

FISH AND INSECT DIVERSITY OF BORI DAM IN RELATION TO FISH CULTURE, OSMANABAD DIST. (M.S.)

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ABSTRACT : The present communication deals with the diversity of fishes and insects of Bori dam, Naldurg in relation to fish culture, Osmanabad Dist. (M.S.). The work was carried out during the year 2011 (January to December) to assess the suitability of this dam for fish culture. Total 12 fish species belonging to 12 genera, 10 families and 5 Orders were found in Bori dam, 'Cyprinidae family were dominated in the dam. Altogether 12 species of insects' fauna were also found in the form of their larvae, nymphs or adults were observed in the dam. One species was belonged to Odonto, 6 to Hemisphera, 5 to Coleoptera etc. population of insects should be under control so as to maintain the favorite condition for fish culture.

Key words : Fish and insects diversity bori dam, Relation to fish culture, Osmanabad Dist.

INTRODUCTION

Now a days, Aquaculture is emerging as a source of food. It may fulfill the need of food to the growing population of our country. Fishes are the rich source of protein sq. is the important elements in the economy for sustained exploitation and simultaneously conservation, it is essential that the updated knowledge of diversity of fishes is important. The control of predator, weeds, wild fishes and aquatic insects is very important in the products of fishes. The production of fishes is also depends upon the correct selection of fish species for cultivation.

The predatory insects and predatory fishes are harmful to the cultivable fish species. The present investigation i.e. fish diversity study was also earlier studied by the workers like Khedkar (2005) and Rao *et al.* (1998). Sakhare & Joshi (2002), Savalla & Piska (2006), Sharma & Nayak (2001) and Sharma *et al.* (1990). The diversity of insects were reported by Dinkarans & Anbalgan (2006), Duran & Suicmez (2007), Padmanabha & Belagali (2007) and Singh (2007). There is no perfect information available about the diversity of fishes and insects that is why this work was undertaken.

MATERIAL AND METHODS

The work was carried out during the year 2011 (January to December). The fishes were collected by the fishermen. The specimens were brought to laboratory for preservation in 4% formalin. By wing pond net, the aquatic insects were collected and brought to the laboratory and preserved in 10% formaldehyde solution. Identification of fishes and insects was done with the help of standard literature *i.e.* Edmondson (1992).

RESULTS AND DISCUSSION

The fishery potential of the water body depends upon the variety of fishes found in the dam. The present survey reported 12 fish species belonging to 12 genera, 10 families and five orders. The order Cypriniformes was dominant with 5 species, 3 species from Siluriformes, 2 from Perciformes and order Clupeiformes and Symbranchiformes were represented with one species each. The present study also showed good number of fish species availability and their production in Bori dam maybe concerned with suitable ecology of water body which provides proper breeding ground for fish (Table.1). The present survey of Bori dam showed that aquatic insects were predators, they feed on carp spawn and fry (Table.2).

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Table. 1 Systematic fish diversity, feeding habits, relative abundance and economic importance of fish species recorded from Bori dam.

Name of the fish	Common name	Feeding habits	Relative abundance	Economic importance
Class : Pisces				
Sub class : Teleostei				
Order I : Cuneiformes				
Family I : Clupeidae				
1. <i>Corico soborra</i> (Ham- Budhanav)			M	CF, FR
Order II : Cuneiformes				
Family I : Cyprinidae				
1. <i>Banilius barila</i>		W	M	CF, LV
2. <i>Catla catla</i>	Catla	H	A	Co, FF
3. <i>Labeo nandia</i> (Ham)		H	M	CF
Family II : Balitoridae				
1. <i>Nemacheliu sinuatus</i>	Minnows	W	R	AF, FR
2. <i>Nemacheliu aureus</i>	Baluari	W	R	AF, FR
Family - III Psilorhynchidae				
1. <i>Arapsilorhynchus prateri</i> (Hora and Misra)			M	CF, FR.
Order III : Siluriformes (catfishes)				
Family I : Bagridae				
1. <i>Mystus bleekeri</i>	Cat fish	P	A	FF, Co
2. <i>Mystus malabarials</i>	Cat fish	P	M	CF
Family II : Siluridae				
1. <i>Ompok pabda</i>	Pabda	P	M	FF, Co, LV
Order IV : Synbranchiformes				
Family I : Mastracembelidae				
1. <i>Mastacembelus armatus</i> (Laceped)	Fresh water eel	P	A	FF, Co
Order V : Perciformes (trash fishes)				
Family I : Chandidae				
1. <i>Chando nama</i> (Ham)	Glass fish	W	M	AF, LV
Family II : Cichlidae				
1. <i>Oreochomis mossambica</i> (peters)		0	A	Co, FF
Family III : Channidae				
1. <i>Channa punctatus</i> (Bloch)	Kabra	P	A	Co, LV, FF

Table. 2 Systematic insect diversity and feeding habits of insect species from Bori dam.

Order	Family	Species	Common Name	Feeding habits
Odonato	Corduliidae	1. <i>Epicordulis</i> sp. (Nymph)	Dragon fly nymph	Predatory
Hemiptera	Nepidae	1. <i>Ranatra</i> sp.	Water scorpion	Predatory
		2. <i>Laccotrephes</i> sp.	Water scorpion (Nepa)	Predatory
	Belostomifidae	1. <i>Diplonychus</i> sp.	Creeping water	Predatory
	Notonectidae	1. <i>Corixa</i> sp.	Back swimmer	Predatory
	Corixidae	1. <i>Coriza</i> sp.	Water boatmen	Herbivorous
	Geridae	1. <i>Gerris</i> sp.	Water strider	Predatory
Coleoptera	Dyficidae	1. <i>Cybister</i> sp.	Diving beetle	Predatory
		2. <i>Eretes</i> sp.	Diving beetle	Predatory
		3. <i>Saidrocottus</i> sp.	Diving beetle	Predatory
		4. <i>Copelatus</i> sp.	Diving beetle	Predatory
	Hydrophilidae	1. <i>Hydrophilus</i> sp.	Scavenger beetle	Predatory
	Cyprinidae	1. <i>Dineutus</i> sp.	Whirligig beetle	Predatory

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