



Avian fauna from urban area of Panvel

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Abstract

Birds are found on all seven continents in vast majority of world ecosystem including the open ocean. Birds are important members of ecosystem, as they play vital role in controlling pests, serving as pollinators and maintaining ecological balance. The present study was investigated to document the status of avian fauna from urban areas of panvel region from July 2019 to December 2021. Total 48 bird's species were recorded from the bird survey.

Keywords: birds, avian fauna, Panvel and Raigad Maharashtra

Introduction

Every human on the planet is enthralled by the beauty of birds, the colours they display, and the songs they chirp while perched (Reynolds et al., 2021). Birds are a valuable tool for ecologists in assessing the health of their environments, as well as a biological indicator of the impact of human anthropogenic activity on native wildlife (Ruchika et al., 2017) [9]. Birds are particularly useful environmental monitoring indicators in urban environments because they are easy to access, quantify, and respond to any sudden changes in urban designs. (G Yang et al., 2015) The presence of this avifauna in a city area indicates that the region is healthy, owing to the availability of food, trees for shelter and nesting, and breeding grounds. (Joshi 2012) Due to rapid urbanisation, which has resulted in habitat destruction, tree removal, and the construction of mobile towers, which emit harmful radiation, avian fauna diversity is decreasing within city limits. (Dal and vaghela, 2015) [5]

Birds are necessary for the survival of the tropics. They are called bio-indicators because they play an important role in pollination and scavenging. A continuous study of avian diversity should be conducted in a city setting, so that important areas can be set aside for such animal groups. As a result, the current research focuses on creating a bird checklist for urban areas. The purpose of this investigation is to compile documents on birds from the Panvel region of Maharashtra in order to raise citizen awareness about bird diversity in their own backyards.

Materials and methodology

Study area

The research was conducted in the Panvel Taluka of Raigad District, Maharashtra (18°59'40"N 73°06'50"E) remnant areas and city area. Panvel covers an area of approximately 110 km²i.e. 42.49 square miles. Panvel is also known as the Raigad Gate because it is the first city encountered when entering Raigad from the east. Panvel is best known as the Konkan region's entry point. It is a crowded city in the district and is only 40 kilometres from Mumbai. The forts in Raigad and Khopoli are well-known, and also the Karnala fort, which is a popular trekking destination. The city of Panvel is split into two sections: Old Panvel and New Panvel. There are open spaces, public gardens, and native ruminant patches in both areas.

Study area description

New Panvel

CIDCO Garden is located in Sector 12, Sector 13, Sector 4, and the School Playground which is located in Sector 18. It covers approximately 30,000 square metres and is surrounded by residential complexes. The location is prime for several city dwellers as a recreational area.

Old Panvel

This part is the main centre for market area and for other small scale business. It comprises of gardens from Panvel Municipal Co-Operation namely, Hutatma Smarak Udyan, Mahatma Gandhi Udyan, Lions garden and a open space surrounded by residential complexes

Methods

Bird Survey

The study was conducted for from July 2019 to December 2021, twice a month at an interval of 15 days. The method used in this study as described (Bibby et al. 1992) [1]. A visual encounter survey was conducted to sight

birds by walking along the survey site (Crump and Scott, 1994; Manley et al., 2005) [2]. The bird species seen or heard were recorded. The birds were observed by using binoculars (Olympus 10 X50) and photographed by camera (Canon SX50). Spot identification of birds was done by using field guides (Ali and Ripley, 1983 and Grimmett) [10] and only those species with confirmed identity were reported

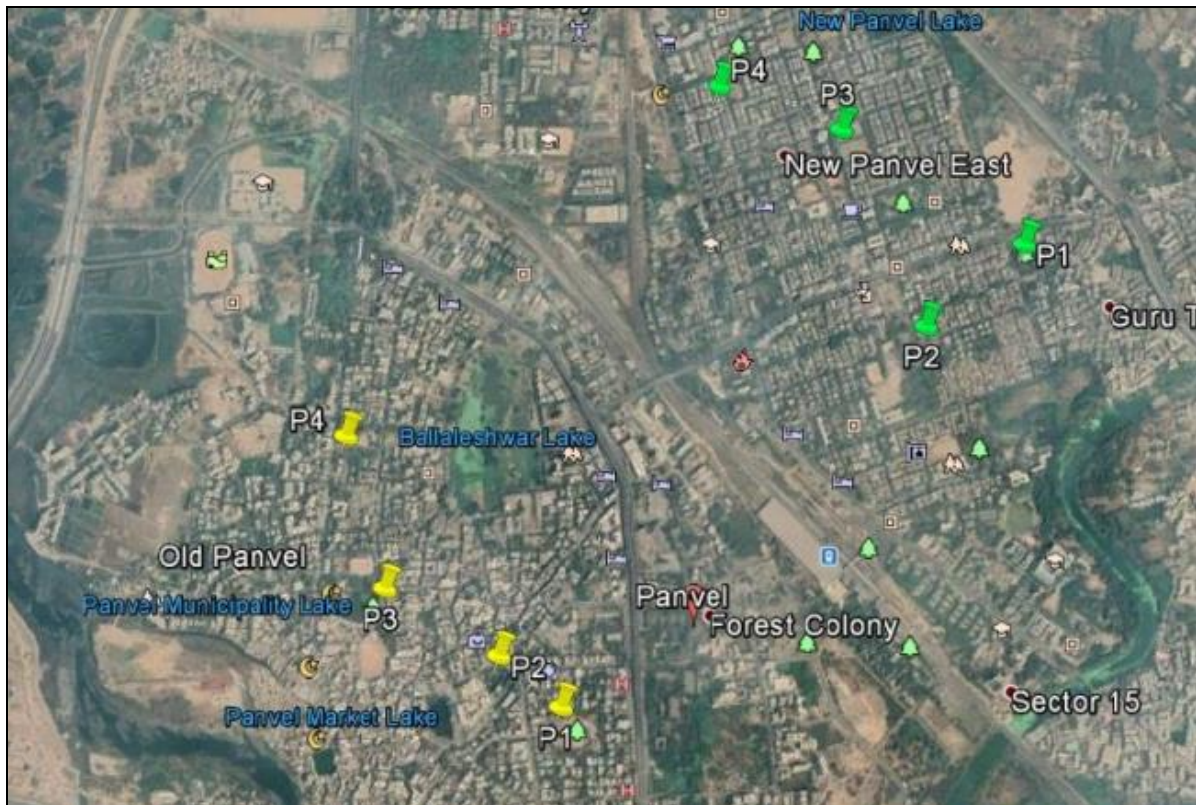


Fig 1: This map showing study area in New Panvel (P1-P4) and Old Panvel (P1-P4) respectively

Observation

Table 1: Bird species classification and distribution at New Panvel and Old Panvel site

Order	Family	Scientific Name	Common Name
Passeriformes	Corvidae	<i>Corvus splendens</i>	House Crow
	Passeridae	<i>Passer domesticus indicus</i>	House Sparrow
	Sylviidae	<i>Chrysomma sinense</i>	Yellow-eyed Babbler
	Muscicapidae	<i>Copsychus fulicatus</i>	Indian Robin
		<i>Copsychus saularis</i>	Oriental Magpie-Robin
	Pycnonotidae	<i>Pycnonotus jocosus</i>	Red-whiskered Bulbul
		<i>Pycnonotus cafer</i>	Red-vented Bulbul
	Nectariniidae	<i>Leptocoma zeylonica</i>	Purple-rumped Sunbird
	Sturnidae	<i>Acridotheres tristis</i>	Common Myna
		<i>Gracupica contra</i>	Indian pied Myna
	Cisticolidae	<i>Prinia inornata</i>	Plain Prinia
		<i>Orthotomus sutorius guzuratus</i>	Common Tailorbird
		<i>Prinia socialis</i>	Ashy Prinia
		Dicaeidae	<i>Dicaeum erythrorhynchos</i>
	Dicruridae	<i>Dicrurus macrocercus</i>	Black Drongo
	Estrildidae	<i>Lonchura punctulata</i>	Scaly-breasted Munia
		<i>Lonchura malacca</i>	Tricolored Munia
		Laniidae	<i>Lanius schach erythronotus</i>
Leiiothrichidae		<i>Argya striata</i>	Jungle Babbler
Ploceidae	<i>Ploceus philippinus</i>	Baya Weaver	
Rhipiduridae	<i>Rhipidura albogularis</i>	White-spotted Fantail	
Cuculiformes	Cuculidae	<i>Centropus sinensis</i>	Greater Coucal
Pelecaniformes	Ardeidae	<i>Egretta garzetta</i>	Little Egret
		<i>Ardea cinerea</i>	Grey Heron
		<i>Bubulcus ibis</i>	Western Cattle Egret

	Threskiornithidae	<i>Platalea leucorodia</i>	Eurasian Spoonbill
Strigiformes	Meropidae	<i>Merops orientalis</i>	Green Bee-eater
		<i>Merops leschenaulti</i>	Chestnut-headed Bee-eater
Columbiformes	Columbidae	<i>Spilopelia senegalensis cambayensis</i>	Laughing Dove
		<i>Spilopelia chinensis tigrina</i>	Spotted Dove
		<i>Columba livia</i>	Rock Pigeon
Charadriiformes	Charadriidae	<i>Vanellus indicus</i>	Red-wattled Lapwing
	Scolopacidae	<i>Limosa limosa</i>	Black-tailed Godwit
Psittaciformes	Psittaculidae	<i>Psittacula krameri</i>	Rose-ringed Parakeet
Coraciiformes	Alcedinidae	<i>Alcedo atthis</i>	Common Kingfisher
		<i>Ceryle rudis insignis</i>	Pied Kingfisher
		<i>Halcyon smyrnensis</i>	White-throated Kingfisher
Piciformes	Meropidae	<i>Merops orientalis</i>	Green Bee-eater
	Megalaimidae	<i>Psilopogon haemacephalus indicus</i>	Coppersmith Barbet
Accipitriformes	Accipitridae	<i>Elanus caeruleus</i>	Black-winged Kite
Anseriformes	Anatidae	<i>Anas poecilorhyncha</i>	Indian Spot-billed Duck
		<i>Dendrocygna javanica</i>	Lesser Whistling Duck
		<i>Anas acuta</i>	Northern Pintail
		<i>Aythya ferina</i>	Common Pochard
Suliformes	Phalacrocoracidae	<i>Phalacrocorax fuscicollis</i>	Indian Cormorant
Podicipediformes	Podicipedidae	<i>Tachybaptus ruficollis</i>	Little Greb

Result and Conclusion

In this investigation the conclusion drawn is that the diversity of birds is noticed in panvel urban area, of district raigad. In present study total 48 bird's species were accounted. Bird's data is depicted in table 1 which show the diversity of birds from the urban area of new panvel and old panvel. Continuous check on birds diversity and data presented from here can be taken as a baseline data for environmental and biodiversity studies. It is known that birds are important in balancing ecosystem their presence in an around urban area marks very importance. Birds are playing precious role in ecosystem as pollinator, scavengers and predation of insect's pest. With such good numbers of birds , diversity here has not being affected by urbanization but in future it might affects due to increase in anthropogenic activity , such bird survey will help to create awareness among citizen which ultimately help in conserving them and maintaining the integrity of biodiversity. It is very necessary to save avian fauna not only in forest but also in urban areas.

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