrocitta vagabunda</i>     | Tree pie                 | 4.54 / $4.54 \times 10^{-4}$   | 6.21  |
| 18. | <i>Streptopelia decaocto</i>     | Dove common              | 8.22 / $8.22 \times 10^{-4}$   | 11.26 |
| 19. | <i>Pycnonotus leucogenys</i>     | White checked bulbul     | 3.48 / $3.48 \times 10^{-4}$   | 4.76  |
| 20. | <i>Merops orientalis</i>         | Little green bee eater   | 7.12 / $7.12 \times 10^{-4}$   | 9.754 |
| 21. | <i>Merops philippinus</i>        | Blue tailed bee eater    | 2.71 / $2.710 \times 10^{-4}$  | 3.712 |
| 22. | <i>Turdoides malcolmi</i>        | Large grey babbler       | 5.36 / $5.363 \times 10^{-4}$  | 7.347 |
| 23. | <i>Terpsiphone paradise</i>      | Paradise flycatcher      | 2.12 / $2.12 \times 10^{-4}$   | 2.904 |
| 24. | <i>Alcedo atthis</i>             | Common Kingfisher        | 3.53 / $3.531 \times 10^{-4}$  | 4.837 |
| 25. | <i>Ceryle rudis</i>              | Pied kingfisher          | 5.093 / $5.093 \times 10^{-4}$ | 6.977 |
| 26. | <i>Upupa epops</i>               | Hoopoe                   | 3.825 / $3.825 \times 10^{-4}$ | 5.240 |
| 27. | <i>Lanius schach</i>             | Rufous backed shrike     | 7.33 / $7.33 \times 10^{-4}$   | 10.04 |
| 28. | <i>Vanellus indicus</i>          | Red watted lapwing       | 3.19 / $3.199 \times 10^{-4}$  | 4.382 |
| 29. | <i>Motacilla maderaspatensis</i> | Pied wagtail             | 5.09 / $5.093 \times 10^{-4}$  | 6.977 |
| 30. | <i>Psittacula eupatria</i>       | Parrots                  | 6.92 / $6.927 \times 10^{-4}$  | 9.489 |
| 31. | <i>Amaurornis phoenicurus</i>    | White breasted water hen | 2.91 / $2.91 \times 10^{-4}$   | 3.986 |
| 32. | <i>Bubo bubo</i>                 | Indian eagle Owl         | 1.43 / $1.43 \times 10^{-4}$   | 1.959 |
| 33. | <i>Apus affinis</i>              | House Swift              | 2.28 / $2.281 \times 10^{-4}$  | 3.124 |
| 34. | <i>Tringa hypoleucos</i>         | Common sand piper        | 0.62 / $6.290 \times 10^{-5}$  | 0.861 |
| 35. | <i>Nycticorax nycticorax</i>     | Night heron              | 0.58 / $5.582 \times 10^{-5}$  | 0.764 |

|     |                               |                     |                               |       |
|-----|-------------------------------|---------------------|-------------------------------|-------|
| 36. | <i>Gallus gallus</i>          | Red jungle fowl     | 0.33 / $3.35 \times 10^{-5}$  | 0.458 |
| 37. | <i>Columba livia</i>          | Pigeon              | 0.62 / $6.29 \times 10^{-5}$  | 0.861 |
| 38. | <i>Spizaetus cirrhatus</i>    | Crested hawk Eagle  | 0.35 / $3.54 \times 10^{-5}$  | 0.484 |
| 39. | <i>Rhyacornis fuliginosus</i> | Plumbeous Red start | 0.86 / $8.681 \times 10^{-5}$ | 1.189 |

The table clearly shows the common and abundant species of the park. These includes, crow, myna, jungle babbler, cattle egret, Indian pond heron, little egret, kite, partridges, black koel, red turtle dove, spotted dove, collared dove, house sparrow, purple sun bird, chiff chaff, robin, drongo, tree pie, red vented bulbul etc.

## CONCLUSION

A considerable number of species that had been previously reported were not seen in the survey conducted in this study. Human interference adversely affected conservation of biodiversity in Loi Bher wildlife park. Studies need to be conducted to determine the exact causes for the decline in species richness in Loi Bher and steps need to be taken to eliminate those factors to protect the avifauna present in the wildlife park.

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