



Avifauna of wetlands of Amravati region, Maharashtra, India

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The avifauna of India and Pakistan was studied by Ali & Ripley (1987, 1988). A total of 536 species were reported from India by Ali (2002). From the Amravati region, Wadatkar (2001) and Wadatkar & Kasambe (2002) reported 171 species of birds from Pohra-Malkhed region and the Amravati University region.

This study is of immense importance to the wetlands which are mentioned here, as it has been observed that the water level of the wetlands is continuously declining and they are also getting polluted heavily by local human activities.

The source of water to all the lakes in this study is only rain water, thus the uncertainty in the amount of rainfall is another big reason for the shrinkage of a large area under water; eventually such poor and

polluted wetlands are taken as the last choice by the migratory birds, hence causing a great loss to the richness of the wetlands.

A regular and meticulous study of these wetlands will definitely help to keep a record of birds species (resident and migratory), thus helping to restore as well as to maintain the present condition of all of the three wetlands.

Study area

Amravati is located at 20°93'N & 77°75'E, at an elevation of 343m in Maharashtra. Three wetland areas of Amravati region have been studied which include Chhatri Lake, Wadali Lake and Bhivapur Lake or Talav.

Chhatri Lake (20°53'42.6"N & 77°46'66.2"E, 372m) covers an area of 111.231934m² (Image 1).

Wadali Lake (20°55'24.37"N & 77°47'46.12"E, 377m) covers an area of 77.818996m² (Image 2).

Bhivapur Lake (20°55'79.1"N & 77°59'68.7"E, 352m) the largest of the three lakes is 162.744404m² in area; fishing is extensively done on a large commercial basis (Image 3).

Out of the three wetlands mentioned here, Chatri Talav and Wadali Talav are located in Amravati City and are thus taken care of by the Amravati Municipal Corporation (AMC); however, the AMC has given these two lakes on lease to other groups which are now responsible for the maintenance of the lakes and also earn profit by various activities like, boating, recreational games for children and snacks stalls for people of all ages who visit the lake.

Slightly different from the above two, the Bhivapur Talav is maintained by the Amravati Zillah Parishad (ZP). The ZP also takes out a tender of five years for any party interested in carrying out fishing activities at Bhivapur Talav, preference is always given to the fishing community.

The predominating vegetation is typically dry deciduous type (Champion & Seth 1968). Common plant species are *Acacia arabica*, *Azadirachta indica*, *Zizyphus jujuba*, *Eucalyptus* sp., *Lantana camara*, *Ipomoea fistula*, *Cassia* sp. etc. Aquatic weeds of these areas are *Hydrilla* sp., *Typha* sp., *Cyperus* sp., *Chara* sp., among others.

The climate of Amravati is tropical wet and dry

Date of publication (online): 26 January 2011

Date of publication (print): 26 January 2011

ISSN 0974-7907 (online) | 0974-7893 (print)

Editor: Rajah Jayapal

Manuscript details:

Ms # o2034

Received 18 August 2008

Final received 12 November 2010

Finally accepted 25 November 2010

Citation: Pachlore, G. & M. Chandrakar (2011). Avifauna of wetlands of Amravati region, Maharashtra, India *Journal of Threatened Taxa* 3(1): 1478-1484.

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Acknowledgements: The Authors are thankful to Dr. M.M. Baig, Head, Department of Zoology, G.V.I.S.H Amravati for his help and support. Authors are also thankful to colleagues Ananta, Pankaj Shelke, Parikshit Deshmukh, Gurav Lahe, Rakesh verma, Amit Mahalle. Authors would also like to extend thanks to Mr. Vikramsingh Pachlore, Director, P.C.B.S.M.R.D.Institute, Amravati, and Mr. Pankaj Pachlore and Mrs. Sarika Pachlore for providing valuable inputs in writing the manuscript.

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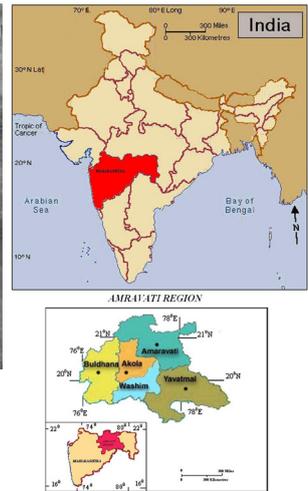
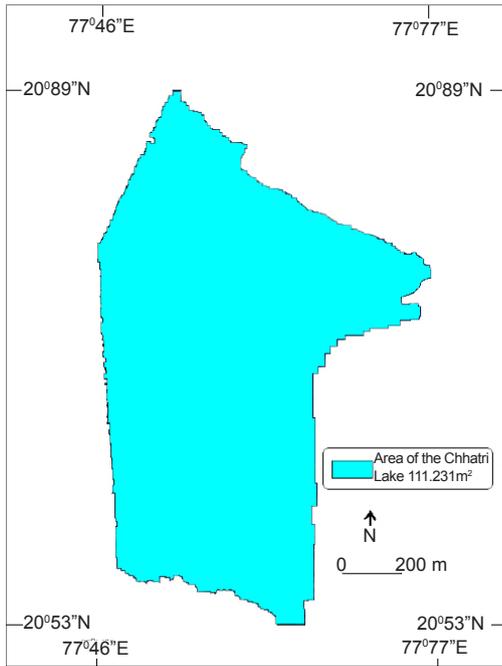


Image 1. Study area - Chhatri Lake

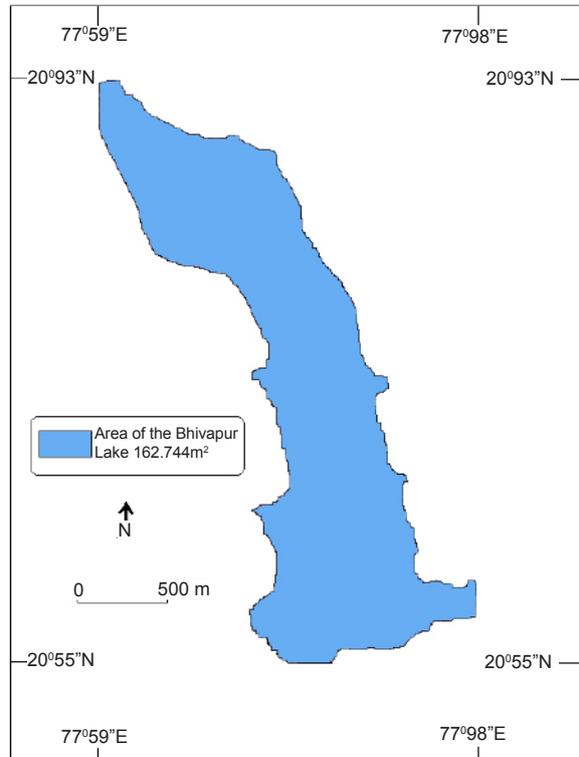
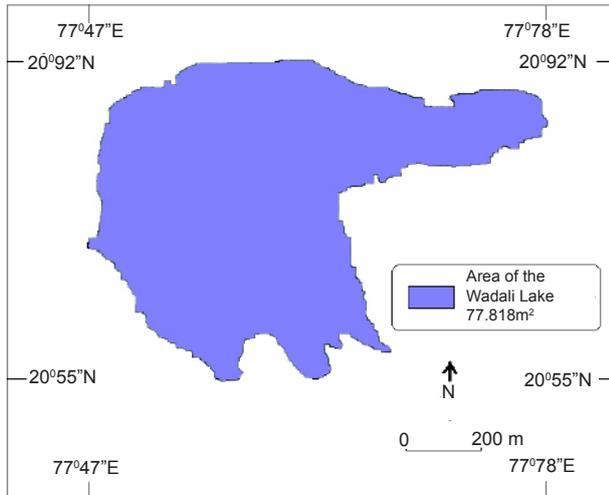


Image 2. Study area - Wadali Lake

Image 3. Study area - Bhivapur Lake

Table 1. Consolidated checklist of birds of wetlands of Amravati region, along with status, sighting months and sites of birds.

	Common name	Scientific name	Status	Month of sight	Lake		
					Chhatri	Wadali	Bhivapur
	Podicipitidae						
1	Little Grebe	<i>Tachybaptus ruficollis</i>	R	Mar	*	*	*
	Phalacrocoracidae						
2	Little Cormorant	<i>Phalacrocorax niger</i>	RM	Mar	*	*	*
	Ardeidae						
3	Grey Heron	<i>Ardea cinerea</i>	RM	+	*	*	*
4	Purple Heron	<i>Ardea purpurea</i>	RM	+	*	*	
5	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	RM	+	*	*	*
6	Large Egret	<i>Casmerodius albus</i>	RM	+	*	*	*
7	Cattle Egret	<i>Bubulcus ibis</i>	R	+	*	*	*
8	Little Egret	<i>Egretta garzetta</i>	R	+	*	*	*
9	Yellow Bittern	<i>Ixobrychus sinensis</i>	R	+	*	*	
10	Great Bittern	<i>Botaurus stellaris</i>	M	Feb #		*	
	Threskiornithidae						
11	Black Ibis	<i>Pseudibis papillosa</i>	RM	+	*	*	*
12	Oriental White Ibis	<i>Threskiornis melanocephalus</i>	R	Mar	*	*	*
13	Glossy Ibis	<i>Plegadis falcinellus</i>	RM	Jun	*		
	Ciconiidae						
14	White-necked Stork	<i>Ciconia episcopus</i>	R	Feb-Apr	*	*	*
15	Open-billed Stork	<i>Anastomus oscitans</i>	RM	Mar #			*
	Anatidae						
16	Brahminy Shelduck	<i>Tadorna ferruginea</i>	RM	Nov-Mar	*	*	*
17	Northern Pintail	<i>Anas acuta</i>	M	Nov-Mar	*	*	*
18	Common Teal	<i>Anas crecca</i>	M	Nov-Mar	*		
19	Spot-billed Duck	<i>Anas poecilorhyncha</i>	RM	+	*	*	*
20	Eurasian Wigeon	<i>Anas penelope</i>	M	Nov-Feb	*	*	*
21	Red-crested Pochard	<i>Rhodonessa rufina</i>	M	Nov-Feb	*	*	*
22	Common Pochard	<i>Aythya ferina</i>	M	Nov-Feb	*	*	*
23	Cotton Teal	<i>Nettapus coromendelianus</i>	R	+	*	*	*
24	Garganey	<i>Anas querquedula</i>	M	Mar	*	*	*
25	Lesser Whistling Duck	<i>Dendrocygna javanica</i>	R	Mar	*	*	*
	Accipitridae						
26	Black-shouldered Kite	<i>Elanus caeruleus</i>	R	+	*	*	*
27	Black Kite	<i>Milvus migrans</i>	R	+	*	*	*
28	Shikra	<i>Accipiter badius</i>	R	+	*	*	*
29	Western Marsh Harrier	<i>Circus aeruginosus</i>	M	Feb		*	
	Phasianidae						
30	Grey Francolin	<i>Francolinus pondicerianus</i>	R	+	*	*	
31	Indian Peafowl	<i>Pavo cristatus</i>	R	+		*	
	Rallidae						
32	Purple Moorhen	<i>Porphyrio porphyrio</i>	R	+	*	*	*
33	Common Coot	<i>Fulica atra</i>	R	+	*	*	*
34	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	R	+	*	*	*

	Common name	Scientific name	Status	Month of sight	Lake		
					Chhatri	Wadali	Bhivapur
35	Common Moorhen	<i>Gallinula chloropus</i>	RM	+	*	*	
	Jacaniidae						
36	Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>	R	Mar-Oct	*	*	
37	Bronze-winged Jacana	<i>Metopidius indicus</i>	R	Mar-Oct	*	*	
	Charadriidae						
38	Yellow-wattled Lapwing	<i>Vanellus indicus</i>	R	+	*	*	*
39	Red-wattled Lapwing	<i>Vanellus malabaricus</i>	R	+	*	*	*
40	Little Ringed Plover	<i>Charadrius dubius</i>	RM	+	*	*	*
	Scolopacidae						
41	Common Sandpiper	<i>Actitis hypoleucos</i>	RM	June-mar	*	*	*
42	Wood Sandpiper	<i>Tringa glareola</i>	M	June-mar	*	*	*
	Recurvirostridae						
43	Black-winged Stilt	<i>Himantopus himantopus</i>	M	Nov- Mar	*	*	*
	Burhinidae						
44	Great Stone Plover	<i>Esacus recurvirostris</i>	R	#			*
	Glareolidae						
45	Indian Courser	<i>Cursorius coromandelicus</i>	R	#			*
	Rostratulidae						
46	Snipe sp.	<i>Gallinago</i> sp.	M	Dec-Feb.	*	*	
47	Greater Painted-snipe	<i>Rostratula benghalensis</i>	R	+	*	*	*
	Laridae						
48	River Tern	<i>Sterna aurantia</i>	RM	+	*	*	*
	Columbidae						
49	Blue Rock Pigeon	<i>Columba livia</i>	R	+	*	*	*
50	Red Collared Dove	<i>Streptopelia tranquebarica</i>	R	+	*	*	*
	Spotted Dove	<i>Streptopeli chinensis</i>	R	+	*	*	*
	Pteroclididae						
51	Painted Sandgrouse	<i>Pterocles indicus</i>	R	+	*	*	
	Psittacidae						
52	Rose-ringed Parakeet	<i>Psittacula krameri</i>	R	+	*	*	*
	Cuculidae						
53	Greater Coucal	<i>Centropus sinensis</i>	R	+	*	*	*
54	Pied Crested Cuckoo	<i>Clamator jacobinus</i>	R	May-Sept		*	
55	Asian Koel	<i>Eudynamys scolopacea</i>	R	+	*	*	*
	Tytonidae						
56	Barn Owl	<i>Tyto alba</i>	R	+	*	*	*
	Strigidae						
57	Brown Fish Owl	<i>Ketupa zeylonensis</i>	R	#	*		
	Apodidae						
58	Asian Palm Swift	<i>Cypsiurus balasiensis</i>	R	+	*	*	*
59	House Swift	<i>Apus affinis</i>	R	+	*	*	*
	Alcedinidae						
60	Small Blue Kingfisher	<i>Alcedo atthis</i>	RM	+	*	*	*
61	Lesser Pied Kingfisher	<i>Ceryle rudis</i>	R	+	*	*	*

	Common name	Scientific name	Status	Month of sight	Lake		
					Chhatri	Wadali	Bhivapur
62	White-breasted Kingfisher	<i>Halcyon smyrmensis</i>	R	+	*	*	*
	Meropidae						
63	Small Green Bee-eater	<i>Merops orientalis</i>	R	+	*	*	*
	Coraciidae						
64	Indian Roller	<i>Coracias benghalensis</i>	R	+	*	*	*
	Upupidae						
65	Common Hoopoe	<i>Upupa epops</i>	R	+	*	*	*
	Alaudidae						
66	Ashy-crowned Sparrow Lark	<i>Eremopterix grisea</i>	R	+	*	*	*
67	Common Crested Lark	<i>Galerida cristata</i>	R	+	*	*	*
	Hirundinidae						
68	Wire-tailed Swallow	<i>Hirundo smithii</i>	RM	Oct-Mar	*	*	*
	Dicruridae						
69	Black Drongo	<i>Dicrurus macrocercus</i>	R	+	*	*	*
	Sturnidae						
70	Brahminy Starling	<i>Sturnus pagodarum</i>	R		*	*	*
71	Asian Pied Starling	<i>Sturnus contra</i>	R	+	*	*	*
72	Common Myna	<i>Acridotheres tristis</i>	R	+	*	*	*
73	Jungle Myna	<i>Acridotheres fuscus</i>	R	+	*	*	*
74	Rosy Starling	<i>Sturnus roseus</i>	M	Mar-May		*	
	Corvidae						
75	House Crow	<i>Corvus splendens</i>	R	+	*	*	*
76	Indian Treepie	<i>Dendrocitta vagabunda</i>	R	Mar #		*	
	Pycnonotidae						
77	Red-vented Bulbul	<i>Pycnonotus cafer</i>	R	+	*	*	*
	Timaliidae						
78	Yellow-eyed Babbler	<i>Chrysomma sinensis</i>	R	+	*	*	
79	Jungle Babbler	<i>Turdoides striatus</i>	R	+	*	*	*
80	Large Grey Babbler	<i>Turdoides malcolmi</i>	R	+	*	*	*
	Motacillidae						
81	Yellow Wagtail	<i>Motacilla flava</i>	RM	Nov- Mar	*	*	*
82	Forest Wagtail	<i>Dendronanthus indicus</i>	R	+	*	*	*
83	White Wagtail	<i>Motacilla alba</i>	R	+	*	*	*
84	Paddyfield Pipit	<i>Anthus rufulus</i>	R	Jul-Nov	*	*	*
85	Large Pied Wagtail	<i>Motacilla maderaspatensis</i>	R	+	*	*	*
	Sylviidae						
86	Ashy Prinia	<i>Prinia socialis</i>	R	+	*	*	*
	Turdidae						
87	Indian Robin	<i>Saxicoloides fulicata</i>	R	+	*	*	*
88	Oriental Magpie-robin	<i>Copsychus saularis</i>	R	+	*	*	*
89	Pied Bush Chat	<i>Saxicola caprata</i>	R		*	*	*
90	Bluethroat	<i>Luscinia svecica</i>	RM	Feb #	*		
91	Common Stone Chat	<i>Saxicola torquata</i>	RM	Dec		*	

	Common name	Scientific name	Status	Month of sight	Lake		
					Chhatri	Wadali	Bhivapur
	Nectariniidae						
92	Purple Sunbird	<i>Nectarinia asiatica</i>	R	+	*	*	*
	Daniidae						
93	Bay-backed Shrike	<i>Lanius vittatus</i>	R	+	*	*	*
94	Rufous-backed Shrike	<i>Lanius schach</i>	R	+	*	*	*
	Muscicapidae						
95	Asian Paradise-flycatcher	<i>Terpsiphone paradise</i>	RM	Mar #		*	
	Ploceidae						
96	House Sparrow	<i>Passer domesticus</i>	R	+	*	*	*
97	Baya Weaver	<i>Ploceus phillippinus</i>	R	June-Aug	*	*	*

The status (seasonal occurrence), feeding habits, months of bird sighting and place of occurrence in the various habitats have been worked out. Different parameters were used as below:

R - Resident; RM - Resident Migratory; M - Migratory; + - throughout the Year, # - sighted once; * - Presence

climate with hot dry summers from March to June. The monsoon season is from July to October and warm winters from November to March; the highest and lowest temperature ever recorded was 46.7°C on 25 May 1954 and 5.0°C on 09 February 1887 respectively.

The Avifauna of these wetland areas has not yet been reported. This study will provide a base for further study.

Methods

The study is based on the observations of two years from March 2006 to March 2008. Regular visits were made to these study areas. In all 230 visits were made to each of the wetlands by three teams, comprising of minimum of three and maximum of 10 persons in each team. Observations were carried on a fixed path in a 1km radius at each station by using the line transect method by Gaston (1973). The birds were observed during the peak hours of their activity from 0600hr to 1000hr and in the evening from 1600hr to 1800hr. Observations were also made during other times of the day as per convenience. Classification followed in this study is as per Ali (2002).

Observation

Ninety-seven species of birds were recorded from three wetland areas of Amravati region (Table 1). Out of 97 species reported, 66 species were local or resident, 20 were resident migrant and 12 species were migrant. Wadali Lake region was found to be

inhabited by the highest number of species i.e. 90. This was followed by Chhatri Lake and Bhivapur Lake with species found to be 88 and 77 respectively. The eating habits revealed that the highest number of birds recorded were insectivores (48), followed by piscivores (21), omnivores (12), grainivores (11), carnivores (6), frugivores (3), nectarivores (1). Out of 97 taxa recorded, the Oriental White Ibis *Threskiornis melanocephalus* is listed as Near Threatened (IUCN 2007) globally and the Indian Peafowl *Pavo cristatus* is included in Schedule I of the Wildlife Protection Act 1972 (Arora 2003).

Discussion

During the period of entire survey, the pair of Black-headed Gull *Larus ridibundus* was sighted only once at Chatri Talav during the winter of 2007. Also the Purple Swamp Hen *Porphyrio porphyrio* population shows seasonal fluctuation in the number of individuals. Although no bird count was done, it was observed during the field visits that the number of Purple Swamp Hen individuals were sometime found in large numbers during winter and rainy seasons, but remarkably low during summers.

Many of these wetlands are used for Ganesh and Durga idol immersion during the festival time of Ganesh Chaturti and Navratri. The total absence of management at the time of idol immersion pollutes these wetlands. Polluted shores of such wetlands have caused increases in the number of scavenger birds like the House Crow *Corvus splendens* which are

found to be feeding on the eggs of Common Coots, Purple Moorhen, and Jacanas and are thus responsible for the decrease in their population. To maintain the biodiversity richness of these areas serious attempts should be made from the concerned authorities, as well as from the local population. Educating the local population and making them aware of these facts will increase the wetland biodiversity richness

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