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Beautiful Avifauna of Waghoba Forest of Palghar Maharashtra

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ABSTRACT

In this paper an attempt is made by the author to enumerate the results of his survey of the avifauna from the Waghoba deciduous forest of Palghar. Waghoba forest is located about 5-6 km away from the Palghar city. This forest area is surveyed for avifauna in the last 20 years through the nature trails. The author has recorded 77 species of birds belonging to 10 orders and 31 families. The order Passeriformes was found dominant having 16 families and 41 bird species and constituted about 53% of the total birds observed. In the families the family Muscicapidae and Accpitridae were found dominant with 9 and 8 species respectively. In this paper an attempt is being made to enumerate the beautiful avifauna and to make authorities aware about the rich heritage of this forest to plan for better conservation and management from the ecotourism point of view.

KEYWORDS Avifauna, Waghoba forest, Biodiversity

INTRODUCTION

Palghar is the 36th district of Maharashtra which was carved out of India's most populous district of Thane on August 1, 2014.The semi-industrialised Palghar has good connectivity from western railway and Mumbai- Ahmadabad highway (N.H.8), around 90 km north of Mumbai. After bifurcation Palghar district includes tribal - dominated tehsils (talukas) of Palghar, Jawhar, Mokhada, Talasari, Vikramgad, Wada, Dahanu and Vasai. Palghar has a tropical, very humid and warm climate all through the year. It lies in 19.69 N 72.76 E. coordinates.

The total forest area of the Thane district is 3463 Sq. km. which is the 37.10 % of the total geographical area. Out of this forest area of the Thane district, more than 53 % forest area spread in five talukas of Palghar district only - Palghar, Jawhar, Wada, Dahanu and Vasai. The major forest produce includes teak, timber, injaili timber of various species viz.,ain, bible, khair, dhavda, hed, kalamb, sawar, etc. and fire wood and charcoal.

The forests in Thane district were bestowed with reputed fauna and wild game in the past. The rich wild life in those days included important species like tiger, panther, leopard, hyena, spotted deer, barking deer, bear, blue bull, mouse deer monkeys, hare, flying squirrels, mongoose, poisonous and non – poisonous snakes and a number of species which the forest was replete. Sadly however this rich heritage of wild life has dwindled with the passage of time. The larger wild animals have suffered a serious reduction and the number of tigers is reduced to such an extent that there is anxiety about its total disappearance. Most of this wild life found to inhabit the interior of forest in Banganga, Jawhar, Dahanu, Mokhada, Wada, Vasai and Murbad talukas.

Among the birds, a large variety occurs in this area specially near tanks and rivers. They inhabit all type of forests. Among them the commonly seen are- red vented bulbul, red whiskered bulbul, spotted babbler, yellow eyed babbler, Indian tree pie, Indian shama, red breasted flycatcher, black drongo, racket tailed drongo, tailor bird, Indian oriole, common myna. Many other winter visitors (migratory birds) which comes in the coastal areas, are – brown-headed king fishers and white breasted king fishers.

The richness of India's biodiversity and its rapid erosion in the last few decades need no telling. Most ecosystems have been degraded, fragmented and depleted to an extent that their conservation requires intense and informed management. India has approximately 1300 species of birds constituting 13% of the world bird assembly and thus is an area of high avian diversity Grimmett et al., (1998). Birds are some of the most prominent species of the Earth's biodiversity and being sensitive to environmental changes. They act as key indicators for assessing the status of ecosystem health Taper et al. (1995); Olechnowski (2009). Assessing the bird diversity of a habitat over time and space is one of the key issues for avian community ecologists. Richness, abundance and community composition are often used by ecologists to understand the diversity of species in their natural occurrence Magurran, (2004). Of course, the Indian subcontinent, a part of the vast Oriental bio geographic regions, is very rich in biodiversity. It is estimated that freshwater wetland alone support 20% of the known range of biodiversity in India Deepa et al. 1999**.** It is being suggested that the avifauna are important for the ecosystem as they play various roles as scavenger, pollinators and predators of insect pest Padmavati et al. 2010**.** Surana ***et al.*** (2007) studied the birds of Chimdi Lake of Nepal. Singh ***et al***. (1990) studied the ecology of birds of Kawar Lake in Bihar. Singh ***et al***. (2016) studied the avifauna of Devkhop lake of Palghar and enumerated 20 families. The bioindicators of different kind of environment like urbanization and industrialization disturbs the avian habitats Sharma (1982), Bhattacharjee ***et al.*** (1985).

The present study is not carried out only to prepare the checklist of birds, but to find out their occurrence and to make aware the government and its constituents and NGO's about the rich heritage of this adivashi tribal dominant area which in turn will start planning for the better conservation and management of this beautiful area for the future of our society.

MATERIAL AND METHODS

Study area-

This study was conducted in Waghoba forest area of Palghar, Maharashtra State which is a hilly track and situated between Geographic coordinates of Latitude: 19°41′ 48′ N Longitude:72°45′ 55′ E. Elevation above sea level:17 m = 55 ft. Palghar is located about 90 kilometers north of Mumbai. The Waghoba forest is located at the Palghar Manor highway about 5-6 km away from Palghar city. It is the highest peak in this area and covered with deciduous forest.Fig.1. In the east Surya River is flowing which is the main source of drinking water in this area. Deokhop Lake is lying in the north of Waghoba and it is being utilized for irrigation, household things and fishing by local inhabitants. Being perennial lake

it is a good abode for water birds. Agriculture and fishing in this area are mainly dependent on monsoon rain. It is the administrative capital of the newly formed Palghar district. The semi-industrialized Palghar has good connectivity with western railway and Mumbai- Ahmadabad highway (N.H.8).

Fig.1. View of Waghoba forest

Method

The entire study was conducted by rigorous field surveys all around the forest. The Observations were recorded by using Nikon Action 10x50 binocular and relevant photographs were taken by Canon 700 D. Birds were identified with the help of noting standard methods given by Ali & Ripley (1969,1995), Ali (1996, 2002) and Grimmett ***et al***. (1999).

RESULT AND DISCUSSION

Birds are considered as useful biological indicators because they are ecologically versatile and live in all kinds of habitats as herbivores or carnivorous. They are susceptible to the change in wetlands or other ecosystem. Some birds are migratory, which are responsible for fluctuation in the population of birds that occurs during different season of the year, which may help to know whether an area is normal or getting polluted, as total absence of birds from any other may be considered as pollution indicator, Borale ***et al.*** (1994). In the present study a total of 77 birds belong to 10 orders and 31 families were recorded in 20 years of casual nature trails from Waghoba forest and surrounding areas (table 1). This is the first record of avian biodiversity of Waghoba forest in Palghar district of Maharashtra state. Waghoba forest exhibits qualitative variation in avifauna.

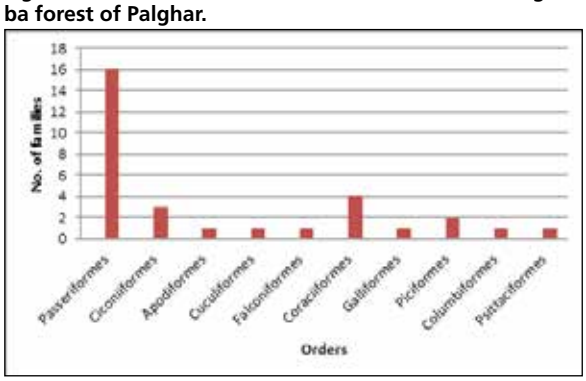
Table 1: Scientific check list of Avifauna of Waghoba forest area of Palghar.

Order	Family	Scientific name	Common Name
Passeriformes	Muscicapidae	Saxicolodies fulicatus	Indian Robin
		Copsychus saularis	Magpie Robin
		Muscicapa thalassina	Verditer Flycatcher ?
		Saxicola caprata	Pied Bushchat
		Orthotomus sutorius	Tailor Bird
		Pomatorhinus horsfieldi	Slatyheaded Scimiter Babbler
		Chrysomma sinense	Yellow-Eyed Babbler
		Turdoides caudatus	Common Babbler
		Prinia sylvatica	Jungle Wren-Warbler
	Motacillida	Motacilla flava	Yellow Wagtai
		Motacilla cinere	Grey Wagtail
		Anthus novaeseelandiae	Paddyfield Pipit
	Sturnidae	Acridotheres tristis	Common Myna
		Acndotheres fuscus	Jungle Myna
	Nectariniidae	Nectarinia minima	Small Sun Bird
		Nectarinia asiatica Latham	Purple Sun Bird
		Nectarinia lotenia	Loten's Sun Bird
	Hirundinidae	Hirundo daurica	Redrumped Swallows
		Hirundo concolor	Dusky Crag martin
	Pycnonotidae	Pycnonotus cafer	Red Vented Bulbul
		Pyclonotus jocosus	Red Whiskered Bulbul
	Dicruridae	Dicrurus macrocecur	Black Drongo
		Dicrurus paradiseus	Greater Racket Tailed Drongo
	Corvidae	Corvus splendens	House Crow
		Corvus macrorhynchos	Jungle Crow
	Ploceidae	Passer domesticus indicus	House Sparrow
		Petronia xanthocollis	Yellowthroated Sparrow
		Lonchura punctulata	Spotted Munia
	Monarchidae	Terpsiphone paradisi	Asian Paradise Flycatcher
	Campephagidae	Pericrocotus flammeus	Scarlet Minivet
		Tephrodornis pondicerianus	Common Wood Shrike
		Tephrodornis virgatus	Large Wood Shrike
		Pericrocotus ethologus	Longtailed Minivet
	Artamidae	Artamus fuscus	Ashy Swallow Shrike
	Irenidae	Chloropsis aurifrons	Goldenfronted Chloropsis
		Aegithina tiphia	Common Iora
		Irena puella	Fairy Blue Bird
	Ploceidae	Lonchura malabarica	Whitethroated Munia
	Oriolidae	Oriolus oriolus	Golden Orioles
		Oriolus xanthornus	Blackheaded Orioles
Passeriformes	Laniidae	Lanius schach	Rufousbacked Shrike
Ciconiiformes	Ardeidae	Egretta garzetta	Little Egrets
		Mesophoyx intermedia	Median Egret
		Casmerodius albus	Large Egret
		Bubulcus ibis	Cattle Egrete
		Ardeola grayii	Pond Heron
	Phalacrocoracidae	Phalacrocorax niger	Little Cormorant
	Ciconiidae	Anastomus oscitans	Asian Openbill Stork
Apodiformes	Apodidae	Cypsiurus parvus	Palm Swift

Cuculiformes	Cuculidae	Eudynamys scolopacea	Asian Koel
		Centropus sinensis	Coucal
		Cacomantis passerinus	
Falconiformes	Accipitridae	Gyps bengalensis	Indian Whitebacked Vulture
		Milvus migrans	Pariah Kite
		Elanus caeruleus	Black Winged Kite
		Accipiter virgatus	Southrn Besra Sparrow Hawk ?
		Accipiter nisus	Asiatic Sparrow Hawk?
		Accpiter badius	Indian Shikra
		Aquila rapax	Tawny Eagle ?
		Circus aeruginosus	Marsh Harrier
Coraciiformes	Meropidae	Merops orientalis Latham	Green Bee Eater
	Upupidae	Upupa epops	Common Hoopoe
	Alcedinidae	Halcyon smyrnensis	Whitebreasted Kingfisher
		Alcedo atthis	Small Blue Kingfisher
	Coraciidae	Tockus birostris	Grey hornbill
Galliformes	Phasianidae	Perdicula asiatica	Jungle Bush Quail
		Francolinus pictus	Painted Partridge
		Francolinus pondicerianus	Grey Partridge
		Pavo muticus	Indian Peafowl
Piciformes	Capitonidae	megalaima flavifrons	Yellow Fronted Barbet
		Megalaima haemacephala	Crimson Throated Barbet
	Picidae	Picumnus innominatus	Speckled Piculet
		Fynx torquilla	Wryneck ?
Columbiformes	Columbidae	Columba livia	Blue rock Pigeon
		Streptopelia chinensis	Spotted Dove
		Treron pompadora	
Psittaciformes	Psittacidae	Psittacula krameri	Roseringed Parakeet

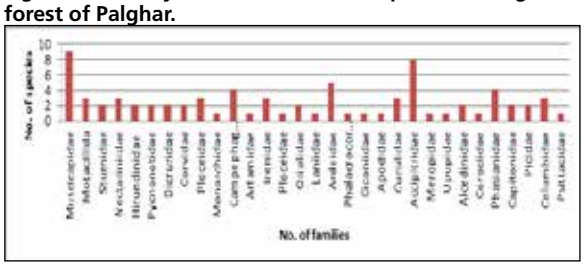
The order Passeriformes was found dominant having 16 families followed by orders Coraciformes(4), Ciconiiformes(3), Piciformes(2), Colubiformes(1) Apodiformes(1), Cuculiformes (1), Falconiformes (1), Galliformes (1), and Psittaciformes (1).Fig.2.

Fig. 2. The Order wise distribution of families at Waghoba forest of Palghar.



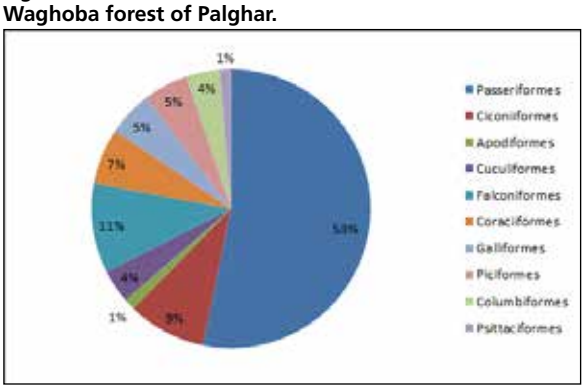
The family Muscicapidae and Accipitridae were found dominant with nine and eight species respectively indicating the terrestrial habitat moderately support birds life followed by Ardeidae (5), phasianidae (4), Campephagidae (4),Motacillida (3), Cuculidae (3), Nectariniidae (3), ploceidae (3), Columbidae (3), Irenidae (3), Hirundinidae (2), Sturnidae (2), Pycnonotidae (2), Dicruridae (2), Corvidae (2), Oriolidae (2), Monarchidae (1),Artamidae (1), Ploceidae (1) Laniidae (1), Phalacrocoracidae (1), Ciconiidae (1), Apodidae (1), Meropidae (1), Upupidae (1), Alcedinidae (2), Coraciidae (1), Capitonidae (2), Picidae (2), Psittacidae (1). Fig.3.

Fig. 3. The Family wise distribution of species at Waghoba forest of Palghar.



On the basis of orders Passeriformes order (41species) was maximum recorded which constituted about 53% and it was followed by orders Falconiformes (11%), Ciconiiformes (9%), Coraciformes (7%) ,Galliformes (5%), Piciformes (5%), Cuculiformes(4%), Colubiformes (4%), Apodiformes (1%), and Psittaciformes (1%) . Fig.3.

Fig.4. The Order wise % distribution of avian fauna at Waghoba forest of Palghar.



Similar type of study was carried out by Singh et al.2016 where they observed beneficial aspect of garbage dump of Palghar in terms of avifauna and recorded 33 species of birds belonging to 21 families. Vikas kumar (2015), where 99 birds' species were recorded in Vansda National Park, Gujarat. Kurhade (1991**)** recorded 51 bird species in Ahmednagar district. Vyawahare (1991) listed 245 bird species in Dhule district of Maharashtra. Prashant ***et al***. (1994) in their study of coastal area of Nellore district recorded 78 species of birds. Terdalkar ***et al***. (2005) listed 45 species of birds belonging to 18 families around Bhatye estuary, Ratnagiri.

The present work is an attempt to establish the richness of the Waghoba forest and surrounding areas in respect of avian fauna which are excellent indicators of ecological health. From the above results it could be made out that the availability of water, safe habitat and food sources for both common and migratory birds in and around the forest are important for the occurrence and abundance of avian population. The aim of this paper is to make aware the government and its constituents and NGO's about the rich heritage of this Adivashi tribal dominant area which in turn will start planning for the better

conservation and management of this beautiful area for the future of our society.

CONCLUSION

Around 77 species of birds belonging to 10 orders and 31 families were recorded in the study area which has its own importance. The proper and honest management of this forest would further increase the avian diversity / population and it increases the incessant bird lover's interest for this region. During our observation we also found that local inhabitants were cutting the trees and collecting the wood from this area which is the cause of great concern to the richness of this ecosystem and in turn the conservation. Further intensive study of this forest area is required to develop this place from avian conservation and ecotourism point of view. If honest efforts are made then this area will open the gate of ecotourism to the public in general and people of Mumbai metro in particular. Ecotourism will increase the revenue of this new district and will provide the job opportunities to the tribal population of this area which in turn will alleviate the living standard of the people. By doing so we can live hand in hand with nature.

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