

Avian Fauna of Coastal Maharashtra with special reference to some Mangrove Ecosystems

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ABSTRACT

The study area is the coastal Maharashtra which lies between 15°44' N to 20°08' N and 72°44' E to 73°39' E. The study area has tropical climatic conditions. Three distinct seasons are observed as Monsoon (June to Sept.), Winter (Oct. to Jan.) and Summer (Feb. to May). The maximum annual rainfall that occurs along the coast is 2500 mm. The relative humidity ranges between 60 to 80%. The temperature varies from 20° C to 35° C. Mangroves ecosystem is known for its high productivity. The mangroves function as a source of food and shelter to the variety of animals like herbivores, detritivores and carnivores. Animals play a key role in making the mangrove ecosystem highly productive. Mangroves play important role in feeding the variety of animals at their juvenile stage. Mangroves show diversified avi-faunal members. Many of the bird species are associated with the mangroves, for many reasons. Birds use the mangroves for nesting, breeding and as a source of secondary food. Some birds are fish-catcher. The most common birds observed in the mangrove ecosystem are Herons, Egrets, Lapwings, Plover, Gulls, Terns, Storks, Hawks, Kites, Eagles, Hornbills and Kingfishers. The birds may either be permanent or temporary residents on mangrove trees. Some of the resident birds are highly depend on mangroves for their survival. Some of the birds are recorded during the present field studies.

Key word: rainfall, humidity, ecosystem.

INTRODUCTION

The pressure on mangrove ecosystem is continuously increasing parallel to increase in population. NRSA has recorded a decline of 7000 hectare mangroves from India within a period of six years from 1975 to 1981. Mangroves ecosystem is known for its high productivity. The mangroves function as a source of food and shelter to the variety of animals like herbivores, detritivores and carnivores. Animals play a key role in making the mangrove ecosystem highly productive. They not only feed on the mangrove flora but also function for the nutrient cycling in the ecosystem and become a part of energy flow in the mangrove ecosystems.

Mangroves play important role in feeding the variety of animals at their juvenile stage. (Snedaker 1978) estimated that about 90% of the tropical fish species spend their juvenile period in the mangroves.

The important animal groups which are associated with the mangroves during their life time are macro and meio benthos, pisces, mammals, reptiles, and birds etc. The benthic groups include molluscs, annelids, crustaceans, echinoderms, hydroids, actinarians, planarians, nematodes, polychaetes and larval forms of several other organisms. The mangrove detritus formed by the litter fall includes leaves, stems, roots, flowers and fruits which form the major source of food for most of the organisms. Odum and Heald (1975) have explained the development of detritus food chain in mangroves.

METHODOLOGY

Regular visits are made to the study area to collect the data on the avian fauna. Several critical observations are recorded regarding their behavior, feeding habits and migration strategies. The collected data is counter checked with available literature.

RESULTS AND DISCUSSION

Several studies were carried out by Untawale (1985) on the benthos of mangrove communities of Goa. Deshmukh (1991) recorded the fauna of Bombay. Mangroves show diversified avi-faunal members. Many of the bird species are associated with the mangroves, for many reasons. Birds use the mangroves for nesting, breeding and as a source of secondary food. Some birds are fish-catcher. Many workers have studied the avifauna in mangrove ecosystem Kathiresan and Quasim

(2005) have enlisted the diversity of avifauna in the Indian mangroves. They have given a list of 419 known bird species for the Indian mangroves. Several aspects of mangrove fauna are studied by Mandal and Mishra (1985), Samant (1985). Around 315 bird species are reported from Sunderbans of Bangladesh. The most common birds observed in the mangrove ecosystem are Herons, Egrets, Lapwings, Plover, Gulls, Terns, Storks, Hawks, Kites, Eagles, Hornbills and Kingfishers. Bhosale (2003) enlisted Faunal species for the coast of Malvan

Table 1. Avi-Faunal components from study area.

Sr. No.	Species	Common name
1.	<i>Amaurornis phoenicurus</i> Pennant.	White breasted water hen
2.	<i>Nycticorax nycticorax</i> Linne.	Night heron
3.	<i>Egretta intermedia</i> Wagler.	Smaller egret
4.	<i>Egretta garzetta</i> Linne.	Little egret
5.	<i>Bubulcus ibis</i> Linne.	Cattle egret
6.	<i>Ardeola grayii</i> Sykes.	Pond heron
7.	<i>Ardea alba</i> Linne.	Large egret
8.	<i>Ardea purpurea</i> Linne.	Purple heron
9.	<i>Ardea cinerea</i> Linne.	Grey heron
10.	<i>Haemotopus ostralegus</i> Linne.	Oyster catcher
11.	<i>Esacus magnirostris</i> Vicillot.	Great stone plover
12.	<i>Vanellus indicus</i> Boddaert.	Red wattled lapwing
13.	<i>Vanellus malabaricus</i> Boddaert.	Yellow wattled lapwing
14.	<i>Larus brunnicephalus</i> Jerdon.	Brown headed gull
15.	<i>Larus ridibundus</i> Linne.	Black headed gull
16.	<i>Ceryle rudis</i> Linne.	Lessor pied kingfisher
17.	<i>Alcedo atthis</i> Linne.	Common kingfisher
18.	<i>Halcyon smyrnansis</i> Linne.	White breasted kingfisher
19.	<i>Halcyon chloris</i> Baddaert.	White collared kingfisher
20.	<i>Motacilla citreola</i> Pallas.	Yellow headed wagtail
21.	<i>Motacilla cinerea</i> Tunstall.	Grey wagtail
22.	<i>Eudynamys scolopacea</i> Linne.	Koel
23.	<i>Merops orientalis</i>	Green Bee eater
24.	<i>Tockus birostris</i> Latham.	Common grey hornbill
25.	<i>Buceros bicornis</i>	Great pied hornbill
26.	<i>Anthracoceros coronatus</i> Boddaevt.	Malabar pied hornbill
27.	<i>Megalaima zeylanica</i> Gmelin.	Green barbet
28.	<i>Acridotheres tristis</i> Linne.	Common myna
29.	<i>Corvus splendens</i> Vieillot.	House crow
30.	<i>Turdoides caudatus</i> Dumont.	Common babler
31.	<i>Saxicoloides fulicata</i> Linne.	Indian robin
32.	<i>Pycnonotus jocosus</i> Linne.	Red whiskered bulbul
33.	<i>Milvus migrans</i> Boddaert.	Black kite
34.	<i>Haliastur indus</i> Boddaert.	Brahminy kite
35.	<i>Gyps indicus</i> Scopoli.	Indian long billed vulture
36.	<i>Ardea insignis</i>	Great white bellied heron

The birds may either be permanent or temporary residents on mangrove trees. Some of the resident birds are highly depend on mangroves for their survival. Some of the birds and other animal components recorded during the present field studies are depicted in Table 1.

CONCLUSION

Among the birds Egrets, Herons and Kingfishers are frequently occurring in the mangroves. Grey herons and Reef herons are more common in the open mud flats. Gulls are observed visiting the muddy planes in the mangroves. Among Kingfishers Lesser pied Kingfisher, common Kingfisher and White breasted Kingfishers are common in the area.

Hornbills, like Great Pied hornbill and Malabar Pied hornbill are recorded from Bhatye, Deogad, Mumbra and Kolamb estuaries on big trees of *S. alba* and *A. officinalis*. The *Roseringed porakeet* (parrot) has been observed on *S. alba*. The study reveals the importance of well protected mangroves for the survival of these and many other animal components. The Great Pied Malabar hornbill is considered as threatened species. However, their occurrence in mangroves indicates hopes of protecting and conservation of the species by habitat conservation.

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