

## Original Article

# Status of wild birds and mammals in urban habitats of Gujranwala, Punjab, Pakistan

Muhammad Altaf\*, Abdul Majid Khan, Muhammad Umair, Irfan and Muhammad Asif Munir

*Department of Wildlife and Ecology, University of Veterinary and Animal Sciences, Lahore (MA, I, MAM), Department of Zoology, University of the Punjab, Lahore (AMK), Department of Botany, University of the Gujarat, Gujrat (MU), Pakistan.*

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### Abstract

A checklist of the birds and mammal species recorded from the urban area of Gujranwala has been prepared. The data were collected from towns, parks, gardens, grounds, railway track and canals passing through the city and open areas. The current checklist consists of 41 species of birds and 11 species of mammals. The data were collected from May 2008 to April 2009. The Gujranwala city is located at 032o19'04N, 073o41'36E and elevation is 208 M.

**Key words:** Status, diversity, ecology, avifauna

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## INTRODUCTION

In urban areas, forest dwelling birds may have lower abundances and lower nesting success (Emlen, 1974). The present study of the avian and mammalian fauna of Gujranwala city is the first attempt to explore the diversity of this area as there have been no records available in literature for this area. However, Whistler (1914) observed the birds of Jhelum and Jhang districts whereas Waite (1948) worked on the birds of Salt Range. Donald (1921) worked on birds of prey of the Punjab. Ali and Ripley (1974) and Robert (1991, 1992) have covered birds that are found in the adjacent areas of Gujranwala.

Millions of migratory birds move towards wetlands of Pakistan from Europe and Central Asia (Ali, 2005) in winter season. The human beings have had a prehistoric relationship with birds since the beginning of the mankind (Bonney and Ronald, 2004).

Birds' populations are declining worldwide (Birdlife International, 2007). The most common threats include overhunting, accidental mortality due to structural collisions or long-line fishing by-catch in case of aquatic birds (Brothers, 1991), pollution (including oil spills and pesticide use), competition and predation from nonnative invasive

species (Blackburn *et al.*, 2004) and climate change. Mammalian species are also facing the above mentioned categories of threats. The declining animal populations necessitate prompt efforts for recording the existing species' data to warrant their conservation. The present study reports the present birds and mammalian fauna of a large industrial city of Pakistan.

## MATERIALS AND METHODS

The methods that were used for data collection regarding avifauna in the present study included Direct Physical Counts/ Point Counts (Haldin and Ulfvens, 1987), Birds Counts Method, / Block Method (Howes, 1987), Species Counting Method, All Species Count Method, Specimen Collection (Indirect Observations), Group Questionnaire and Survey (Indirect Observations). The sources consulted for identification and confirmation of the data were Robert, (1991, 1992) Mirza and Wasiq, 2007 and meetings with the locals (Indirect Observations). The diversity of the mammalian species was studied by direct physically observations. The indirect clues (calls and voices, nests, burrows, fecal pellets, marks and foot-prints for the presence or absence of species) were also considered. For behavioral

study of the wildlife species binoculars (32x50) were used.

For identification purpose Ali and Ripley (1987); Robert (2005a, b) were consulted. Bull (1964) and McCaskle (1970) methods were used to present the status of the birds in terms of; very rare, rare, uncommon, fairly common, common, very common, abundant and very abundant (Table I).

**Table I: Bull (1964) and McCaskle (1970) method.**

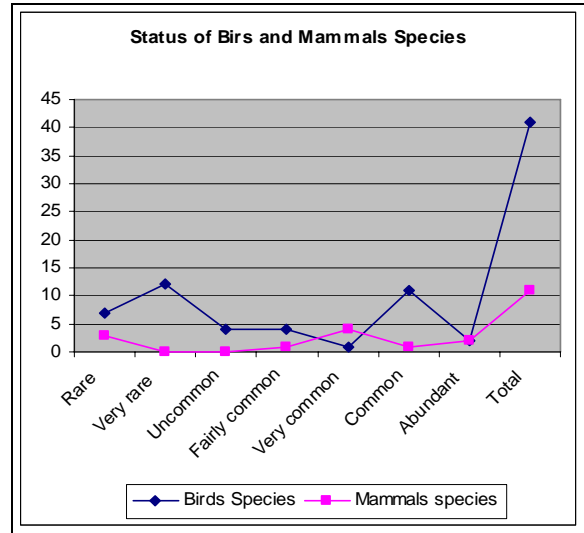
Status	No. of Individual
Very Abundant	Over 1000 individuals per day
Abundant	201-1000 individuals per day
Very Common	51-200 individuals per day
Common	21-50 individuals per day
Fairly common	7-20 individuals per day
Uncommon	1-6 individuals per day
Rare	1-6 individuals per season
Very Rare	Infrequent

## RESULTS AND DISCUSSION

In the present study we have observed 41 species of bird and 11 species of mammals. According to Bull (1964) and McCaskle (1970) methods, 12 very rare, 7 rare, 4 uncommon, 4 fairly common, 11 common, 4 very common and 2 abundant species of birds were identified as given in tables (II and III) and figure 1. As far as mammals are concerned 3 rare, 1 fairly common, 4 uncommon, 1 common and 2 very common species of mammals were observed (Tables II and IV).

**Table II: Status of avian and mammalian species.**

Status	Birds	Mammals
Rare	7	3
Very rare	12	0
Uncommon	4	0
Fairly common	4	1
Very common	1	4
Common	11	1
Abundant	2	2
Total	41	11



**Figure 1 Status of avian and mammalian species.**

**Table III: Summary of status of Mammals.**

No.	Scientific Name	Common Name	Status
1	<i>Suncus etruscus</i>	Mediterranean pygme shrew	Rare
2	<i>Scotophilus kuhlii</i>	Lesser house bat	Very common
3	<i>Funnambulus pennantii</i>	Northern palm squirrel	Fairly common
4	<i>Rattus rattus</i>	House rat	Very common
5	<i>Mus musculus</i>	House mouse	Common
6	<i>Mus booduge</i>	Indian field mouse	Uncommon
7	<i>Nesokia indica</i>	Short tailed mole rate	Uncommon
8	<i>Tatera indica</i>	Indian gerbil	Rare
9	<i>Meriones hurrianae</i>	Indian desert jird	Rare
10	<i>Herpestes javanicus</i>	Small indian mongoose	Uncommon
11	<i>Herpestes edwardsi</i>	Common indian mongoose	Uncommon

**Table IV: Summary of status of birds.**

No.	Scientific name	Common name	Status
1	<i>Phalacrocorax niger</i>	Little/Javanese Cormorant	Rare
2	<i>Exobrychus sinensis</i>	Chinies/Yellow Bittern	Very rare
3	<i>Nycticorax nycticorax</i>	Night Heron	Very rare
4	<i>Ardeola grayii</i>	Indian Pond Heron	Rare
5	<i>Bubulcus ibis</i>	Cattle Egret	Very rare
6	<i>Egretta garzetta</i>	Little Egret	Rare
7	<i>Egretta intermedia</i>	Intermediate Egret	Very rare
8	<i>Milvus migrans migrans</i>	Indian/Black Kite	Common
9	<i>Hoplopterus indicus</i>	Red-wattled Lapwing	Uncommon
10	<i>Columba livia</i>	Blue Rock Pigeon	Rare
11	<i>Streptopelia decaocta</i>	Indian Ring Dove	Uncommon
12	<i>Streptopelia tranquebarica</i>	Red Turtle Dove	Uncommon
13	<i>Streptopelia senegalensis</i>	Little Brown Dove	Rare
14	<i>Psittacula eupatria</i>	Alexandrine/Large Indian Parakeet	Common
15	<i>Psitta krameri</i>	Rose-ringed Parakeet	Rare
16	<i>Clamator jacobinus</i>	Pied Crested Cuckoo	Common
17	<i>Hirrococcyx varius</i>	Common Hawk Cuckoo	Common
18	<i>Apus affinis</i>	Little Swift	Common
19	<i>Halcyon smymensis</i>	White-throated Kingfisher	Very rare
20	<i>Alcedo atthis</i>	Common Kingfisher	Very rare
21	<i>Ceryle rudis</i>	Small Pied kingfisher	Very rare
22	<i>Upupa epops</i>	Common Hoopoe	Very rare
23	<i>Coracias benghalensis</i>	Indian Roller/Blue Jay	Very rare
24	<i>Riparia paludicola</i>	Indian Sindh Martin	Fairly common
25	<i>Motacilla maderaspatensis</i>	Large Pied Wagtail	Uncommon
26	<i>Tephrodornis pondicerian</i>	Lesser Wood Shrike	Very rare
27	<i>Pycnonotus leucogenys</i>	White-cheeked Bulbul	Fairly common
28	<i>Pycnonotus cafer</i>	Red-vented Bulbul	Common
29	<i>Saxicola leucura</i>	White-tailed Bush Chat	Very rare
30	<i>Rhipidura aureola</i>	White-browed Fantail Flycatcher	Very rare
31	<i>Chrysomma altirostre</i>	Sind Babbler	Common
32	<i>Turdoides caudatus</i>	Common Babbler	Common
33	<i>Turdoides earlei</i>	Striated Babbler	Common
34	<i>Turdoides striatus</i>	Jungle Babbler	Common
35	<i>Nectarinia asiatica</i>	Purple Sunbird	Fairly common
36	<i>Dicrurus macrocercus</i>	Black Drongo/King Crow	Common
37	<i>Acridothera tristis</i>	Common Myna	Very common
38	<i>Acridothera ginginianus</i>	Bank Myna	Fairly common
39	<i>Turdus merula</i>	Himalayan Blackbird	Rare
40	<i>Corvus splendens</i>	House Crow	Abundant
41	<i>Passer domesticus</i>	House Sparrow	Abundant

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