

A Checklist of Birds of Prey of Rawalpindi, Islamabad and Adjacent Areas

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**A CHECKLIST OF BIRDS OF PREY OF RAWALPINDI, ISLAMABAD
AND ADJACENT AREAS**

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ABSTRACT

Wildlife is declining worldwide due to loss of habitat, pollution, introduction of exotic species, climatic changes etc. Birds of prey are believed to be rapidly declining in Pakistan though no reliable recent data is available and the available literature suggests its previous wide distribution throughout Pakistan. This current study was carried out in the Rawalpindi, Islamabad and some adjacent areas (latitude N 33°27.34-33°48.05 longitude E 72°59.34-73°27.30) to make a checklist of previously and newly existing prey birds as well as to study their general behaviors and biology. Targeted areas were studied at different times of day in different seasons of the year. After identification of prey birds through photographs taken during the study, presence and absence of prey birds was also recorded. Some species, which were formerly not reported in region, were also identified and the relative abundance among different species was calculated.

Keywords: Birds of prey, birds of Rawalpindi, birds of Pakistan.

INTRODUCTION

According to taxonomic point of view, modern living birds are approximately nine thousand eight hundred species to ten thousand and fifty (Gill, 2006; Clements, 2007). The number of genera and species continues to change as revisions and discoveries are made. Generally, modern birds are divided into the two main groups: Passerine and Non-passerine. All prey birds fall in

category of non-passerine group. The prey birds are the flying creatures which are the indicators of environmental health (Koskimies, 1989). They are commonly found in all habitats like desert and semi-desert areas, open steppe, plains, forests, arid-zones, mountains, coastal-areas, marshes, rivers and lakes water lakes, grounds and near human habitations. Few of them are resident while the rest of them are migratory. A few years ago, 660 species of non-

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passerines occurring in Pakistan had been reported, out of which 36.5% are oriental, 63.5% are of Palearctic origin while 0.5% are cosmopolitan (Roberts, 1991). They are obvious barometers of environmental health and for this reason alone they deserve our understanding (Kemp and Kemp, 1998). Birds of prey have been categorized into: Osprey, kites, buzzards, hawks and shikras, harriers, eagles, falcons and vultures. Most of the work on the prey birds had been done (Waite, 1948; Roberts, 1991; Whistler 1930 and Mirza, 1998), but current field study was conducted because the knowledge about the previously existing prey birds in selected areas is no more authentic due to invasion and extinction of many species in the past few years. Therefore, the aim of this study is to make a checklist of previously and newly existing prey birds as well as to study their general behaviors and biology.

MATERIAL AND METHODS

Study Area

The selected study area was Rawalpindi, Islamabad, Margalla hills, Rawal Lake and partially the Potohar region. The range of the latitude (N) and longitude (E) of the selected study area is given below: Latitude (N): 33° 27.34 - 33° 48.05, Longitude (E): 72° 59.34 - 73° 27.30. Topography of the study area is rugged and elevation ranges from 450

to 1580 m. Average minimum and maximum temperature is 19.5° C and 33.3°C, respectively. Study area is shown in Figure 1 (a and b).

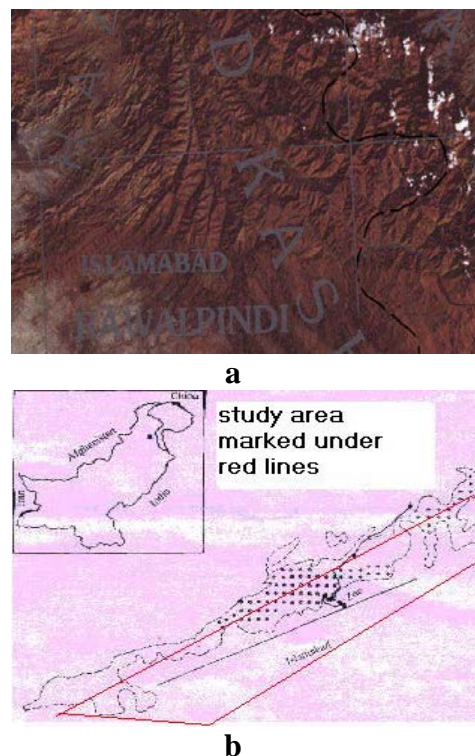


Figure 1: (a) Satellite view of study area. (b) Map of study area.

The study area was divided into different zones and appropriate points were selected for the identification and observations of prey birds. At different times and different seasons of year, study areas were visited. Field binoculars, having a range of about 500 meters, was carefully used to note down the distinguishing features of prey birds. A spotting scope with a movable stand having a range of ten kilometers

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was used to observe distinctive behaviors of prey birds. Surrounding areas were also scanned for prey birds on the obvious perches & then photographs were taken carefully with the help of digital camera having a range of about thousand meters. Various characteristic features such as color and flight pattern, body size, calls and songs were recognized with the help of a computer and its accessories. The observed species were compared with the provided checklist and unreported species were estimated. Relative abundance of existing species was estimated by counting their number in the study area. Relative statistical test was applied to estimate the relative abundance of the bird's prey of the selected area.

RESULTS AND DISCUSSION

The current study revealed four categories i.e. present or confirmed species, not confirmed species, absent species and newly found species. Dramatic changes can occur in species population of certain area over years which can also result in extinction of native species and addition of species (Catherine *et al.*, 2005). Therefore, the categories in current were formed regarding the comparison of previous literature and data collected in current study.

Confirmed or Present Species

The detailed data of confirmed or the present species of birds of prey in previously recorded data and current study areas are given in Table 1.

Not Confirmed Species

The detailed data of species of birds of prey that are not confirmed in previously recorded data and status in current study areas are given in Table 2.

Absent Species

The detailed data of species of birds of prey which are present in previously recorded data while are absent in current study areas are given in Table 3.

Newly Reported Species

The detailed data of species of birds of prey which are absent in previously recorded data while found in current study areas are given in Table 4.

The population of different species of birds of prey varied in the current study area. Black Kite, Pariah Eagle and Steppe Eagle had higher population while Black Eagle, Merlin and other birds like Red Kite, Buteo Regalis, and Sooty Falcon etc. were less in population. The details are given in Table. 5. The relative abundance was also calculated in which black eagle showed highest

Table 1: Detailed data of Confirmed/Present species of Birds of Prey according to previous record and their current status in selected study area.

	Scientific Name	Common Name	Location of Sightseeing (Previously)	Previously Reported By	Location of Sightseeing (Current Study)
1	<i>Accipiter nisus melaschistos</i>	Eurasian Sparrow Hawk	Punjab salt range and Rawalpindi	Roberts, 1991	Metropolitan areas of Rawalpindi and Islamabad
2	<i>Accipiter badius cenchroides</i>	Indian sparrow Hawk or Shikra	Margalla Hills, Potohar region and throughout Punjab	Roberts, 1991 and Mirza, 1998	Metropolitan areas of Islamabad and Rawalpindi.
3	<i>Aquila rapax nipalensis</i>	Steppe Eagle	Rawalpindi, Punjab salt ranges and Potohar regions	Waite, 1948; Roberts, 1991 and Mirza, 1998	Metropolitan areas of Rawalpindi and Islamabad.
4	<i>Aquila pomarina</i>	Lesser Spotted Eagle	Rawal Lake, Islamabad	Kazmierczak, 2000	Metropolitan areas of Rawalpindi and Islamabad.
5	<i>Circus aeruginosus</i>	Marsh Harrier	Rawal Lake, Islamabad and throughout Punjab	Roberts, 1991 and Mirza, 1998	Rawal Lake, metropolitan areas of Rawalpindi and Islamabad
6	<i>Falco tinnunculus</i>	Eurasian kestrel	Rawalpindi and Potohar region	Whistler, 1930; Ticehurst, 1923; Roberts, 1991 and Mirza, 1998	Metropolitan areas of Rawalpindi and Islamabad

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7	<i>Falco chicquera</i>	Red headed Merlin or Turumtee	Rawalpindi, Rawal Lake and Potohar region	Whistler, 1930; Roberts, 1991 and Mirza, 1998	Metropolitan areas of Rawalpindi and Islamabad
8	<i>Gyps himalayensis</i>	Himalayan Griffon Vulture	Murree Hills and Rawal Lake	Roberts, 1991 and Mirza, 1998	Rawal Lake, Islamabad
9	<i>Gyps fulvus</i>	Eurasian Griffon Vulture	Murree Hills, Punjab salt ranges and Rawal Lake, Islamabad	Waite, 1948; Roberts, 1991 and Mirza, 1998	Rawal Lake, Islamabad
10	<i>Milvus migrans migrans</i>	Black kite	Rawalpindi and Potohar region	Roberts, 1991 and Mirza, 1998	Rawal Lake, Metropolitan areas of Rawalpindi and Islamabad
11	<i>Milvus migrans lineatus</i>	Eared or large Indian kite	Rawalpindi	Roberts, 1991	Metropolitan areas of Rawalpindi and Islamabad
12	<i>Milvus migrans govinda</i>	Pariah or Indian kite	Rawalpindi and Potohar region	Roberts, 1991 and Mirza, 1998	Rawal Lake, Metropolitan areas of Rawalpindi and Islamabad
13	<i>Neophron percnopterus</i>	Egyptian or Scavenger Vulture	Throughout Punjab and Punjab salt region	Waite, 1948 and Roberts, 1991	Rawal Lake, Islamabad
14	<i>Pernis ptilorhynchus</i>	Crested Honey Buzzard	Throughout Punjab and Punjab salt region	Roberts, 1991 and Mirza, 1998	Metropolitan areas of Rawalpindi and Islamabad

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Table 2: Detailed data of species of Birds of Prey which are not confirmed according to previous record and their current status in selected study area.

	Scientific Name	Common Name	Location of Sightseeing (Previously)	Previously Reported By	Location of Sightseeing (Current Study)
1	<i>Aegypius monachus</i>	Cineros Vulture or Eurasian Black Vulture	Rawalpindi and Potohar region	Roberts, 1991 and Mirza, 1998	Rare at Rawal Lake and metropolitan areas of Rawalpindi and Islamabad
2	<i>Aquila clanga</i>	Greater Spotted Eagle	Throughout Punjab	Roberts, 1991	Rarely seen at metropolitan areas of Rawalpindi and Islamabad
3	<i>Aquila rapax vindhiana</i>	Tawny Eagle	Throughout Punjab and Potohar region	Roberts, 1991 and Mirza, 1998	Rarely seen at metropolitan areas of Rawalpindi and Islamabad
4	<i>Butastur teesa</i>	White eyed Buzzard	Rawalpindi, Punjab salt range and potohar region	Waite, 1948 and Roberts, 1991	Very rarely seen at the Metropolitan areas of Rawalpindi and Islamabad.
5	<i>Buteo buteo vulpinus</i>	Desert Buzzard	Occasionally encountered throughout Punjab	Roberts, 1991	Very rarely seen at Metropolitan areas of Rawalpindi and Islamabad
6	<i>Buteo rufinus</i>	Long Legged Buzzard	Throughout Punjab and Potohar region	Roberts, 1991 and Mirza, 1998	Very rarely seen at Metropolitan areas of Rawalpindi and Islamabad
7	<i>Circus cyaneus</i>	Hen Harrier	Margalla hills and Potohar Plateau, Rawalpindi	Roberts, 1991 and Mirza, 1998	Rarely seen at Rawalpindi, Islamabad and Margalla hills

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8	<i>Circaetus pennatus</i>	Booted Eagle	Punjab salt ranges, Margalla hills, Potohar regions	Roberts, 1991 and Mirza, 1998	Encountered very rare in the Margalla hills and Metropolitan areas of Rawalpindi and Islamabad
9	<i>Circus macrourus</i>	Pallid Harrier	Potohar Plateau of salt ranges and throughout Punjab	Roberts, 1991 and Mirza, 1998	Very rare at the metropolitan areas of Rawalpindi, Rawal Lake and Islamabad
10	<i>Falco subbuteo</i>	Northern Hobby	Northern Mountains, Murree hills and Rawalpindi	Whistler, 1930 and Roberts, 1991	Rarely seen at metropolitan areas of Rawalpindi, Margalla hills, Rawal Lake and Islamabad
11	<i>Falco biarmicus jugger</i>	Lagger Falcon	Punjab and Rawalpindi	Whistler, 1930; Roberts, 1991 and Mirza, 1998	Very rare at the Margalla hills, metropolitan areas of Rawalpindi and Islamabad
12	<i>Falco cherrug</i>	Saker Falcon	Rare in Potohar region, Murree hills and Rawal Lake	Roberts, 1991 and Mirza, 1998	Very rare at the metropolitan areas of Rawalpindi, Islamabad and Margalla hills
13	<i>Falco peregrinus</i>	Shaheen Falcon	Scarce at Rawal Lake and Potohar region	Whistler, 1930; Roberts, 1991 and Mirza, 1998	Very rare at Rawal Lake, Margalla hills, metropolitan areas of Rawalpindi and Islamabad
14	<i>Gyps bengalensis</i>	Oriental White backed Vulture	Throughout Punjab and occasionally at Murree hills	Roberts, 1991	Rare at metropolitan areas of Rawalpindi and Islamabad
15	<i>Hieraaetus fasciatus</i>	Bonnelli's Eagle	Throughout Punjab and Potohar	Roberts, 1991 and Mirza, 1998	Rare at Rawalpindi and Islamabad
16	<i>Hieraaetus pennatus</i>	Booted Eagle	Murree foot hills	Roberts, 1991	Rare at the metropolitan areas of Rawalpindi and Islamabad.
17	<i>Pandion haliaetus</i>	Osprey	Potohar region, regularly occurs at Rawal Lake	Roberts, 1991 and Mirza, 1998	Rarely seen at Rawal Lake

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Table 3: Detailed data of species of Birds of Prey which are absent in current status study area.

	Scientific Name	Common Name	Location of Sightseeing (Previously)	Previously Reported By	Location of Sightseeing (Current Study)
1	<i>Accipiter gentiles</i>	Goshawk	Rarely seen in Punjab and Rawal Lake, Islamabad	Waite, 1930 and Whistler, 1930	Absent in Rawalpindi and Islamabad
2	<i>Circus pygargus</i>	Montagu's Harrier	Punjab salt range	Roberts, 1991 and Mirza, 1998	Absent in Rawalpindi and Islamabad
3	<i>Elanus caeruleus</i>	Black-Shouldered Kite	Throughout Punjab and Potohar region	Roberts, 1991 and Mirza, 1998	Absent in metropolitan areas of Rawalpindi and Islamabad
4	<i>Falco pelegrinides</i>	Red Capped Falcon	Common at Rawalpindi and Rawal Lake	Whistler, 1930 and Roberts, 1974	Absent in Margalla hills, Rawalpindi and Islamabad
5	<i>Haliastur Indus</i>	Brahminy kite	Absent in most of Punjab while present at Rawal lake	Roberts, 1991 and Mirza, 1998	Absent from Rawal Lake, Metropolitan areas of Rawalpindi and Islamabad
6	<i>Spilornis cheela</i>	Crested Serpent eagle	Very less in number in Rawalpindi and Murree hills	Roberts, 1991	Absent from Margalla hills, Rawal Lake, Rawalpindi and Islamabad
7	<i>Torgos Calvus</i>	King Vulture or Red headed Vulture	Rawalpindi plateau but had not recently been encountered around Rawalpindi or Punjab salt range	Whistler, 1930 and Roberts, 1991	Absent at Rawal Lake, Margalla hills, Rawalpindi and Islamabad

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Table 4: Detailed data of species of Birds of Prey which are newly reported in selected study area.

Scientific Name	Common Name	Previous Record	Previously Reported By	Location of Sightseeing (Current Study)
1 <i>Buteo regalius</i>	Buzzard	Unreported in Rawalpindi and Islamabad	Roberts, 1991	Metropolitan areas of Rawalpindi and Islamabad
2 <i>Falco concolor</i>	Sooty Falcon	Absent from Rawalpindi and Islamabad	Roberts, 1991	Metropolitan areas of Rawalpindi and Islamabad
3 <i>Ictinaetus malayensis</i>	Black Eagle	Unreported at Rawal Lake, Rawalpindi and Islamabad	Roberts, 1991	Metropolitan areas of Rawalpindi and Islamabad
4 <i>Milvus milvus</i>	Red Kite	Unreported at Rawal Lake, Rawalpindi, Islamabad	Roberts, 1991	Metropolitan areas of Rawalpindi and Islamabad.

Table 5: Population of the Birds Of Prey in the Study Area

Name of Birds	Population (#)	Name of Birds	Population (#)
1 Black Kite	280	8 Indian Sparrow Hawk	180
2 Black Eagle	60	9 Lesser Spotted Eagle	160
3 Crested Honey Buzzard	70	10 Marsh Harrier	140
4 Eurasian Kestrel	150	11 Steppe Eagle	200
5 Egyptian Vulture	60	12 Pariah Kite	240
6 Eurasian Sparrow Hawk	70	13 Merlin	45
7 Griffon Vulture	80	14 Other Species (Red Kite, Buzzard, Sooty Falcon)	25

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relative abundance of 16 % while Black eagle, Merlin and Egyptian vulture showed 3% relative abundance. The graph is shown in Figure 2.

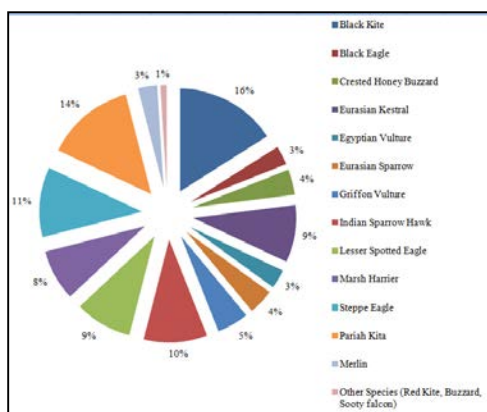


Figure 2: Relative abundance of birds of prey in study area.

CONCLUSION

Wildlife is declining globally, as in Pakistan. The Red Book by IUCN suggests the extinction of 3 species per day of various fauna from the surface of earth. Diurnal birds of prey, like all carnivores, are especially vulnerable to pesticides, insecticides, and other human made toxic chemicals. These birds of prey are exposed to a variety of bacterial, viral, and fungal diseases, as well as internal and external parasites from the prey they eat. Though not usually fatal, infections may make a bird weak and vulnerable to other environmental factors.

This study revealed that the birds of prey are declining due to the invasion and extinction of many species. According to reliable literature, in the study area 100 species were abundantly present in the recent past. Out of those 100 species 34% species confirmed present, 39% rare, 17% absent and about 10% have been reported new according to our study. It appears from this result that fauna of the region is on the verge of declining. If necessary actions are not taken accordingly, the conditions may result into even worse situation. It is recommended that relative agencies organizations should be dedicated to meet this challenge and to ensure the survival of rich variety of wild life.

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