

Bird Diversity in Shallabug Wetland (Kashmir), India

A. Hai¹, M. Jeelani¹, S. Patil² and R. Ahmad²

Received: May 12, 2012 | Accepted: October 22, 2012 | Online: December 25, 2012

Abstract

Shallabug wetland is located in District Srinagar of J&K State covering an area of 700 hectares at an altitude of 1580m. The wetland depth ranges from 0.3 to 2.0 metres (Pandit, 1982). The wetland harbours a variety of aquatic and semi-aquatic vegetation providing a good habitat for a variety of birds. The supplementary food like mollusks, fishes and insects are also available in plenty. For the present study counting of birds was done on visual basis and with the help of binoculars following standard methods. The identification of birds was done according to the standard books and monographs. The present study examines the present status of birds in the Shallabug Wetland Kashmir, India.

Keywords: *Bird diversity | Shallabug Wetland | Kashmir*

For correspondence



¹Department of environmental studies, Srinagar Women College, Srinagar (Kashmir), India.

²Department of Zoology and Applied Aquaculture, Barkatullah University, Bhopal (M.P.), India
Email: envfriend@gmail.com

Introduction

The State of J&K has a large number of wetlands due to glacial erosions and depressions which are mingled with rivers giving rise to lentic ecosystem. These lentic ecosystems (wetlands and lakes) are of great ecological and socio-economic importance as it harbours a diverse group of plants and animals. These wetlands are providing a good habitat for birds with abundant food, safe place for roosting, nesting and moulting. From the ornithologist point of view, the valley of Kashmir is heaven for migratory and endemic species of birds. Indeed the local populaces are not much aware of migratory and resident species of birds except few. However, during the recent past these wetlands and lakes have faced a lot of destruction due to agricultural activities in and around, pollution of water which ultimately enters these water bodies, soil erosion from the catchment areas, siltation, rampant removal of hydrophytes are few effects to mention. Earlier studies on the birds of wetlands of Kashmir were initiated during

British period. Many investigators have studied the diversity, distribution, seasonal migration etc. of birds in various wetlands and lakes of Kashmir (Magrath, 1921; Holmes and Parr, 1988; Qadri, 1989; Basher, 2002) but a little is known about the birds of Shallabug wetland in the recent past. In addition, the present study represents the comprehensive picture of the bird community of a small representative area in Kashmir, India.

Materials and Methods

Keeping in view the size of the study area sampling strategy was adopted for studying the birds of Shallabug wetland (July to December). For the present investigation the area was divided into four zones, north, south, east and west. The divisions were on the basis of characteristics of water depth and vegetation. The visual census method was used for bird population estimation after Watson and Gaston, 1975. Birds were observed with aid of 10 x 50 super Zenith prismatic field binocular. Observations were made once a month (July-

December) for atleast 5 hours a day. The most important aspect kept in consideration was the activity of birds. Since the peak activity in most birds lasts for 1 or 2 hours after sunrise or before sunset, so monitoring was done either in early morning or late evening hours. The identification of birds was done according to the identification keys and monographs adopted by Bates and Lowther, 1952; Whistler 1963; Salim Ali, 1979. Residential status of the birds has been worked out and different status categories like resident, winter visitor and summer visitor have been assigned strictly with reference to the study area on the basis of presence or absence method.

Results and Discussion

The present studies on bird diversity of Shallabug wetland of Kashmir, India revealed the presence of 34 species of birds. Out of these 14 were found to be residents whereas 10 each were summer and winter migrant birds. (Table 1a,b,c).

S.No	Scientific name	Common name	Number of birds observed on monthly basis					
			July	Aug	Sept	Oct	Nov	Dec
1	<i>Anas acuta</i>	Pintail				++	++	+
2	<i>Anas crecca</i>	Common teal				++	+++	+++
3	<i>Anas Penelope</i>	Wigeon				+	+	+
4	<i>Anas strepera</i>	Gadwall				+	++	++
5	<i>Anas platyrhynchos</i>	Mallard				++	++	+++
6	<i>Athya ferina</i>	Common pochard				+	+	+
7	<i>Anas rufina</i>	Red crested pochard				+	++	+
8	<i>Anser anser</i>	Graylag goose				+	++	++
9	<i>Anas clypeata</i>	Northern shoveler				++	++	++
10	<i>Anas querquedula</i>	Garganey				+	+	+
Density: 1-50 = + ; 51-100 = ++; 101 and above; +++								

Table 1(a): Showing the abundance of **Winter migrant birds** in Shallabug wetland.

S.No	Scientific name	Common name	Number of birds observed on monthly basis					
			July	Aug	Sept	Oct	Nov	Dec
1	<i>Actitis hypoleucos</i>	Common sand piper	+	+	+	+		
2	<i>Acridotheres tristis</i>	Common Myna	+++	+++	+++	+++	++	++
3	<i>Ardea cinerea</i>	Eastern grey heron	+	+	+	+	+	
4	<i>Ardeola grayii</i>	Indian pond heron	+	+		+		
5	<i>Alcedo atthis pallasii</i>	Central Asian kingfisher	+	+	+			
6	<i>Corvus splendens</i>	House crow	++	++	++	+	+	
7	<i>Columba liva</i>	Blue rock pigeon	+	+		++		+
8	<i>Pycnonotus leucogenys</i>	White- cheeked bulbul	+	+	+			
9	<i>Milvus migrans</i>	Common pariah kite	+	+				
10	<i>Nycticorax nycticorax</i>	Black crowned night heron	+	+	+	+		
11	<i>Passer domesticus</i>	House sparrow	+	+	++	+++	+	
12	<i>Tachybaptus ruficollis</i>	Little grebe	+	+	+			
13	<i>Gyps himalayensis</i>	Himalayan griffon vulture	+	+	+			
14	<i>Bubo bubo</i>	Great horned owl	+	+	+			

Density: 1-50 = +; 51-100= ++; 101 and above; +++

Table 1(b): Showing the abundance of **Resident birds** in Shallabug wetland.

S.No	Scientific name	Common name	Number of birds observed on monthly basis					
			July	Aug	Sept	Oct	Nov	Dec
1	<i>Chlidonias hybrida indica</i>	Indian whiskered tern	+	+	+			
2	<i>Gallinula chloropus indicus</i>	Indian Moorhen	+	++	++	++		
3	<i>Hydrophasianus chirurgus</i>	Pheasant tailed jacana	+	+	+			
4	<i>Hirundo rustica</i>	Common swallow	+	+	+			
5	<i>Lanius schach</i>	Rufous-backed shrike	+	+				
6	<i>Ixobrychus minutus</i>	Little Bittern	+	+	+			
7	<i>Oriolus oriolus kundoo</i>	Indian oriole	+	+				
8	<i>Psittacula himalayana</i>	Slaty-headed parakeet	+	+				
9	<i>Rostratula benghalensis</i>	Greater painted-snipe	+	++	+	+		
10	<i>Upupa epops</i>	European Hoopoe	+	+	+	+		

Density: 1-50 = + ; 51-100 = ++; 101 and above; +++

Table 1(c): Showing the abundance of **Summer migrant birds** in Shallabug wetland.

Analysis of data on all the three classes of birds i.e. resident, summer migrants and winter migrants is given in the table. The data reveals that among the resident birds, *Acridotheres tristis* (common Myna) was sighted to be in larger numbers for all the months (July to December) followed by winter migrant bird *Anas crecca* (common teal). The resident birds

like *Corvus splendens* (house crow) and *Passer domesticus griscigularis* (Kashmiri house sparrow) were also found in abundant numbers. Among the summer migrant birds *Gallinula chloropus indicus* (Indian Moorhen) were abundant for the present study. While as *Anas platyrhynchos* (Mallard) was recorded to be in large numbers among the winter birds.

Another bird *Anas clypeata* (Northern Shoveller) was also found in good numbers. The minimum density of birds among the resident was that of *Gyps himalayensis* (Himalayan griffon vulture), *Oriolus oriolus kundoo* (Indian oriole) among the summer migrants and *Anas Penelope* (wigeon) among the winter migrant birds.

The seasonal pattern of all the three classes of birds reveals that the resident birds were sighted almost throughout the study period. However, *Milvus migrans govinda* (common pariah kite) was sighted in the month of July and August only. Another bird *Alcedo atthis pallasi* (central asian kingfisher) was sighted in the month of July to August. In all the eight resident birds which were sighted from July up to October are *Actitis hypoleucos* (common sandpiper), *Acridotheres tristis* (common myna), *Ardea cinerea* (eastern grey heron), *Ardeola grayii* (Indian pond heron), *Corvus splendens* (house crow), *Columbaliva neglecta* (home blue rock pigeon), *Nycticorax nycticorax* (black crowned night heron) and *Passer domesticus griscigularis* (Kashmiri house sparrow). While as only four resident birds were sighted in the month of November which are common *Acridotheres tristis*, *Ardea cinerea*, *Corvus splendens*, *Passer domesticus griscigularis* and only *Acridotheres tristis* and *Columbaliva neglecta* were sighted in the month of December. In contrary the *Acridotheres tristis* (common myna) among the

resident birds was sighted throughout the studied period. While as the birds which belong to summer migratory were found in the months of July to September except *Gallinula chloropus* (Indian moorhen), *Rastratula benghalensis* (greater painted snipe), *Upupa epops* (European hoopoe) which were also sighted in the month of October in the present study. On the other hand the all winter migratory birds were sighted during October to December months.

For the present study, a total of 4314 birds were recorded among which 1576 belong to resident, 752 belong to summer migrants and 1986 to winter migrants respectively (figure-1). The maximum number of birds recorded was winter migrants which constitute 46.04% of total bird population, followed by resident birds which constitute 36.53% and summer migrants 17.43% respectively in the following pattern.

Winter migrants (46.04%) > Resident (36.53%) > Summer migrants (17.43%)

The maximum number of birds were recorded during the month of September (636) among the resident category. Among the summer migrants, maximum number of birds observed were during the month of August (550) and among winter migrants maximum number of birds observed were during the month of November (1057) following the following trend.

Winter migrants (November) 1057

Resident (September) 636

Summer migrants (August) 550

The present study which is preliminary in nature reveals that large number of birds recorded were primarily due to availability of food, nesting and resting sites and also due to availability of dense great variety of plants. It was revealed that the migratory birds have mostly visited the area.

References

Basher, S. Yousuf, A.R. and Shah, A.M. (2002): Habitat preference for nesting in some birds of Hokursar Wetland, Kashmir. 49-55 pp. bioresources concern and conservation.

Bates, R.S.P and Lonther, E.H.N (1952): The history of bird photography in India. J.

Bombay Natural Society. 50(2); 779-784pp.

Holmes, P.R. and Parr, A.J. (1988): Achecklist of birds of Haigam Kashmir. J. of Bombay Nat. Hist.Soc.

Pandit, A.K. (1982): Feeding ecology of breeding in five wetlands of Kashmir, J.env.Man.33: 143-154pp

Magrath, H.A.F. (1921): Kashmir bird notes. J.Bomb. Nat.Hist. Soc.,28(1). 276-279pp.

Qadri, S.S. (1989): Ecological factors affecting waterfowl in the wetlands of Kashmir. Ph.D. thesis, University of Kashmir, Srinagar.

Salim Ali (1986):Field guide to the birds of the eastern himalayas. Oxford University Press, Delhi.

