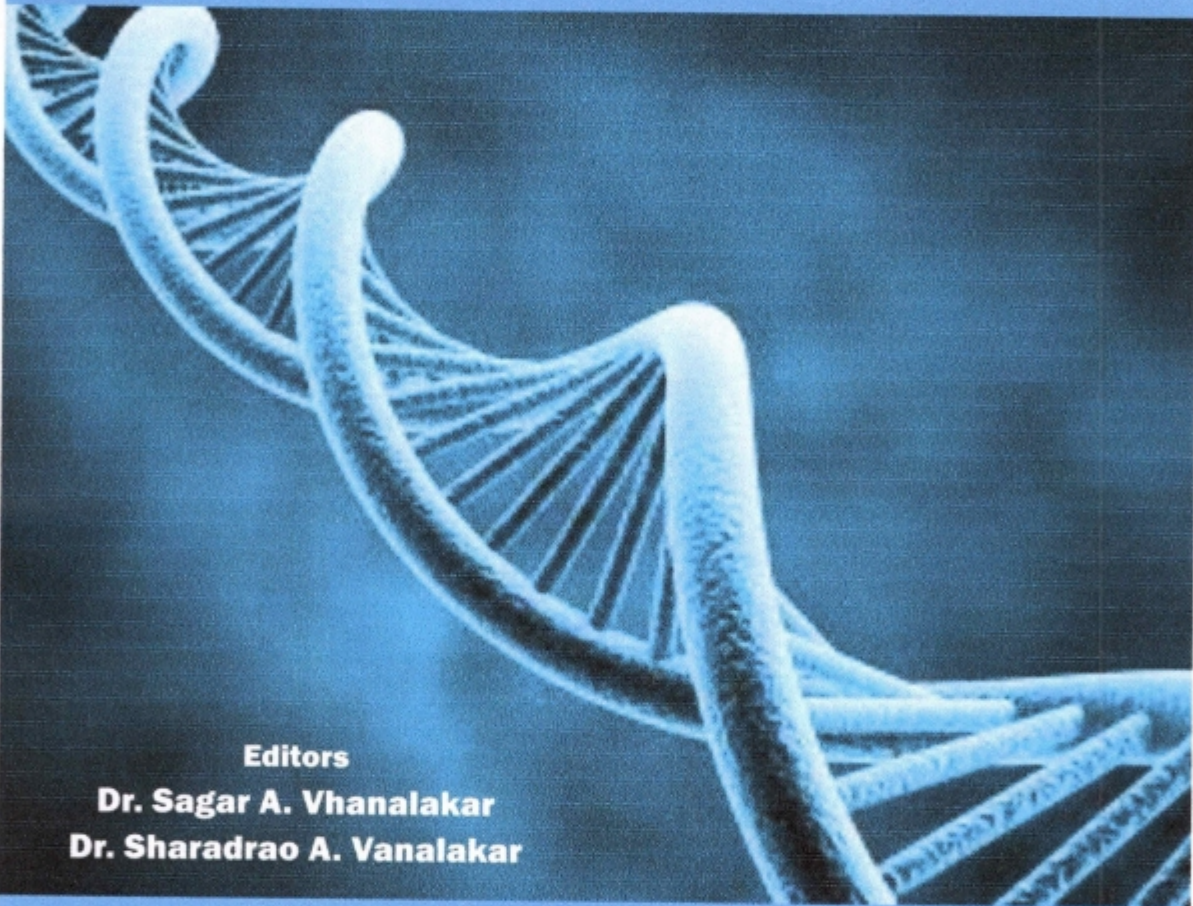


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IN LIFE SCIENCES**



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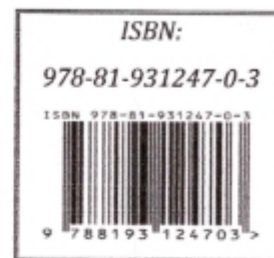
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ABSTRACT

Birds are one of the sensitive bioindicators of the environmental health as well as its sustainability; being high in food chain and the best known and most popular component of wildlife. Sir Pirajirao Lake, Murgud, Kolhapur is one of the major water reservoir in the present area which is surrounded by planned agricultural field and residential houses having vegetation variations from grassland to trees. To plan accordingly at the state and regional level, as well as to assess valuable guidelines and prioritization of reserves, the biodiversity of birds plays an important role. The present study includes study period of five months in which total 44 birds species were recorded, out of which 15 were resident migratory and 29 were resident. This paper provides an overview of status of birds and their occurrence in the study area.

KEYWORDS: Avifaunal Diversity; Lake; Murgud

INTRODUCTION

Birds are sensitive indicators of the health of the environment and sustainability, reflecting trends in other biodiversity, being responsive to change, high in food chains, inexpensive to survey and the best known and most popular component of wildlife. Freshwater ecosystems may well be the most endangered ecosystems in the world. Declines in biodiversity are far greater in freshwaters than in the most affected terrestrial ecosystems.

In addressing the environmental problems of an area, birds can be used as very appropriate bio-indicators suggesting the status of biodiversity in general. Biodiversity assessment provides valuable guidelines for the prioritisation of reserves and protected areas for the resource conservation and planning accordingly at state and regional level (Badola & Aitken, 2010). In biodiversity conservation efforts, the assessment and evaluation of bird communities have been considered as important tools (Shafiq et al., 1997).



in understanding biodiversity, altitudinal gradients for the bird distribution provide highly useful clues. Comprising about 13% of the world avian diversity, India has approximately 1300 species of birds (Grimmett et al., 1998). Relatively, there is insufficient knowledge available regarding the bird communities and their dynamics in India. In mountain context, altitudinal gradients display a number of diversity patterns of birds. Moreover, the Hima-layan avian diversity for a wider range remains relatively least investigated. However, some important studies on Himalayan context of bird diversity and community structure have been made (Laiolo, 2003).

Wetlands constitute a treasury of biodiversity. The social demand and dependence on the wetlands provide an unaccountable economic value to such habitats. They are complex water and land interactive systems and are supposed to be the most fertile and productive sites in the world. Lakes are highly complex water, land interactive systems, supposed to be the most fertile - productive ecosystems in the world (R G Wetzel, 2001) and constitute a treasury of biodiversity. Due to inadequate attention and ignorance of common man, these lakes are referred as wastelands in the past, leading to their disappearance in the process of urbanization and development.

MATERIAL AND METHODS

The study site of Sir Pirajirao water reservoir, Murgud is situated in Kagal Taluka of Kolhapur district. The area covered by the Lake is about 4.5km. The varied vegetation covers the most of the study area. The study area surrounding contains planned agricultural field sites and residential houses. The Sir Pirajirao water reservoir has varied vegetation from grassland to trees.

The study was carried out during September 2012 to January, 2013. The observations regarding the bird diversity were made two times daily i.e. during early morning and late evening.

A binocular was used as a field instrument and camera was used for catching some photos. For identification of birds "The Book of Indian Birds" by Salim Ali (2002) was referred.

STUDY AREA:

The lake is owned by Maharashtra state Minor Irrigation department. According to the history, the lake is constructed by Sir Pirajirao ghadage in 1923. Lake is surrounded by three villages (one on the east, one on the west and the other one on north side). It is wholly rain fed and canal is connected to it for traditional supply of water and Irrigation. The northern embankment runs about a kilometer and is still strong.

RESULTS

During the study period of the five months (Spt.2012- Jan.2013) a total of 44 bird species belonging to 27 families and to 9 order were observed in the said of water bodies. Their local status was also analyzed through the study data. Among these 44 birds were observed in sir Pirajirao Lake out of which 15 were Resident Migratory (RM) and 29 were Resident (R).



Table 1: Checklist of Birds of Sir Pirajirao Lake during the study period:

Order	Family	Scientific Name	Common Name	Migratory Status	Status
Anseriformes	Anatidae	<i>Anas Poecilorhyncha</i>	Spot billed duck	RM	1
Bucerotiformes	Bucerotidae	<i>Ocyrceros birostris</i>	Indian Grey Hornbill	R	2
Upupiformes	Upupidae	<i>Upupa epops</i>	Common hoopoe	RM	2
Coraciformes	Alcedinidae	<i>Alcedo atthis</i>	Small blue Kingfisher	RM	3
	Dacelonidae	<i>Halcyon smyrnensis</i>	White breasted Kingfisher	R	1
	Cerylidae	<i>Ceryle rudis</i>	Lesser pied Kingfisher	R	1
	Meropidae	<i>Merops orientail</i>	Small bea eater	R	1
Cuculiformes	Centropodidae	<i>Centropus sinensis</i>	Greater Cauca	R	2
Columbiformes	Columbidae	<i>Columba livia</i>	Blue rock pigeon	R	1
Gruiformes	Rallidae	<i>Gallinula Chloropus</i>	Common moorhen	RM	2
		<i>Fulica atra</i>	Common coot	RM	2
Ciconiformes	Scolopacidae	<i>Actitis hypoleucos</i>	Common sandpiper	RM	1
	Charaatridae	<i>Charadrius dubius</i>	Little ringed plover	RM	2
		<i>Vanellus indicus</i>	Red wattled lapwing	R	1
	Laridae	<i>Sterna aurantia</i>	River tern	R	1
	Accipitridae	<i>Milvus migrans</i>	Black kite	R	2
		<i>Haliastur indus</i>	Brahminy kite	R	2
	Phalacrocoracidae	<i>Phalacrocorax niger</i>	Little Cormorant	RM	1
	Ardeidae	<i>Casmerodius albus</i>	Large Egret	RM	1
		<i>Ardea purpurea</i>	Purple Heron	RM	1
		<i>Ardea Cinerea</i>	Grey Heron	RM	1
		<i>Bubulucus ibis</i>	Cattle Egret	RM	1
		<i>Egretta garzetta</i>	Little Egret	R	1
	Threskiornithida e	<i>Threskiornis melanocephalus</i>	Oriental white ibis	R	2
		<i>Pseudibis papilloso</i>	Black ibis	R	2
		<i>Platalea Leucorodia</i>	Eurasian Spoonbill	RM	2
Passeriformes	Lanidae	<i>Lanius schach</i>	Rufous Backed shrike	R	2
	Corvidae	<i>Corvus Splendens</i>	House Crow	R	1
		<i>Corvus macrorhynchos</i>	Jungle crow	R	2



		<i>Dicrurus macrocercus</i>	Black drongo	R	2
	Muscicapidae	<i>Saxicola torquata</i>	Common stonechat	RM	2
		<i>Saxicola leucura</i>	White tailed stonechat	R	2
	Sturnidae	<i>Sturnus pagodarum</i>	Brahminy starling	R	2
		<i>Acridotheres tristis</i>	Common Myna	R	2
		<i>Acridotheres fuscus</i>	Jungal Myna	R	1
	Hirundinidae	<i>Hirundo smithii</i>	Wire tailed swallow	R	2
	Pycnonotidae	<i>Pycnonotus cafer</i>	Red vented bulbul	R	1
		<i>Pycnonotus jocosus</i>	Red whiskered bulbul	R	2
	Alaudidae	<i>Gealerida cristata</i>	Common Crested lark	R	1
		<i>Gealerida deva</i>	Sykes's Crested	R	1
	Passeridae	<i>Motacilla flava</i>	Yellow wagtail	RM	2
		<i>Motacilla alba</i>	White Wagtail	RM	1
		<i>Motacilla maderaspatensis</i>	Large pied wagtail	R	1
	Fringillidae	<i>Crested bunting</i>	Melophus lathami	R	2

(Abbreviations: Migratory status: R - residential, M - migratory, RM - residential migratory. Status: 1- abundant or very common, 2- common, 3- fairly common)

DISCUSSION

In the present study, total 44 species of birds were observed on the Sir Pirajirao Lake, Murgud. The lake provides the optimum requirements for birds. It is a good site for bird study.

The selected water body has the potential for shelter to various bird species. The availability of food in the area and low anthropogenic activities attract various birds to come over the site.

The status and variation in the diversity of birds during the study period is presented in Table 1. It was observed that the avifaunal diversity was more in December and January as there was optimum water storage, availability of abundant food, increased vegetation and the arrival of migratory birds. The same observation was recorded by Bhat et al. (2009) of Anekere wetland, Karkala, Udupi Karnataka. Similar observations were made by Saxena (1975) on avifauna of Keoladeo National Park, Bharatpur.

CONCLUSION

The water body is attracting variety of birds since many years and considered as stopover site for migratory birds. To conclude, December month was found to be most favourable to Avifauna of Sir Pirajirao Lake.

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