Bird Diversity in and around the Hatale Dam,Taluka Chalisgaon, District of Jalgaon, Maharashtra.

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ABSTRACT

Hatale dam is nearer to Hatale village in Chalisgaon Taluka in Jalgaon District of Maharashtra State, India. It belongs to Khandesh and Northern Maharashtra region. It belongs to Nashik Division. It is located 92 KM towards South from District head quarters Jalgaon. 17 KM from Chalisgaon. 330 KM from State capital Mumbai. Hatale is surrounded by Kanand Taluka towards South, Bhadgaon Taluka towards North , Pachora Taluka towards East , Khultabad Taluka towards South.

Birds play prominent and diverse role in religion, and popular culture. They have their functional role in the ecosystem as potential pollinators and scavengers and are rightly called as bio-indicators. All birds are not aquatic but few of them reside on the bank of reservoir. Birds are important group of aquatic food chain. They feed on vegetation, fishes and other animals of the reservoir (Donar *et. al* 2012). In India, small water-storage reservoirs or tanks are a distinctive feature which provides important feeding and nesting areas for a wide range of water birds (Grimmett *et al.* 2001).

In this work attempt has been made to record the bird diversity in winter season especially to record the migratory bird diversity of this dam. This bird diversity of Hatale dam was studied from December 2018 to January 2019. Total 45 species including water birds and the land bird were recorded belonging to the different 21 families and 09 orders during the study period.

Keywords: Bird diversity, Hatale Dam, Taluka Chalisgaon,Jalgaon, Diversity, Status.

INTRODUCTION

Avifauna is one of the most important ecological indicators to evaluate the quality of habitats. Most of the birds are useful to mankind. Birds play a useful role in the control of insect of pests of agricultural crops, as predators of rodents, as scavengers, as seed dispensers and as pollinating agents. Therefore birds are reared not only for preserving ecological balance but also for products of economic importance such as downs feather. (Simone *et al*., 2002). The bird habitats of the Indian subcontinent can be roughly divided into forest, scrub, wetlands, marine, grassland, desert and agricultural land habitat. Many bird species require mixed habitat types (Grimmett *et al*., 2011).

The recent studies assess freshwater biodiversity as the most threatened of all types of diversity and wetlands are found to be the richest sites by holding major share of the existing avifauna (Anon, 2000). Birds are very visible and integral part of the ecosystem occupies many trophic levels in a food chain ranging from consumers to predators. Their occurrences have been helpful as environmental health indicator, plant pollinators, and seed dispersals as well as pest controller (Ramchandra, 2013). Birds are essential animal group of an ecosystem which play a functional role in the ecosystem and are rightly called as bioindicators. There are more than 10000 bird species in the world, out of these 1313 species recorded from Indian subcontinent (Grimmett*et al.*,2011). (Kulkarni *et al.*, 2005) reported 151 species of birds in and around Nanded city; (Balkhande *et al.*, 2012) recorded 53 species of birds on river Godavari near Dhangar Takli.

The present study is carried out to report the Bird Diversity in and around the Hatale dam, Taluka Chalisgaon, District of Jalgaon, Maharashtra and to find out their occurrence and to create the awareness for their conservation.

MATERIALS AND METHODS

Study Area:

Hatale dam is nearer to Hatale village in Chalisgaon Taluka in Jalgaon District of Maharashtra State, India. It belongs to Khandesh and Northern Maharashtra region. It belongs to Nashik Division. It is located 92 KM towards South from District head quarters Jalgaon. 17 KM from Chalisgaon. 330 KM from State capital Mumbai. Hatale is surrounded by Kanand Taluka towards South, Bhadgaon Taluka towards North , Pachora Taluka towards East , Khultabad Taluka towards South.

Nikon Aculon A211 10 x 50Binocular was used for close observation of birds and for photography Nikon Coolpix B700 camera, The photo sampling was done between 6.30 to 11.00 hrs. and 16.30 to 18.30 hrs. during winter season. No any bird specimen was collected, only photo and video with audio were prepared for the reference in the study duration. Book of Indian Birds by Salim Ali (2002) and Birds of the Indian Subcontinent by Grimmett, Inskipp and Inskipp (2011) were used as field guides and Internet Birds database were used for the identification of birds. Avifauna ofin and around Hatale dam was recorded during December 2018 to January 2019. Regular field visits were made throughout this period. Visits were carried out for two days a week during the months to report the seasonal diversity.

Fig:1Map of study area.

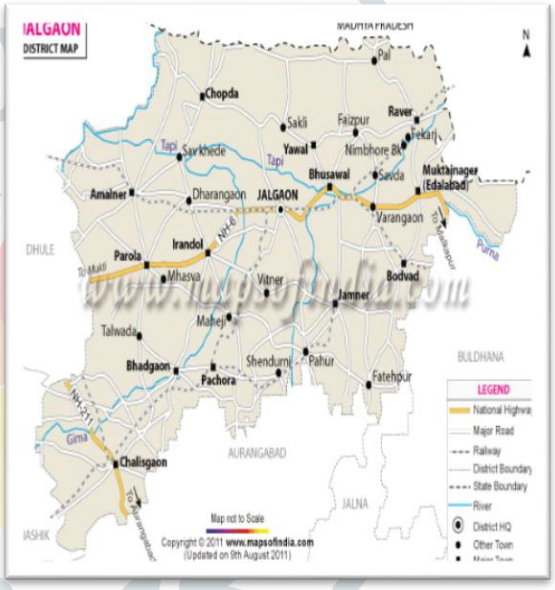


Fig:2 Map of study area.

Fig: A Satellite View of Hatale dam.

Fig. 4: A Satellite View of Hatale dam.

RESULTS AND DISCUSSION

The study reveals the occurrence of 45 species of birds belonging to 09orders and 21 families recorded during this study shown in Table No. 1, which depicts details about the Scientific and Common Names, and Status of birds. This is the first record in chalisgaon taluka of Jalgaon district of Maharashtra State which shows quite good avian diversity in Hatale dam. These varieties of birds visit and some permanently dwells in this dam area might be due to no anthropological disturbance and presence of ample amount of avian food in and around. Most of the avian species are resident (R), winter migrant (VM) and very few are local migrant (LM).

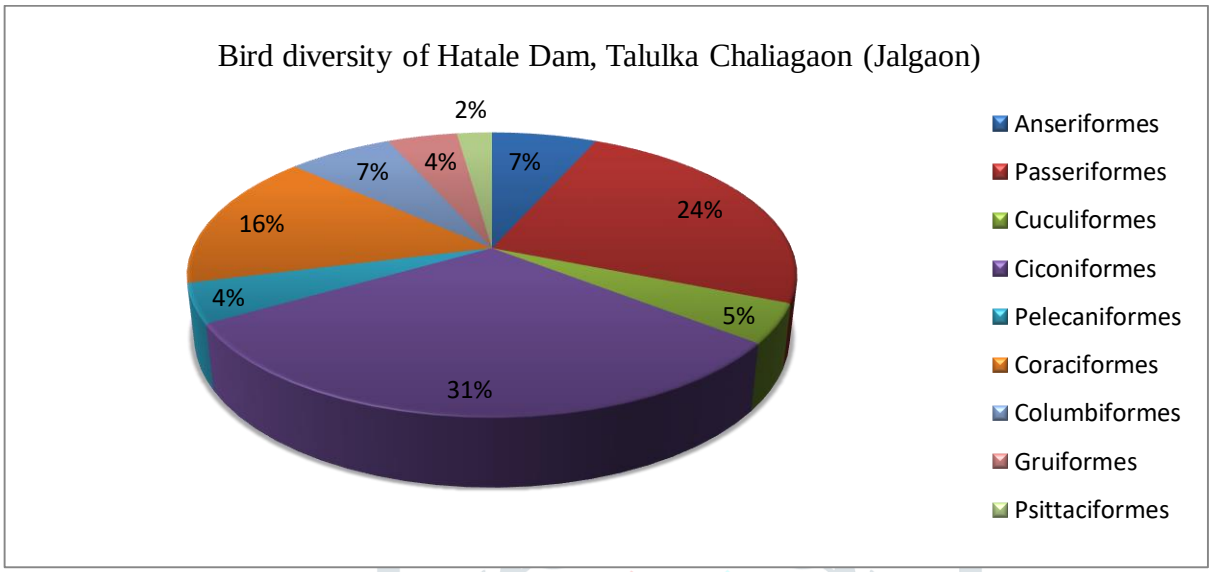


Table 1:Bird Diversity in and around the Hatale Dam, Taluka Chalisgaon, District of Jalgaon, Maharashtra.

Sr. No.	Order	Family	Scientific Name	Common Name	Status
1.	Anseriformes	Anatidae	*Anas poecilorhyncha*	Indian spot-billed duck	WM
			Anas acuta	Northern Pintail	WM
			Tadorna ferruginea	Ruddy shelduck	WM
2.	Passeriformes	Corvidae	*Corvus splendens*	House crow	R
			Dicrurus macrocercus	Black Drongo	R
		Passeridae	*Anthus rufulus*	Paddyfield Pipit	R
			Motacilla flava	Yellow-Wagtail	R
		Sylviidae	*Turdoides striat*	Jungal Babbler	R
		Muscicapidae	*Saxicola caprata*	Pied Bushchat	R
			Saxicolodies fulicatus	Indian Robin	R
		Pycnonotidae	*Pycnonotus cafer*	Red-Vented Bulbul	R
		Nectariniidae	*Nectarinia zeylonica*	Purple-Rumped Sunbird	R
		Sturnidae	*Acridotheres tristis*	Common Myna	R
			Sturnus pagodarum	Brahminy Starling	R
3.	Cuculiformes	Cuculidae	*Eudynamys scolopaceus*	Asian Koel	LM
			Centropus sinensis	Greater Coucal	R
4	Ciconiformes	Charadriidae	*Himantopus himantopus*	Black Winged Stilt	WM
			Tringa solitaria	Semipalmated Piper	WM
			Tringa gareola	Sand Piper	WM
			Vanellus indicus	Red-Wattled Lapwing	R
			Vanellus malabaricus	Yellow-Wattled Lapwing	R
		Ardeidae	*Ardea cinerea*	Grey Heron	WM
			Ardeola grayii	Indian Pond Heron	R
			Mesophoyx intermedia	Intermediate Egret	LM

			Casmerodius albus	Large Egret	R
			Egretta garzetta	Little Egret	LM
			Bubulcus ibis	Cattle Egret	LM
		Accipitridae	*Anastomus oscitans*	Asian Openbill-Stork	WM
		Ciconiidae	*Elanus caeruleus*	Black Shouldered Kite	R
			Mycteria leucocephala	Painted stork	LM
5.	Pelecaniformes	Phalacrocoracidae	*Phalacrocorax niger*	Little Cormorant	WM
			Phalacrocorax fuscicollis	Indian Cormorant	LM
6.	Coraciformes	Alcedinidae	*Halcyon smyrnensis*	White-Breasted Kingfisher	R
			Alcedo atthis	Small Blue Kingfisher	R
			Ceryle rudis	Lesser Pied Kingfisher	LM
		Meropidae	*Merops philippinus*	Blue-Tailed Bee Eater	R
			Merops orientalis	Small Bee-Eater	R
		Coraciidae	*Coracias benghalensis*	Indian Roller	R
		Upupidae	*Upupa epops*	Common hoopoe	LM
7.	Columbiformes	Columbidae	*Columba livia*	Blue Rock Pigeon	R
			Streptopelia chinensis	Spotted Dove	R
			Spilopelia senegalensis	laughing dove	R
8.	Gruiformes	Rallidae	*Gallinula chloropus*	Common Moorhen	WM
			Fulica atra	Common Coot	WM
9.	Psittaciformes	Psittacidae	*Psittacula krameri*	Parakeet	R

R- Resident Species (these species are found throughout the year in the study area).

WM-Winter Migrant (these species migrate from the northern hemisphere and are found in the study area during winter only).

LM- Local Migrant (these species migrate locally within the country and are found in the study area).

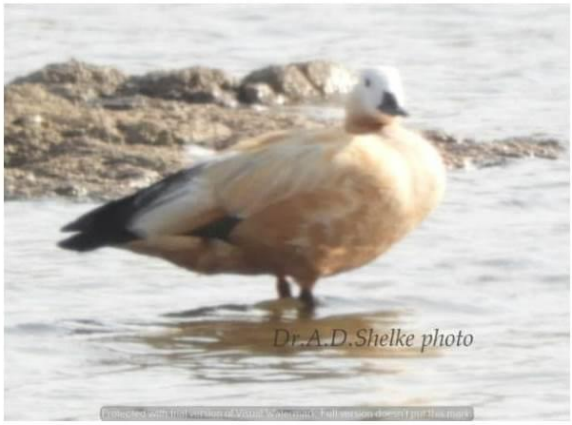
Photoplate 1: Bird Diversity in and around the Hatale dam, Taluka Chalisgaon.

Anas poecilorhyncha (Indian spot-billed duck)

Anas acuta (Northern Pintail)

Fulica atra (Common Coot)

Phalacrocorax fuscicollis (Indian Cormorant)



Tadorna ferruginea (Ruddy shelduck)

Ardea cinerea (Grey Heron)

Photoplate 2: Bird Diversity in and around the Hatale dam, Taluka Chalisgaon.

Himantopus himantopus (Black Winged Stilt)

Vanellus malabaricus (Yellow-Wattled Lapwing)

Phalacrocorax niger (Little Cormorant)

Ceryle rudis (Lesser Pied Kingfisher)

Ardeola grayii (Indian Pond Heron)

Mycteria leucocephala (Painted stork)

Photoplate 3: Bird Diversity in and around the Hatale dam, Taluka Chalisgaon.

Halcyon smyrnensis (White-Breasted Kingfisher)

Mesophoyx intermedia (Intermediate Egret)

Egretta garzetta (Little Egret)

Upupa epops (Common hoopoe)

Hatale dam, Taluka Chalisgaon

Hatale dam, Taluka Chalisgaon

Total 45 species Out of which House crow, Black Drongo, Paddyfield Pipit, Yellow-Wagtail, Jungal Babbler, Pied Bushchat,Indian Robin, Red-Vented Bulbul, Purple-Rumped Sunbird, Common Myna, Brahminy Starling, Greater Coucal, Red-Wattled Lapwing, Yellow-Wattled Lapwing, Indian Pond Heron, Large Egret, Black Shouldered Kite, White-Breasted Kingfisher, Small Blue Kingfisher, Blue-Tailed Bee Eater, Small Bee-Eater, Indian Roller, Blue Rock Pigeon, Spotted Dove, laughing dove, Parakeet 26 are of Resident (R).

Out of which of 08 species are Local Migrant LM) Asian Koel, Intermediate Egret, Little Egret, Cattle Egret, Indian Cormorant, Painted stork, Lesser Pied Kingfisher and Common hoopoe.

11 species are Winter Migrant (WM) Indian spot-billed duck, Northern Pintail, Ruddy shelduck, Black Winged Stilt, Semipalmated Piper, Sand Piper, Grey Heron, Little Cormorant, Asian Openbill-Stork, Common Moorhen and Common Coot.

Ardeidae was the dominant family with 06 species and followed by the family Charadriidae with 0 5 species. Further investigation reveals that the Anatidae, Alcedinidae, Columbidae with (3 species each), Corvidae,Passeridae, Muscicapidae Sturnidae, Cuculidae¸ Ciconiidae, Phalacrocoracidae, Meropidae, Rallidae with (2 species each), Sylviidae, Pycnonotidae, Nectariniidae, Accipitridae, Coraciidae, Upupidae, Psittacidae with (1 species each), (Table 1).

In present study, White breasted kingfisher, Indian Pond heron, Large Egret, Red Vented Bulbul, Common Myna, Small Bee Eater, Blue Rock Pigeon, Rose Ringed Parakeet, Cattle Egret, Red Wattled Lapwing, Eurasian Collared Dove and Little Cormorant were found in good numbers.

The various lakes and wetlands in any city serve as a balancing reservoir for sustaining native flora and fauna (Grimmett and Inskipp, 2007). Kukade *et al.* (2011)recorded 68 species from Chhatri lake of Amravati district. Lad and Patil (2015) recorded 131 species from Bhayander and Naigaon wetlands in Thane district. Puri (2015) reported 27 species from Zaliya lake in Gondia district.

CONCLUSION

The observation and data collected Hatale dam is nearer to hatale village in Chalisgaon Taluka in Jalgaon District of Maharashtra State; India reveals that the study area supports a healthy avian diversity. In winter season maximum bird diversity was observed this study area provides feeding and breeding ground for many birds but anthropogenic activities are a concern for the existing bird diversity of the study area. Development projects like extensions of roads in these areas and because of cutting of very huge amount of roads trees under the label of development will deplete the breeding and feeding ground of the avifauna and will affect the diversity of that area. Government is not serious about the sustainable development and not with any strategic plan how to sustain the habitats of animals so as to protect future biodiversity loss.

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REFERENCES

1. Ali S. 2002.*The Book of Indian Birds*, 13threvised Ed. Mumbai: Bombay Natural History Society, pp: 326.
2. Anon, 2000. Wetland values and functions.The Ramsar Bureau. Gland, Swittzerland. pp. 20-25.
3. Balkhande, J.V., BhowateC.S. and Kulkarni A.N. 2012. Check list of birds of river godavari, dhangar takli near purna, Dist. Parbhani Maharashtra Bionano.
4. Donar A.S., Reddy K.R. and Deshpande D.P. 2012.Avifaunal Diversity of Nipani Reservoir, Belgaum District Karnataka. The Ecoscan; 1:27-33.
5. Grimmett R., Inskipp C. and Inskipp T.**,**2001.*Pocket Guide to the Birds of the Indian Subcontinen*t. (Oxford University Press**,** 2001).
6. Grimmett R and T Inskipp, 2007. *Birds of Southern India*. Om Books International, New Delhi, India.
7. Grimmett R, Inskipp C. and Inskipp T. 2011.*Birds of the Indian Subcontinent*,2ndEd. London WCIB 3DP: Christopher Helm,pp: 528.
8. Kulkarni, A.N., KanwateV.S. and DeshpandeV.D. 2005. Birds in and around Nanded city, Maharashtra. *Zoo's print J.*, 20(II): pp.2076-2078
9. Kukade R.J, Warhekar S.R, Tippat S.K. and Dudhey N.S. 2011.Avifaunal diversity of Chhatrilake, Amravati, Maharashtra. In the proceeding of UGC sponsored National level conference on "*Environmental Biology and Biodiversity*" NCEBB
10. Lad D. and Patil S. 2015. Status and diversity of Avian fauna in the estuarine wetland area of Bhayander and Naigaon, Maharashtra, India. *Bioscience Discovery*, 6(1):39-44.
11. Puri S.D. 2015. Avifaunal diversity of Malguzarilake at Zaliya near Amgaon in Gondia district (MS), India. *Int. J.of LifeSciences*, 3(3): 219-224.
12. Ramchandra A.M. 2013. Diversity and richness of birdspecies in newly formed habitats Chandoli national parkin Western Ghats, Maharashtra State, India. *BiodiversityJournal*, 4(1): 235-242.
13. Simeone, A., Araya, M.B. M. Bernal, Diebold, E. N. Grzybowski, K. Michaels, M. Teare, J.A. Wallace R.S. and Willis, M.J. 2002. Oceanographic and climatic factors influencing breeding and colony attendance patterns of Humboldt Penguins Spheniscus humboldti in central Chile. Marine Ecology Progress Series 227:43–50.