



## Seasonal diversity of water birds of Tapti River in Burhanpur District (M.P.)

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### Abstract

Birds have been always fascinated for their ability to fly in air and for their exquisite coloration. They have their functional role in the ecosystem as potential pollinators and scavengers, and are rightly called as bio-indicators. The avifaunal diversity in Tapti River from Dedtalai to Burhanpur M.P. was studied for a period of one and half years (July 2017 –January 2019) The River inhabits several local and migratory bird species. Reduction in water retention in this river in summer has affected the avifaunal diversity in the study area. This habitat attracted 29 bird species belongs to 10 families, which are local and migratory. Highest population of migratory Red crested pochard, Spot billed Ducks and Great whistling Ducks were recorded in January while residents were herons and little cormorants.

**Key Words:** Diversity, Water birds, Migratory, Pollinators

### Introduction

India is one of the 10 popular countries of the world in which maximum biodiversity of plants and animals can be seen. The biodiversity of India consist 7% of plants and 6.5% of animal species of the world, according to Rodgers and Panwar (1988) in India 10 biographic zones and 26 biotic provinces are found. In India 1300 species of birds are found in which 2 meter long pelicans to 8 centimeters small humming bird are included. out of which 78 species of birds are about to extinct or threatened. Birds are most beloved animals due to their beautiful colors, sweet and melodious calls or songs and most active life; besides these they show their presence from dense forests, grasslands, wetlands, croplands to the gardens of cities and our residences. The richness of these species is due to presence of different types of habitat like dry desert of Rajasthan to dense rain forest of north-east and from long humid southern seashore to colder parts of Himalaya. We have many types of grassland, wetlands; man grows forests and islands in our country which not only attracts the birds for food and shelter but for the nesting and breeding also. Birds have been always fascinated for their ability to fly in air and for their exquisite coloration. They have their functional role in the ecosystem as potential pollinators and scavengers, and are rightly called as bio-indicators. Birds are most useful to

human as destroyer of harmful insects and as consumer of weed seeds. During the last few decades considerable studies on avifaunal diversity from different fresh water bodies of India have been carried out by researchers like, Osmatston (1922), Siungh (1929), Ali (1932), Kannon (1980), Mujumdar (1984) Davidar (1985) Jhingran (1988), Ghosal (1995), Kulkarni *et al.*, (2005). However very little information is available about avifauna of central India. This work has therefore undertaken to document the avifauna of this historical and useful river located near the town Burhanpur, which lies in the central region of the country.

### Materials and Method

The Tapti, also called Tapi River is one of the famous and holy river of central India The river is supposedly named after the goddess Tapti, the daughter of Surya, which originates from village called Multai of Betul district in Madhyapradesh, it flows westward between two spurs of the satpura range like Narmada and roughly parallel to it, over a 724 K.M. before draining to Arabian Sea through gulf of Khambat. The area from Dedtalai to Burhanpur roughly estimated 71.1 K.M. (21.515 N-76.756 E to 21.293N-76.228 E) was surveyed and the study work was carried out from July 2017 to January 2019. The observation were made out monthly by using a field binocular (22x50x magnification) during the morning (6 to 9 AM) and

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in the evening (4 to 7 PM) and identification of species was done with the help of standard literature of Woodcock (1980), Ali, S. and Ripley, S.D. (1995) Grimmet *et al.*, (1999) and in all cases photographs were taken in order to confirm the identification.

**Table 1. List of Tapti river birds**

Order	Family	Scientific name	Commen Name	Residenti al status
Pelecaniformes	Threkinornithidae	<i>Pseudibis</i>	Black ibis	CR
		<i>Threskiornis malanocephalus</i>	Black headed Ibis	NR
		<i>Platalea leucorodila</i>	Spoon bill	NR
Ciconiformes	Ardeidae	<i>Ardea cineria</i>	Grey heron	LCR
	//	<i>Ardeola grayii</i>	Pond heron	CR
	//	<i>Bubulcus ibis</i>	Great egret	NR
	//	<i>Egretta garzetta</i>	Little egret	CR
	Ciconidae	<i>Ciconia episcopus</i>	Wooly necked stork	LCR
		<i>Mycteria leucocephala</i>	Painted stork	LCR
Charedriformes	Recurvirostridae	<i>Himantopus himantopus</i>	Black winged stilt	NR
	Charadriidae	<i>Vanellus indicus</i>	Red wattled lapwing	CR
		<i>Charadrius dubius</i>	Little ringed plover	LCR
		<i>Tringa hypoleucos</i>	Common sandpiper	CW
	Scolopacidae	<i>Sterna aurantia</i>	Sandplover	V
Coraciformes	Helcyonidae	<i>Halcyon smyrnensis</i>	White throated kingfisher	CR
	Cerylidae	<i>Ceryle rudis</i>	Pied kingfisher	LCR
Anseriformes	Anatidae	<i>Tadoma ferruginea</i>	Ruddy shelduck	LCW
		<i>Sarcindiornis malanotos</i>	Comb duck	NR
			Spot bill duck	NR
		<i>Dendrocygna bicolor</i>	Greater whistling Duck	NR
		<i>Rhodonessa rufina</i>	Red crested Pochard	NW
Gruiformes	Ralidae	<i>Gallinula chloropus</i>	Common moorhen	LCR
			Purple swamphen	NR
		<i>Amaurornis phoenicula</i>	White breasted water Hen	NR
Suliformes	Anhingidae		Darter	NR
	Phalacrocoracidae	<i>Phalacrocorax fuscico</i>	Indian cormorant	LCR
			Little cormorant	LCR
			<i>Rostratula benghalensis</i>	<b>Greater Painted Snipe</b>
		<i>Sterna aurantia</i>	River Tern	LCR

LCR= Local common resident, NR= not resident, LCW= local common winter visitor, V = vegarant

## Results and Discussion

Nearly 250 species of birds are known to be highly depends on fresh water habitats for various purposes, out of which nearly 62% belongs to a single family Anatidae, comprises ducks, swans and gees. Wading birds such as herons, plovers and sandpipers are also associated with fresh water bodies. Yardi *et al.*, (2004) reported 64 species of birds in Salim Ali Lake, Aurangabad. Kedar and

Patil (2005) recorded 60 bird species from Rishi Lake Karanja of Washim District. Kulkarni and Kanwate (2006) reported 18 species of birds in Dongarkheda irrigation pond of Hingoli district. Kukade *et al.*, (2011) recorded 68 bird species of Chatri Lake of district Amrawati. During the present investigation, a total 29 bird species belongs to 7 different orders were recorded from



Seasonal diversity of water birds of Tapti River



Fig 1.



Fig 2.

this river. The order Ciconiformes was dominated with six species while the order Charadriiformes and Anseriformes and Suliformes all three has five species each and other all Pelicaniformes, Gruiformes and Coraciiformes orders were recorded with only three, three and two species respectively. It was recorded that the maximum bird species were observed during springs, early monsoon and late winter while comparatively less number of species were observed during late summer, late rainy season and early winter season. Moderate volume of water, favorable temperature, availability of food may be the causes of maximum bird species during winter. In the rainy season due to cultivable fields around the river and the availability of water everywhere the displacement of birds may be the reason due to which number of species goes down. The lowest water level during summer season is also one of the reason causes minimum bird species. The Spot bills, Painted stork, Red crested pochard, Spoonbills, Painted snipes, greater whistling ducks and Ruddy shelduck make this river their home for few months of every year and are seen in good numbers in this river while residential species like plovers, herons and darters found in or around the river nearly all seasons. It has been proved that the altered characteristics of the river made the birds unable to inhabit throughout the year. To conclude the December month was found to be most favorable to avifauna of Tapti River and the June is most unfavorable month for birds.

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