



## ORIGINAL ARTICLE

### Status of Indian Migratory Birds from the Selected Ecosystems of Yavatmal, Maharashtra, India

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#### ABSTRACT

*This study was conducted from January 2016 to March 2017 to explore the Indian migratory birds from the selected ecosystems and to find out the major threats to the avian fauna of the area as it was neglected for years. The study revealed a total of 100 migratory bird species including 63 waders, 09 raptors and 28 passerines were recorded from the study area around Yavatmal city of Maharashtra. Status wise 43 common, 34 fairly common, 22 uncommon, 01 rare were recorded from the different habitats. Nilona dam alone supports 75 migratory birds which was the highest record compared with the rest of the other ecosystems. Most of the selected areas are vulnerable ecosystems harboring many migratory birds because five globally near threatened species like Curlew Sandpiper, Ferruginous Pochard, Painted Stork, Pallid Harrier and European Roller and one vulnerable category like Common Pochard have a protected status under the schedule IV of Indian Wildlife Protection Act, 1972 were recorded from these areas. The diversity records of Indian migratory birds from the study area are satisfactory and search is continuing hope the number will increased in the future. The ecosystems are facing tremendous conservation challenges by the impact of anthropogenic alteration of the habitats in and around the lake and forest area. All birds' species are required different ecosystems if we have understanding their needs and influencing factors that will helps to improve the ecological status it will automatically helps to increases the numbers of birds in the area.*

**Key words:** Status of Migratory Birds, Different Ecosystems, Diversity Records, Threats

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#### INTRODUCTION

Every year thousands of migratory birds from the various part of the world visited to India. Bird's migration is the regular seasonal journey undertaken by many species of the birds. Indian subcontinent plays a host to a number of migratory birds in winters as well as summers. It is observed that over hundreds of species of migratory birds including waders, raptors and passerine fly to India in searching of food. The need of their migration has to escape from extreme weather of their native habitat. Birds start their migration to the other areas almost through fix route it helps to study the pattern of migration. Birds having different reasons for migrating, they also have different ways they accomplish these epic journeys. Some birds can stay aloft for many hours in one long migration flight, while others take shorter journeys and refuel along the way. Still other birds may utilize different climate or wind patterns to aid migration. Some birds navigate with landmarks, while others may use the stars or other astronomical clues to find their way. With so much diversity in how and why birds migrate, it comes as no surprise that there are many different types of migration. The present paper has focus on the diversity of migratory birds arrived on selected fresh water resources around the Yavatmal city.

## MATERIALS AND METHODS

The study area covers eight fresh water resources like Nilona(N)-78° -8'-32"N"-20°-23'-10"E , Bargaon dam(B)-78° -17'-43"N 20° -27'16"E, Jamwadi dam(J)-78°-11'-52"N 20°20'16"E, Echori dam(E) - 78°02'54.69"N 20°22'16.40"E. Bembla dam(BE)-78° -8'-05.88"N-20°-28'-07.20"E, Arjuna dam(A)-78°-06'-52"N 20°24'12"E, Singhandov(S)-78°-28'-42"N 20°28'10"E and Chapdov(C)- 78° -10'-64"N"-20°-28'-43"E. Three forest ranges like Jam (JR) 78°06'28.04"N 20°21'07.97"E., Chousala (CF) 78° -04'-41.43"N-20°-25'-04.04"E and Durge (DF) -78° -16'-28.20"N-20°-19'-02.22"E are also the part of study area. Routinely visits at list two habitats during study period i.e. from March 2016 to April 2017 & observed by the help of binocular Nikon 10X50. Photographs taken by help of 520-coolpix Nikon digital camera for visual records. Inskip and Grewal reference books used for identification of birds. For preparation of visitor list used EVIS records to check list of Indian migratory birds and under which category birds are mention.

## RESULT AND DISCUSSION

There are 370 Indian migratory birds including Raptors, Waders & Passerines visited to all over the India. A total of 100 species of migratory birds belonging to 22 families including sixty three waders, nine raptors & twenty eight passerine have been recorded from the study area like Nilona dam, Bargaon dam, Jamwadi dam, Echori dam, Bembla dam, Arjuna dam, Singhandov dam, Chapdov dam, Jam range, Chousala forest and Durge forest. Details such as common and scientific names, occurrence and status are mention in Table 1 and Graph-1 based on sighting records. Out of one hundred species 23 species were sighted only in a single habitat, 41 birds were observed on any two habitats and 36 species were visited to every selected area their details are mention in the observation Table 2.

It was very surprising that out of 100 migratory birds, 75 species were sighted on Nilona dam it indicated the richness of Nilona ecosystem followed by bargaon-56, bembla-42, Echori-41, arjuna-40, singhandov-39, jamwadi-37, chapdov-36, Chausala-23, durge-19 and jam-18. (Table-2 & Graph-2)

The most noticeable fact is 5 birds' species which are under near threatened category like Curlew Sandpiper, Ferruginous Pochard, Painted Stork, Pallid Harrier and European Roller and 1 species belongs to vulnerable category i.e. Common Pochard have been recorded from the selected habitats. Status wise counting results indicates that 43 Common, 34 fairly common, 22 uncommon and 01 rare were noticed from the area. The above results are clearly indicates that diversity of migratory birds which are visited to selected habitat are good in numbers and the conclusion is the selected habitats are ecologically healthy and supports more number of migratory birds which will visit to the area. It could be possible due to more attention and regular monitoring. Some reasons like anthropogenic activities- micro fishing, poaching, deforestation, collection of firewood and fodders are destroying ecological parameters and disturb the habitats. The few things are needed to focus immediately, first is to stop the illegal irrigation, micro fishing, over fishing, cattle grazing, irradiation of weeds that automatically helps to improve the condition of ecosystem in the area and it develops more chances to visit large number of migratory birds. The routine survey and running various research projects which help to explore good or bad changes in the area and better chances of finding new bird records in the area. Regular monitoring is continuing and confident that the number will increases in future.

## ACKNOWLEDGEMENT

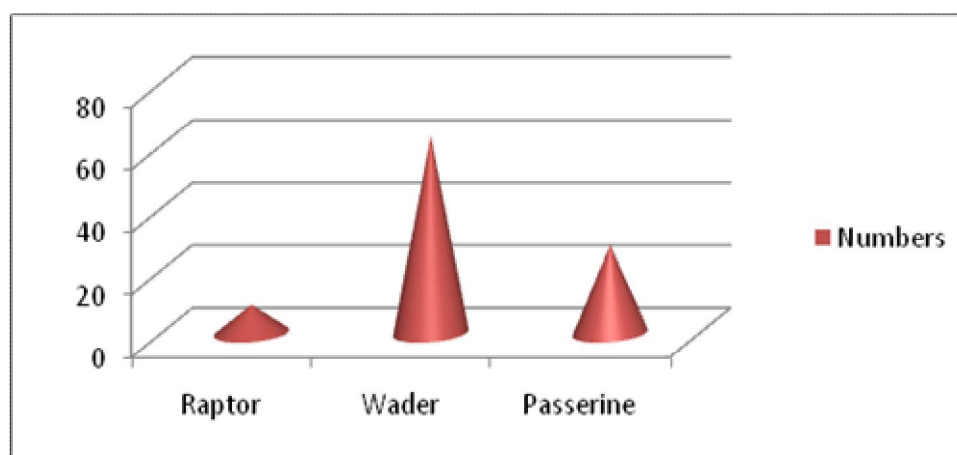
I am thankful to Dr. Deepak Dabhere for his support during field visits.

**Table 1:** Brief Classification of Migratory Birds and Abbreviation Status C-Common, FC-Fairly Common, UC-Uncommon and R-Rare

S.N.	Common Name	Scientific Name	Family	Status
1	Asian Brown Fly Catcher	Muscicapa dauurica	Muscicapidae	FC
2	Baillon's Crake	Porzana pusilla	Rallidae	UC
3	Bar Headed Goose	Anser indicus	Anatidae	C
4	Barn Swallow	Hirundo rustica	Hirundinidae	C
5	Black Red Start	Phoenicurus ochruros	Muscicapidae	FC
6	Black Stork	Ciconia nigra	Ciconiidae	UC
7	Black Bellied Tern	Sterna acuticauda	Laridae	UC
8	Black Headed Bunting	Emberiza melanocephala	Fringillidae	UC
9	Black Tailed Godwit	Limosa limosa	Scolopacidae	C
10	Blue Rock Thrush	Monticola solitaries	Muscicapidae	UC
11	Blyth's Pipit	Anthus godlewskii	Passeridae	UC
12	Booted Warbler	Hippolais caligata	Sylviidae	UC
13	Brown Shrike	Lanius cristatus	Laniidae	FC
14	Brown Headed Gull	Larus brunnicephalus	Laridae	C
15	Cattle Egrate	Bubulcus ibis	Ardeidae	C
16	Citrin Wagtail	Motacilla calcarata	Passeridae	C
17	Collared Pratincole	Glareola pratincola	Glareolidae	UC
18	Comb Duck	Sarkidiornis melanotos	Anatidae	FC
19	Common Black Headed Gull	Larus ridibundus	Laridae	C
20	Common Coot	Fulica atra	Rallidae	C
21	Common Green Shank	Tringa nebularia	Scolopacidae	C
22	Common Kestral	Falco tinnunculus	Falconidae	FC
23	Common Pochard	Aythya ferina	Anatidae	C
24	Common Red Shank	Tringa tetanus	Scolopacidae	C
25	Common Rosefinch	Carpodacus erythrinus	Fringillidae	FC
26	Common Sandpiper	Actitis hypoleucos	Scolopacidae	C
27	Common Shelduck	Tadorna tadorna	Anatidae	UC
28	Common Snipe	Gallinago gallinago	Scolopacidae	FC
29	Common Teal	Anas crecca	Anatidae	C
30	Cotton Pygmy Goose	Nettapus coromandelianus	Anatidae	FC
31	Curlew Sandpiper	Calidris ferruginea	Scolopacidae	FC
32	Desert Wheater	Oenathe deserti	Muscicapidae	UC
33	Dunlin	Calidris alpine	Scolopacidae	UC
34	Eastern Marsh Harrier	Circus aeruginosus	Accipitridae	C
35	Eurasian Hobby	Falco subbuteo	Accipitridae	UC
36	Eurasian Sparrow Hawk	Accipiter nisus	Accipitridae	UC
37	Eurasian Spoon Bill	Platalea leucorodia	Threskiornithidae	C
38	Eurasian Wegeon	Anas Penelope	Anatidae	C
39	Eurasian Wryneck	Jynx torquilla	Picidae	FC
40	European Roller	Coracias garrulous	Coraciidae	R
41	Ferruginous Pochard	Aythya nyroca	Anatidae	FC
42	Gadwall	Anas strepera	Anatidae	C
43	Garganey	Anas querquedula	Anatidae	C
44	Glossy Ibis	Plegadis falcinellus	Threskiornithidae	FC
45	Great Cormonant	Phalacrocorax carbo	Phalacrocoracidae	FC
46	Great Egrate	Casmerodius albus	Ardeidae	C
47	Greater Flamingo	Phoenicopterus ruber	Phoenicopteridae	C
48	Greater Spotted Eagle	Aquila clanga	Accipitridae	C
49	Green Sandpiper	Tringa ochropus	Scolopacidae	FC
50	Greenish Warbler	Phylloscopus trochiloides	Sylviidae	FC
51	Grey Heron	Ardea cinerea	Ardeidae	C
52	Grey Wagtail	Motacilla cinerea	Passeridae	FC
53	Grey Headed Lapwing	Vanellus cinereus	Charadriidae	UC
54	Grey Lag Goose	Anser anser	Anatidae	C
55	Grey Necked Bunting	Emberiza buchanani	Fringillidae	FC
56	Gull Billed Tern	Gelochelidon nilotica	Laridae	FC

57	Grey Plover	Pluvialis squatarola	Charadriidae	UC
58	Indian Pond Heron	Ardeola grayii	Ardeidae	C
59	Indian Skimmer	Rynchops albicollis	Laridae	UC
60	Isabelline Wheater	Oenanthe isabellina	Muscicapidae	UC
61	Kentish Plover	Charadrius alexandrinus	Charadriidae	FC
62	Little Ring Plover	Charadrius dubius	Charadriidae	C
63	Little Stint	Calidris minuta	Scolopacidae	C
64	Little Tern	Sterna albifrons	Laridae	UC
65	Marsh Sandpiper	Tringa stagnatilis	Scolopacidae	C
66	Montagu's Harrier	Circus pygargus	Accipitridae	UC
67	Northern Shoveler	Anas clypeata	Anatidae	C
68	Northern Pintail	Anas acuta	Anatidae	C
69	Oriental Honey Buzzard	Pernis ptilorhynchus	Accipitridae	FC
70	Oriental Turtle Dove	Streptopelia orientalis	Columbidae	FC
71	Olive -Backed Pipit	Anthus hodgsoni	Passeridae	C
72	Osprey	Pandion haliaetus	Accipitridae	FC
73	Pacific Golden Plover	Pluvialis fulva	Charadriidae	FC
74	Painted Stork	Mycteria leucocephala	Ciconiidae	C
75	Pallid Harrier	Circus macrourus	Accipitridae	UC
76	Pied Avocet	Recurvirostra avosetta	Charadriidae	C
77	Pin-Tailed Snipe	Gallinago stenura	Scolopacidae	FC
78	Paddy Field Warbler	Acrocephalus Agricola	Sylviidae	FC
79	Peregrine Falcon	Falco peregrines	Falconidae	FC
80	Red Crested Pochard	Rhodonessa rufina	Anatidae	FC
81	Red Breasted Flycatcher	Ficedula parva	Muscicapidae	FC
82	Red Rumped Swallow	Hirundo daurica	Hirundinidae	FC
83	Red Headed Bunting	Emberiza bruniceps	Fringillidae	UC
84	Richard's Pipit	Anthus richardi	Passeridae	FC
85	Rosy Starling	Sturnus roseus	Sturnidae	FC
86	Ruddy Shelduck	Tadorna ferruginea	Anatidae	C
87	Ruff	Philomachus pugnax	Scolopacidae	C
88	Siberian Stonechat	Saxicola torquata	Muscicapidae	C
89	Spot Bill Duck	Anas poecilorhyncha	Anatidae	C
90	Spotted Red Shank	Tringa erythropus	Scolopacidae	C
91	Sulphur Bellied Warbler	Phylloscopus griseolus	Sylviidae	FC
92	Syke's Warbler	Hippolais rama	Sylviidae	UC
93	Tawny Pipit	Anthus campestris	Passeridae	FC
94	Temminck Stint	Calidris temminckii	Scolopacidae	C
95	Tufted Duck	Aythya fuligula	Anatidae	C
96	Tree Pipit	Anthus trivialis	Passeridae	C
97	Whiskered Tern	Chlidonias hybridia	Laridae	C
98	White Wagtail	Motacilla personata	Nectarinidae	C
99	White Eye Buzzard	Butastur teesa	Accipitridae	FC
100	Wood Sandpiper	Tringa glareola	Scolopacidae	C

**Graph1:** Categories Wise Species Visited to the Study Area



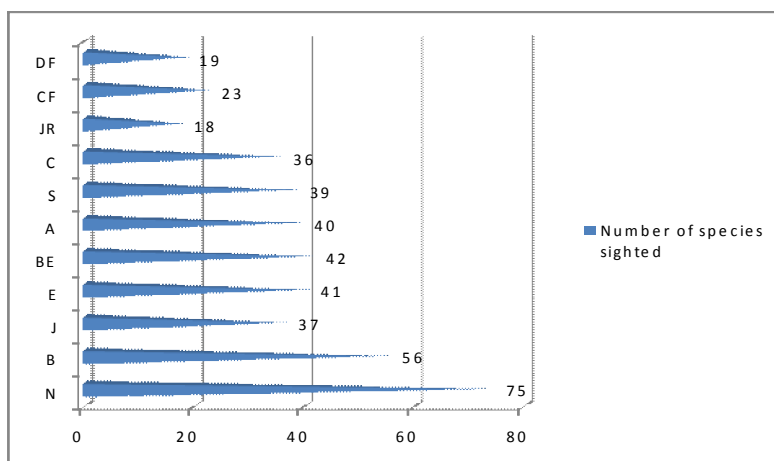
**Table 2:** Details Sighting Records of Birds and Habitat

S.N.	Common Name	Occurrence										
		N	B	J	E	BE	A	S	C	JR	CF	DF
1	Asian Brown Fly Catcher	-	-	-	-	-	-	-	-	-	Y	Y
2	Baillon's Crake	Y	-	-	-	-	-	-	-	-	-	-
3	Bar Headed Goose	-	Y	-	-	-	-	Y	-	-	-	-
4	Barn Swallow	All Habitats										
5	Black Red Start	All Habitats										
6	Black Stork	-	Y	-	-	-	Y	-	-	-	-	-
7	Black Bellied Tern	-	-	-	-	Y	-	-	-	-	-	-
8	Black Headed Bunting	All Habitats										
9	Black Tailed Godwit	Y	Y	-	-	-	-	-	-	-	-	-
10	Blue Rock Thrush	All Habitats Except forest										
11	Blyth's Pipit	-	-	-	Y	-	-	-	-	-	-	-
12	Booted Warbler	All Habitats										
13	Brown Shrike	Y	-	-	-	Y	-	-	-	-	-	-
14	Brown Headed Gull	All Habitats Except forest										
15	Cattle Egrate	All Habitats										
16	Citrin Wagtail	-	Y	-	-	-	Y	-	-	-	-	-
17	Collared Pratincole	-	Y	-	-	-	-	-	-	-	-	-
18	Comb Duck	-	Y	Y	-	-	-	-	-	-	-	-
19	Common Black Headed Gull	Y	Y	-	-	-	-	-	-	-	-	-
20	Common Coot	All Habitats Except forest										
21	Common Green Shank	Y	Y	-	-	-	-	-	-	-	-	-
22	Common Kestral	All Habitats										
23	Common Pochard	-	Y	-	-	-	-	Y	-	-	-	-
24	Common Red Shank	Y	-	-	Y	-	-	-	-	-	-	-
25	Common Rosefinch	Y	-	-	-	-	-	-	-	-	-	-
26	Common Sandpiper	All Habitats Except forest										
27	Common Shelduck	-	Y	-	-	-	-	-	-	-	-	-
28	Common Snipe	All Habitats Except forest										
29	Common Teal	Y	-	-	-	Y	-	-	-	-	-	-
30	Cotton Pygmy Goose	Y	-	Y	-	-	-	-	-	-	-	-
31	Curlew Sandpiper	Y	Y				-	-	-	-	-	-
32	Desert Wheater						Y			Y		
33	Dunlin	Y	Y									
34	Eastern Marsh Harrier	Y			Y							
35	Eurasian Hobby										Y	
36	Eurasian Sparrow Hawk	Y										Y
37	Eurasian Spoon Bill	Y	Y									
38	Eurasian Wegeon	All Habitats Except forest										
39	Eurasian Wryneck	All Habitats Except forest										
40	European Roller										Y	
41	Ferruginous Pochard	Y			Y							
42	Gadwall	Y				Y						
43	Garganey	Y						Y				
44	Glossy Ibis	Y	Y									
45	Great Cormorant		Y				Y					
46	Great Egrate	All Habitats										
47	Greater Flamingo							Y				
48	Greater Spotted Eagle									Y		
49	Green Sandpiper	All Habitats Except forest										
50	Greenish Warbler										Y	
51	Grey Heron	All Habitats										
52	Grey Wagtail	All Habitats										
53	Grey Headed Lapwing	Y										
54	Grey Lag Goose	Y										
55	Grey Necked Bunting	All Habitats										
56	Gull Billed Tern	Y										
57	Grey Plover	Y										
58	Indian Pond Heron	All Habitats										

59	Indian Skimmer	Y											
60	Isabelline Wheater		Y										
61	Kentish Plover	All Habitats Except forest											
62	Little Ring Plover	All Habitats Except forest											
63	Little Stint	All Habitats Except forest											
64	Little Tern	Y	Y										
65	Marsh Sandpiper	Y	Y										
66	Montagu's Harrier	Y				Y							
67	Northern Shoveler	All Habitats Except forest											
68	Northern Pintail	All Habitats Except forest											
69	Oriental Honey Buzzard	All Habitats											
70	Oriental Turtle Dove	Y			Y								
71	Olive -Backed Pipit	Y			Y								
72	Osprey	Y				Y							
73	Pacific Golden Plover	Y											
74	Painted Stork	Y	Y										
75	Pallid Harrier	Y				Y							
76	Pied Avocet	Y											
77	Pin-Tailed Snipe	Y											
78	Paddy Field Warbler		Y										
79	Peregrine Falcon	Y											
80	Red Crested Pochard	All Habitats Except forest											
81	Red Breasted Flycatcher										Y		
82	Red Rumped Swallow										Y		
83	Red Headed Bunting	All Habitats											
84	Richard's Pipit										Y	Y	
85	Rosy Starling	All Habitats											
86	Ruddy Shelduck	All Habitats Except forest											
87	Ruff	Y		Y									
88	Siberian Stonechat	All Habitats Except forest											
89	Spot Bill Duck	All Habitats Except forest											
90	Spotted Red Shank	Y											
91	Sulphur Bellied Warbler											Y	
92	Syke's Warbler	Y		Y									
93	Tawny Pipit		Y				Y						
94	Temminck Stint	All Habitats Except forest											
95	Tufted Duck	Y						Y					
96	Tree Pipit			Y									Y
97	Whiskered Tern	Y	Y										
98	White Wagtail	All Habitats											
99	White Eye Buzzard	All Habitats											
100	Wood Sandpiper	All Habitats Except forest											

Abbreviation: Nilona (N), Borgaon dam (B), Jamwadi dam (J), Echori dam (E), Bembla dam (BE), Arjuna dam (A), Singhandov (S) and Chapdov (C). Three forest ranges like Jam (JR), Chousala (CF) and Durge (DF)

Graph 2: Species Were Sighted in the Selected Area



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