



## DIVERSITY OF AVIFAUNA AT MOCHEMAD ESTUARY OF VENGURLA OF SOUTH KONKAN MAHARASHTRA

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### Abstract:

Avifauna is the aerial of characteristic of mangrove ecosystem is supposed ecologically and economically important for the sustainable development of konkan region. Thick belt of mangroves is providing treasure house for number of birds. Muddy ground provides food to various birds as there is no interface of any animal. The species *Rhizophora* is having beautiful flowers containing honey therefore many birds keep their stay with this species. The present investigation is carried out in Mochemad estuary (15° 51' 2" N, Long 73° 37' 08" E Lat) during February 2015 to January 2016. Among avifauna *Halcyon smyransis* (Linne), *Ardea cinerea* (Linne), *Ardeola grayii* (Sykes), *Babulcus ibis* (Linne), *Corvus macrorhynchos* (Wayter), *Eudynamis scolopacea* (Linne), *Haliaastur Indus* (Buddaert), *Larus ridibundus* (Linne) were prominent.

**Keywords:** Avifauna, *Rhizophora*, Mochemad

### Introduction:

The Mochemad estuary is associated with thick belt of different species of mangroves spread in muddy ground. Due to muddy grounds, no interference of any animals hence attracts the varieties of birds for various purposes. Thick forest of mangrove swamp is associated with variety of faunal species, which serve as food for many birds. The species like *Rhizophora* has beautiful flowers containing honey, so that many birds keep their stay with this species.

Many species of birds disappeared all over the world due to deforestation, human interference in hill, stone breaking in forest and pollution. Human interference in the jungle for various purposes create the disturbance in habitat of birds, hence, neither they feed properly nor construct the nest safely. The wetlands ecosystem plays an important role in conservation of birds. Thus the wetlands serve as treasure house for ornithologist.

During high tide the birds remain on the mangrove plants while during low tide they come down and feed on the ground or in air on varieties of insects. The mangrove swamps provide readymade food, therefore naturally, the birds stay there and during breeding season they make their nest amongst the plants where the enemies cannot reach.

One of the other important roles that mangrove plays is that it acts the habitat for many species of birds. Although mangroves at first glance appears to be barren and unprotected place for any animal to live in this is precisely the aspect that many of the birds species take to their advantages being a marshy and saline area animals do not venture in this zone. Quietness and silence are so tangible in fully developed mangrove forests, that one can hear the puff of

methane bubbles coming up from the bottom as they break the surface of the water. Even water itself is silent in its even streamlined flow up and down with the tides. Who is not going to lower such clam, peaceful and academic environment? Hence the birds have a undisturbed environment at their disposal, for a resting, breeding, nesting and also feeding.

Since the tidal influx and recede creates a marshy ground many insects, marine animals, mud borers and also some fishes, which may be accidentally carried in due to tidal influx and are found in this zone. This attracts many of aquatic feeding birds. During low tides many birds freely water on the mud flats of mangroves for their active feeding.

The present investigation showed that the Mochemad estuary mangrove areas are calm and undisturbed by people; hence large numbers of birds are available in all the seasons.

### Materials and Methods:

Morning as well as evening continuous observation with eyes as well as binoculars.

### Results:

The taxonomic list of the avifauna recorded during the studies period February 2015 - January 2016 is given in Table 1. The check list may show variant from time to time due to drastic change in environmental conditions. The observation was recorded for three seasons.

Birds represented by 24 species recorded in Mochemad estuary for the period of twelve months. This shows that there was significant species diversity in the avifauna of mangroves. It was also noticed that there were four categories of birds like vagrant (V), resident and local (RM), migrants (M) and resident with migratory predators. The percentage composition of categories (Table 2) clearly indicate that the

population of resident with migratory was high (50.41%) and lowest vagrant (3.14%). This clearly showed that the mangrove ecosystem is quite and silent with varieties of food items, make the migrant to stay for longer time. The resident migratory birds were observed to move from one patch of the mangrove to other on the basis of selectivity of food to move from one patch of the mangrove to other on the basis of selectivity of food. The true migrant birds percentage was noted at third rank because these birds show migration only for short time basis and then they leave the place. Resident with migratory birds remained for longer time and laid their eggs in the mangrove belts.

#### Conclusion:

The largest and the most diverse group of birds inhabiting in the area was of the arboreal birds. These belonged to different ecological background but their utilization of mangrove ecosystem was remarkably similar (Samant, 1985). The same observation is related to the present investigation of Mochemad estuary mangrove habitats. These birds used the habitat provided by the mangrove canopy. Many birds like cattle egret used trunk, branches and

pneumatophore as a significant influence of the terrestrial bird species on the avifauna of the mangrove ecosystem around Mochemad estuary. It was also noticed that proximity of open areas increased like hood of birds of prey.

Mangrove wood cutting, which is present in the other areas, affects bird population by depriving them of their resting and roosting habitat. In Mochemad estuary mangrove, there is no human interference hence no disturbances to the bird population. The first peak of bird population in October correspond with the arrival of migrants in the area and the decline noted in December is due to the departure of many bird species as monsoon habitats start depleting, however the second influx of migratory birds are also noted during journey resulting in second peak in February.

The Mochemad estuary and its environment act wintering, staging and breeding ground for birds. This area is good for birds watching for tourists as well as for ornithologists. Making water trenches between mangrove forests can help spread tidal water to a larger area providing habitats for birds longer period.

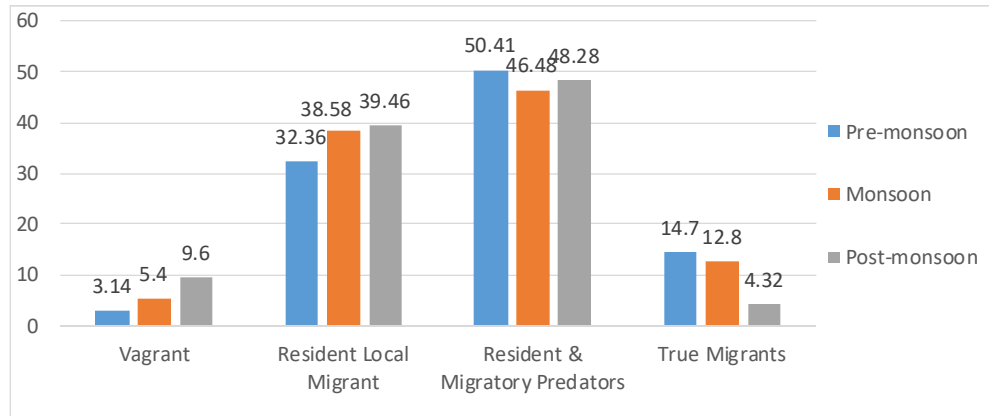
**Table 1:** Check list of birds in and around wetlands of Mochemad estuary.

Sr. No.	Name	Common Name	Status
1	<i>Accipiter nisus</i> (Linne)	Sparrow Hawk	M
2	<i>Alcedo atthis</i> (Linne)	Common Kingfisher	RM
3	<i>Ardea cinerea</i> (Linne)	Grey Heron	RM
4	<i>Ardea purpurea</i> (Linne)	Purple Heron	RM
5	<i>Ardeola grayii</i> (Sykes)	Pond heron	R
6	<i>Babulcus ibis</i> (Linne)	Cattle Egret	RM
7	<i>Ceryle rudis</i> (Linne)	Lesser pied Kingfisher	R
8	<i>Coracina melanoptera</i> (Rupp)	Black headed cuckoo	RM
9	<i>Corvus macrorhynchos</i> (Wayter)	Jungle crow	R
10	<i>Corvus splendens</i> (Vieillot)	House crow	R
11	<i>Egreta intermedia</i> (Wagles)	Smaller crow	RM
12	<i>Eudynamis scolopacea</i> (Linne)	Koel	R
13	<i>Gyps bengalensis</i> (Gmelin)	White beaked Vulture	R
14	<i>Halcyon smyransis</i> (Linne)	White breasted Kingfisher	R
15	<i>Haliaastur indus</i> (Buddaert)	Brahminy Kite	R
16	<i>Larus brunnicephalus</i> (Jerdon)	Brown headed gull	RM
17	<i>Larus ridibundus</i> (Linne)	Black headed gull	M
18	<i>Limicola falcinellus</i> (Ponl)	Common sand Piper	V
19	<i>Motacilla cinerea</i> (Tupstall)	Grey Wagtail	M
20	<i>Nycticorax nycticorax</i> (Linne)	Night Heron	R
21	<i>Orthotomus sutorius</i> (Pennant)	Taylor Bird	R
22	<i>Pycnonotus cafer</i> (Linne)	Red vented Bulbul	R
23	<i>Saxicoloides fulicata</i> (Linne)	Indian Robin	R
24	<i>Parus major</i> (Linne)	Grey tit	R

**Table 2:** Percentage composition of types of birds in relation to seasons.

Sr. No.	Season	Vagrant	Resident, Local Migrant RM%	Resident and Migratory predators	True migrants M%
1	Pre-monsoon	3.14	32.36	50.41	14.70
2	Monsoon	5.40	38.58	46.48	12.80
3	Post monsoon	9.60	39.46	48.28	4.32

**Figure 1:** Percentage composition of types of birds in relation to season of Mochemad estuary.



**Plate 1:** Birds in relation to monsoon of Mochemad estuary



**Cattle Egret**



**Seagull**



**Seagull****References:**

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