



## THE STUDY OF ICHTHYOFAUNA DIVERSITY IN UPPER DUDHNA PROJECT WATER RESERVOIR NEAR SOMTHANA IN JALNA DISTRICT (MS) INDIA

SHAIKH H.M., KAMBLE S.M.\* AND RENGE A.B.

Department of Fishery Science, A.S.C. College, Badnapur, Jalna, MS, India

\*Department of Zoology, S.M.D.M. College, Kallamb, Osmanabad, MS, India

Department of Zoology, D.S.M. College, Parbhani, MS, India

\*Corresponding author. E-mail: [sgbodkhe@gmail.com](mailto:sgbodkhe@gmail.com)

Received: December 10, 2010; Accepted: December 31, 2010

**Abstract-** Dudhna project is the water reservoir specially constricted for irrigation and drinking water purpose. But as the storage capacity of water is more and water remain stagnant through out the year due to this fish farming is also possible. Present study was carried out of study the Ichthyofauna Diversity in Upper Dudhna Project Water Reservoir during the year 2008-2009. During study 27 fish species belong to 7 orders. 15 genera and 9 families were recorded.

### 1. INTRODUCTON

Fishes are one important group of vertebrates which influences the life of human in various ways. Fishes have a rich source of food and provide a meat to tide over the nutritional difficulties of man. Fishes provided several by-products such as fish meal, fish glue, fish oil, etc. fish diet provides proteins, fat and vitamins A and D

A larger amount of principle minerals like Ca, Mg, P, Na, Fe, I, etc. and other elements are also present in the food. Fish diet are provide rich source of protein in the form of simple proteins with different essential amino acids, fats, and trace of vitamin B-Complex etc. and other non-protein nitrogenous forms. They have good taste and are easily digestible and growth promoting value. Considerable studies on ichthyo fauna diversity from different fresh water bodies of India have been carried out during the last few decades (i.e. Jayaraman, 1981, Khan 1986, Talwar and Jhingran, 1991, Menon 1992, Pandit, 1994, Shrivastava, 1994, Datta 1992, Rao 1999, Sarkar and Banerjee, 2000, Datta et al 2001, Mishra et.al 2003,).

### 2. STUDY AREA

Dudhna project have been constricted on the river Dudhna at somthana village, Tal. Badunapur, Dist. Jalna. This project is constricted on 'interval 75<sup>o</sup> 41' E to 75<sup>o</sup> 42' E in Jalna district of Maharashtra. It isolated about 29 km towards west from Jalna. It covers about 243.44 hectares. Sq. area. This project is of the capacity area of water spread about 15.204 X 10<sup>6</sup> cubic cm.

The height of reservoir is 16.5 m. and length is 2.46km, where the width is 2 km. irrigation was main aim behind the construction of this project. For the purpose of irrigation. 8.04 km canal have been

prepared, due to which about 3400 hectors of fields from 24 villages is under irrigation. The project have been considered as a boon for the Badnapur region. In addition to irrigation this water of the project also used for drinking Purpose. Near about 15 villages are also benefited including Tal. Badnapur Tahasil region. This water reservoir is also used for culture of some commercially important fishes such as *Labeo*, *Catla*, *Mrigalas*, *Cyprinus* and other species of fishes.

### 3. MATERIALS & METHODS

For the study of Ichthyofauna diversity. Fishes were collected from different fishing station by fisher man by using dragnets, castnets, gillnets etc. during the year 2008 to 2009. The collected specimens were preserved 10% formalin and subsequently identified by following standard reference (Jayaram, 1999, Talwar and Jhingran, 1991, Day – 1994, Datta, Munshi and shrivastra 1968).

### 4. RESULT AND DISCUSSION

The *Ichthyofauna* is an important aspect of fishery potential of water body. More work has been, Carried out on ichthyofauna in Indian reservoirs the distribution of fish species is variable due to geographical and geological conditions of reservoir. The present study confirm the occurrence of 27 species belonging to 7 orders, 9 family 15 genera which is given is checklist (table1).

The order cypriniforms was dominant with several fish species. The above species namely *Catla*, *Catla*, *Labeo Rohita*, *Labeo Bata*, *Labeo Calbasu*, *Cirrihina Mrigala*, *Cirrihina Reba*, *Cyprinus Carpeo*, *Punctius Ticto*, *P. Sarana*, *Chela Flow*, *Chela Labuca*, *Rasbora Daniconius*, *Mystus Seenghala*, *M. Vittatus*, *Wallago Attu*, *Clarias Batrachus Mugil*

*Corsula*, *Glossogobius Giuris P.*, *Channa Muralius*, *C. Gachua*, *C. Stratus C. Punctatus*, *Armatus Guentheri*, *Hypothalmichthus Molitrix*, *Ctenopharyngodon Idella*. The order Cypriniforms includes 15 species. This order is found to be dominant as it constitutes highest species. The order silluriformes and Channiformes are includes four species. The order Mastacembeliformes are includes two species whereas order Clupiformes, Mugiliformes, and Perciformes are includes single species each.

The work is supported by number of investigators has and Nath (1971) recorded ichthyofauna of Jammu presence o 27 fish species belongs to 8 families and 15 genera in river Tawi and its tributaries Data et al 2002 26 species belongs to 3, orders 6 families and 18 genera collected from river Chenab.

Malhotra et al (1975) prepared an identification key of 45 fish species including 37 fish species in river Tawi and its Gadighad tributary Joshi et-al (1978) observed fishery resurvey resources of hill stream of Jammu and identified 10 species belongs river Tawi and its tributaries.

Koul(2000) studied BehloInullan and reported 21 fish species belongs to 4 order, 7 families and 16 genera. Patta et-al (2000) studies 59 species belonging to 50 orders, 15 families and 41 genera from river Basantar.

Pawar et-al (2003) also study of fish diversity in Sirur dam and confirm the occurrence of 11 fish species belong to 5 orders

Paik et-al (2003) was recorded 75 fish species belonging to 50 genera, 23 families and 6 orders from east Singhbhum distinct Jharkhand.

Valsangkar (1993) recorded 17 indigenous and 5 exotic species from Shivajsagar reservoir Sakhare (2001) recorded 23 fish species belonging to 7 orders in Jawalgaon reservoir in Solhapur District.

Kamble et al (2005) recorded 27 species belonging to 18 Genera, 7 orders and 11 families from river Manjara near Kallamb District Osmanabad.

During study it was found that abundance and diversity of fishes were found to be very high in respect to extent of water bodies. The maximum no. of species was recorded from low land areas. According to Paik et al (2003) in low land and middle land areas fresh water fish diversity was found to be very high. It is due to deep water bodies allow niche segregation in order to enable the fishes to live without facing more intra and inter specific completions. During summer when maximum level of water decreased due to hot air and high temperature most of fishes migrated toward low land for survival. But during winter season diversity of fish fauna abundant due to clear water, preference of maximum amount of phyto and Zoo plankton as complain to rainy season. During study one more thing came out fish fauna became decline irregular and low rain fall and decline in water level,

soil erosion, illegal fishing, fishing during breeding seasons etc.

## A CHECKLIST OF FISHES OF DUDHNA PROJECT RESERVOIR

Phylum	Chordata
Sub -Phylum	Gnathostomata
Super Class	Pisces
Class	Teleostomii
Sub-Class	Actinopterygii
<b>1. Order</b>	Clupeiformes
Family	Notopterus
Genus	<i>Notopterus</i>
Species	<i>Chitala</i>
<b>2. Order</b>	Cypriniformes
Family	Cyprinidae
Genus	<i>Catla</i>
Species	<i>Catla</i>
Genus	<i>Labeo</i>
Species	<i>rohita</i>
	<i>Calbasu</i>
	<i>Bata</i>
Genus	<i>Cirrhina</i>
Specie	<i>Mrigala</i>
	<i>Reba</i>
Genus	<i>Cyprinus</i>
Species	<i>Carpio</i>
Genus	<i>Punctius</i>
Species	<i>Ticto</i>
	<i>Sarana</i>
	<i>Chela</i>
Genus	<i>Labusa</i>
Genus	<i>Rasbora</i>
Species	<i>damiconus</i>
Genus	<i>Ctenopharyngodon</i>
Species	<i>Idella</i>
Genus	<i>Hypothalmichthys</i>
Species	<i>Molitrix</i>
<b>3. Siluriformes</b>	
Family	Bagridae
Genus	<i>Mystus</i>
Species	<i>Seenghala</i>
	<i>Vittatus</i>
Family	Siluridae
Genus	<i>Wallago</i>
Species	<i>attu</i>
Genus	<i>Clerias</i>
Species	<i>batrachus</i>
<b>4. Order</b>	Mugiliformes
Family	Mugilidae
Genus	<i>Mugil</i>
Species	<i>Corsula</i>
<b>5. Order</b>	-Perciformes
Family	Gobidae
Genus	<i>Glossogobius</i>
Spcies	<i>Channidae</i>
Genus	<i>Channa</i>
<b>6. Order</b>	Channiformes
Species	<i>muralius</i>
	<i>Gachua</i>

	<i>Striatus</i>
	<i>Punctatus</i>
<b>7. Order</b>	Mastacembeliformes
Family	Mastacembelidae
Speceis	<i>Armatus</i>
	<i>guentheri</i>

Among these species some spices are local whereas others are seeded for fish farming. From family cyprinidae the species like *Catla catla*, *Labeo rohita*, *Labeo calbasu*, *Cirrhina mrigala*, *Cyprinus carpeo*, *Puntius sarana*, and *Pitunu Tincto* are dominating.

From family Channidae, *Channa Gachua*, *Channa Straita* and *Channa marulius* are prominent. From family Silurian species like *Wallago attu* have been reworded. From family Brigade, *Mystus vittatus* and *Mystus cavasius* have been recorded. Among family Notopteridae, *Notopterus chitla* is found to be located in abundant.

[12] Talwar and Jhingran (1991) Vols. 1 and 2: Oxford and IBH publishing Co. Pvt. Ltd.

#### REFERENCES

- [1] Datta S.P.S., Kour H & Zutshi N. (2001) *Fish diversity in river Tawi and Its tributaries 12<sup>th</sup> All Indian congress of zoology Dec. 29-31 Dept. of zoology and environment Science Gurukul Kangri Vishwa Vidyalyaya, Haridwar, Abstract No. 95, 42.*
- [2] Day F. (1994) *Burma and Ceylon, Fourth Indian Reprint, Vols I & II Jagmander Book Agency, New Delhi.*
- [3] Jayaram (1981) *Rec. Zoology Survey, India Occ. 135:78.*
- [4] Khan M.A. (1986) *Hazaribag, Bihar, Geobias, 13:188.*
- [5] Koul V. (2000) *Effects of Industrial effluents and Gandhinagar Sewage on abiotic and biotic components of Behlol nullah Jammu, Ph.D. Thesis, University of Jammu.*
- [6] Menon A.G.K. (1992) *Conservation of fresh water fishes of peninsular India unpublished report Ministry of Environment and forest Govt. of India P. 136.*
- [7] Mishra S. Pradhan P. Kar S. and Chakraborty S.K. (2003) *Rec. Zoology Survey India Occ. 2220:1-66.*
- [8] Pawar S.K., V.R. Mandlapure & J.S. Palle (2003) *Jour. Of Aqua. Biology 18 (2): 69-70.*
- [9] Pandit S. Adhikary S.S.& Roy S. (1994) *Environment and Ecol. 12: 501-506.*
- [10] Shrivastava S.A., Mahato A.K. Mahato P. (1994) *Environment and Ecol. 12: 839-842.*
- [11] Sarkar L. and Banerjee S. (2000) *Ichthyofauna of Damodar river system Proc. Zoology Soc. Calcutta, 53(1): 41-54.*