FLORAL AND FAUNAL DIVERSITY AT MAVOOR WETLAND -KERALA

Shaheer Ansari ,v. Ali Akshad, M.
Department of Zoology, Khadir Mohideen College, Adirampattinam 614 701, Tamil Nadu, India

ABSTRACT: Mavoor wetland was used for different agricultural practices mainly paddy field before more than ten years. Now it is permanently water-logged with muddy banks and different type of vegetation. The wetland are enriched with rich diversity of plants, which include floating, submerged and emergent vegetation. The various types of angiosperm and gymnosperm in this wetland and associated places of wetland are, *Eragrostis Paniculata, Eichornia Crassipes, Salvinia Molesta ,Azolla Pinnata,Vallisneria Nattans, Hygrophila Salcifolia, Eclipta Prostrata ,Potamogeteon Pectinatus, Salvinia Molesta*

Key words: Flora , Mavoor wetland , *Salvinia Molesta , Pandanus Tectorius*

INTRODUCTION:

Mavoor, thengilakkadavu wetland situated around (11.2604° N, 75.9391° E) 20kms from the city of Kozhikode, Kerala. As different area of it spread about 50 hectors of wetlands. This wetland formerly well known for its brick kilns. By over exploitation of human made activities such as excavating soil for brick manufactures the area became a wetland , actually we can called Mavoor wetland as human made wetland , and the area became well saturated with water throughout the year converting the temporary wetland to permanent wetland

Algal fauna provide better habitat and feeding place for water bird **H.S. Gupta2004** and wild paddy varieties *Oryza sativa* provide better hiding place to them. and shoots of vegetation and seeds ,rhizomes are the major food varieties of water birds.

MATERIALS AND METHOD:

The present study mainly aimed to assess the Floral diversity of Mavoor wetland habitat . The water quality parameters also monitored to study the avian relationship with their habitat. Mavoor wetland provides a fresh water habitat for flora and avifauna.

Observation of floral diversity was conducted by total count method 1989) and line transect method . In this method, plants were identified based on physical features with the help of field guides and reference books .

Study Area:

The study areas has mainly two types of available monsoon are Southwest monsoon and Northern monsoon. The south west monsoon starts in the last week of May or the first week of June onwards , heavy rainfall occurs during these months. Mavoor has a generally humid climate with a hot season continue from March to May. The most important rainy season is during the South West Monsoon, which sets in the first week of June and extends up to September. In June and July, season most of the places face threat of floods .

Study period:

The study and data collection was started from July 2015 to June 2017 . . Enriched vegetation reduces the area of water available for diving birds . The rooted floating plants help an attaching place or feeding place for certain groups of waterbirds like jacanas moor hens etc. *etc . nympaea stellata is used by water bird for* making their nest .

Result and discussion:

Flora of Mavoor wetland : Rich diversity of plants, which include floating, submerged and emergent vegetation. The various types of angiosperm and gymnosperm in this wetland and associated places of wetland are, **Gamble, J. S. (1919).** *Eragrostis Paniculata, Eichornia Crassipes, Salvinia Molesta ,Azolla Pinnata,Vallisneria Nattans, Hygrophila Salcifolia, Eclipta Prostrata ,Potamogeteon Pectinatus, Salvinia Molesta ,Kyllinga Brevifolia ,Pandanus Tectorius ,Lygodium Flexuosum ,Syzygium Caryophyllatum ,Ischaemum Hirtum ,Vernonia Albicans Eragrostis Unioloides ,Cucumis Anguria , Derris Scandens , Nymphaea Nouchali, Nymphaea Amarana , Nymphoides Hydrophilla, Panicum Brevifolium, Saccharum Spontaneum* .(List given in table) . Enriched vegetation reduces the area of water available for diving birds . The rooted floating plants help an attaching place or feeding place for certain groups of waterbirds like jacanas moor hens etc. *etc . nympaea stellata is used by water bird for* making their nest . Algal fauna provide better habitat and feeding place for water bird and wild paddy varieties *Oryza sativa* provide better hiding place to them. and shoots of vegetation and seeds ,rhizomes are the major food varieties of water birds. **Basavarajappa, S.** 2006

Other organisms of MavoorThengilakkadavu wetland

Vertebrates such as Frogs, mainly belonging to genus *Hoplobatrachus like Hoplobatrachus tigerinus* species breed in this wetland during monsoon season ,major food of carnivorous birds like Cormorants and Darters etc **Grimmett, R., Inskipp, T. 2007** are Tadpoles of frogs . Invertebrates include aquatic insects, and polychaets worm Aulophorus etc crabs, prawns (*Palaemon* species) and gastropods , apple snails or fresh water snail , pila globosa.. Snail species are *Limnae , Bellamya, Gyralis, Indoplanorbis* etc. Small worms and insects fishes major food varieties of water birds. Various species of Dragonflies , butterflies and Damselflies and their larvae were also in plenty number. Dragonflies start their breeding season during May and June .Different species of dragonflies are active in the month of December . Broad scarlet Darter *crocothemis erythraea* , Azure damselfly *Coenagrion puella* , Zeenath chozhiyattel (2009) Golden-ringed dragonfly *Cordulegaster boltonii* . The Common Clubtail *Gomphus vulgatissimus* , Ruddy darter *Sympetrum sanguineum* , commoncrow, Common Tigertails *Ictinogomphus ferox* . Long-tailed skimmer (*Plathemis lydia*) , the common crow butterflies *Euploea core***,** Dark blue tiger *Tirumala septentrionis* Common Parasol dragonflies, Brachythemis contaminate, Ictinogomphus rapax , Crocothemis servilia female, Urothemis signata , Diplacodes trivialis , Rhyothemis variegate , Blue Tiger , Neurothemis tullia are the most abundant species, Some species of Calotes in family agamidae also were present **Araty sasikumar(2009).**

Fish fauna of Mavoor – wetland **:** The major fishes recorded from wetland were *Channa orientalis ,Macropodus cupanus , Aplocheilus blochii , Puntius mahecola, Puntius vittatus , clarias butrachus , channa punctatus , Hetropneustis fossilis , Cyprinus carpio etc ,* the wetland is a better breeding place for these fishes during monsoon season' **Jayson E A. and P. S. Easa** 2000

Other organisms of Mavoor wetland:

Vertebrates such as Frogs, mainly belonging to genus *Hoplobatrachus like Hoplobatrachus tigerinus* species breed in this wetland during monsoon season ,major food of carnivorous birds like Cormorants and Darters etc are Tadpoles of frogs . Invertebrates include aquatic insects, and polychaets worm Aulophorus etc crabs, prawns (*Palaemon* species) and gastropods , apple snails or fresh water snail , pila globosa.. Snail species are *Limnae , Bellamya, Gyralis, Indoplanorbis* etc. Small worms and insects fishes major food varieties of water birds. **E. A. Jayson(2002**). Various species of Dragonflies , butterflies and Damselflies and their larvae were also in plenty number. Dragonflies start their breeding season during May and June .Different species of dragonflies are active in the month of December . Broad scarlet Darter *crocothemis erythraea* , Azure damselfly *Coenagrion puella* , Zeenath

chozhiyattel (2009) Golden-ringed dragonfly *Cordulegaster boltonii* . The Common Clubtail *Gomphus vulgatissimus* , Ruddy darter *Sympetrum sanguineum* , commoncrow, Common Tigertails *Ictinogomphus ferox* . Long-tailed skimmer (*Plathemis lydia*) , the common crow butterflies *Euploea core***,** Dark blue tiger *Tirumala septentrionis* Common Parasol dragonflies, Brachythemis contaminate, Ictinogomphus rapax , Crocothemis servilia female, Urothemis signata , Diplacodes trivialis , Rhyothemis variegate , Blue Tiger , Neurothemis tullia are the most abundant species, Some species of Calotes in family agamidae also were present

Flock of egrets with white ibis

Breeding place of birds : syzygium caryophyllatum, and pandanus furcatus

Mavoor wetland during post monsoon

Brachythemis contaminate

Ictinogomphus rapax

Crocothemis servilia female

Pila globosa

Actinoscirpus grosses, hide the wetland

Table: **LIST OF PLANTS OBSERVED AT MAVOOR WETLAND**

NO: OF SPECIES	NAME OF PLANT SPECIES
1	*Eragrostis paniculata*
2	*Panicum brevifolium*
3	*Saccharum spontaneum*
4	*Salvinia molesta*
5	*Kyllinga brevifolia*
6	*Pandanus tectorius*
7	*Lygodium flexuosum*
8	*Syzygium caryophyllatum*
9	*Ischaemum hirtum*
10	*Vernonia albicans*
11	*Eragrostis unioloides*
12	*Cucumis angurial*
13	*Derris scandens*
14	*Hygroryza aristata*
15	*Milkania micrantha*
16	*Blechnum gibbum*
17	*Ludwigia peruviana*
18	*Acacia auriculiformis*
19	*Nymphoides indica*
20	*Ottelia alismoides*
21	*Fimbristylis ferruginea*
22	*Cyperus digitatus*
23	*Ipomoea marginata*
24	*Wedding trilobata*
25	*Eclipta alba*
26	*Sphaeranthus indicus*
27	*Mimosa invisa*

28	*Cleome burmanni*
29	*Cyperus platystylis*
30	*Derris scandens*
31	*Sida accuta*
32	*Cardiospermum halicacabum*
33	*Hibiscus hirtus*
34	*Alstonia scholaris*
35	*Actinoscirpus grossus*
36	*Terminalia catappa*
37	*Nymphaea nouchali*
38	*Colocasia esculenta*
39	*Monocharia vajinalis*
40	*Limnophila heterophylla*
41	*Scoparia dulcis*
42	*Mimosa pudica*
43	*Crotalaria striata*
44	*Melochia corchorifolia*
45	*Heliotropium indicum*
46	*Bambusa bambos*
47	*Saccharum spontaneum*
48	*Macaranga peltata*
49	*Hibiscum surattensis*
50	*Ficus hispida*
51	*Psidium guajava*
52	*Acrostichium aureum*
53	*Canthium coromandelicum*
54	*Utricularia aurea*
55	*Actinocirpum grossum*
56	*Nymphya rosea*
57	*Cabomba caroliniana*

Now most of the wet land area is not proper for any type of agricultural practices by the plenty of water in every season, the water level of this wetland is varying by opening or closing of regulator. Mainly water from neighboring river koolimadu , is entering to this wetland .

The secondary data revealed that formerly at mavoor wetland were much number of waterbirds. In all season. But nowadays most of the area were enriched by thick vegetation of grass verities like *Actinocirpus grossus, Eragrosis viscosa, Panicum species,Cyprus iria, Panicum repens* etc water birds couldn't swim smoothly due to the dense growth of vegetation . Eventhogh a good number of Large waders, Swimming birds, and Divers, are in this wetland , growth of vegetation were noted a major threat to water birds .

REFERENCES:

Araty sasikumar(2009). Faunal diversity of mangrove ecosystem of kadalundi and nallalam

Basavarajappa, S. 2006. Avifauna of agro ecosystems of Maidan area of Karnataka. *Zoos Print Journal*. 21 (4): 2117-2119

E. A. Jayson(2002). ecology of wetland birds in the kole lands of kerala. KFRI Research Report No. 244 ISSN 0970-8103

Gamble, J. S. (1919). Rhizophoraceae In: Flora of the Presidency of Madras, Vol. 1. Aldard & Son

Grimmett, R., Inskipp, T. 2007. Birds of Southern India. Om Books International, New Delhi, India

H.S. Gupta2004. Waterbirds diversity of ranchi district, zoos' print journal2004- 19(9): 163

Jayson E A. and P. S. Easa 2000. Documentation of vertebrate fauna in Mangalavanam mangrove

Zeenath chozhiyattel (2009) . Behaviour and adaptation of Little cormorant and darter