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STUDY OF FISH FAUNA OF GORAMA DAM HANUMANA REWA (M.P.)

Sushma Tiwari [1], and Dr. D.N. Pandey [2]
Research Scholar Department of Zoology, Govt. SKN (PG) College Mauganj, Rewa (M.P.)
Prof. Govt. SKN (PG) College Mauganj, Rewa (M.P.)

***ABSTRACT*:-** Fish fauna of a dam basically represent the diversity and their abundance. Fishes plays a very significant role in the human economy by providing pretentious food. India has got vast potential for development of inland fisheries. Present study was carried out to know fish fauna of Gorama dam. Gorama (stop dam) is an anthropogenic construction on the confluence of two small rivers Gorama and Pidrya in the between village Dadar Pidriya and Bijhauli on the right hand side of N.H.7 in Hanumana tahsil of Rewa district at 24 ^{0}43' 13" N and 80^{0}2'53"S. Rewa has 7495 sq. Km of territory and occupies about 2.5% of total geographical area of the state. It stretches about 150 Km from north to south and 83 Km. from east to west. Study on hydrological status of Gorama Dam water was made to assess the portability of water from January 2017 to December 2017, where twenty two fish species of six orders and twelve families were observed.

KEYWORDS:- Fish diversity, Gorama Dam.

INTRODUCTION:-

Biodiversity is the degree of variation of life in a given ecosystem. Biodiversity is essential for stabilization of ecosystem, protection of overall environmental quality for understanding intrinsic worth of all species on the earth. Biologically biodiversity is a term used to describe the number, variety and variability of organism in a particular area. India is very rich in terms of biological diversity due to its unique biogeographic locations, diversified climatic conditions and enormous eco diversity and geo diversity. India is one of the mega biodiversity countries in the world and occupies the ninth position in terms of fresh water mega biodiversity. In India there are 2,500 species of fishes of which 930 live in freshwater and 1570 are marine (Kar et al., 2003).

Fishes are very rich in protein, carbohydrates, Vitamins (A, D & E), and other minerals. They are preserved by Salting, smoked or other ways. In one pound of fish the food value comes to be 300-600 calories, which is much higher in comparison to other food materials for human consumption. Fresh and preserved fishes are used as food; also protein, fat and other useful content in the body of fish are processed into a number of valuable products and by-product (B.N.Yadav) (1993).Fishes of the inland water bodies have been studied since last century , Day (1994) , Jayram (1991) , Talwar and Jhingram (1991), Rao et al (1999), Sakhare and Joshi (2002), Pawar et al (2006), Kamble(2007).

(Day 1994) described 1418 species of fish under 342 genera from British. (Jayaram 1981) listed 742 fresh water species of fishes coming under 233 genera, 64 families and 16 order from the Indian region. (Talwar 1991) estimated 2546 species of fish belonging to 969 genera, 254 families and 40 orders from

India. About 21,730 species of fishes have been recorded in the world, of which about 11.7% are found in Indian water. Today the Fish diversity and associated habitat management is a great challenge and the ability to evaluate the effects of habitat change and other impact on the fish population.

Gorama dam was constructed by the irrigation department. The main purpose to provide irrigation and drinking water, water is also used for fish culture The present study deals with the fish diversity and their abundance in the Hanumana, Dist. Rewa, Madhya Pradesh.

MATERIAL AND METHODS:-

Gorama (stop dam) is an anthropogenic construction on the confluence of two small rivers Gorama and Pidrya in the between village Dadar Pidriya and Bijhauli on the right hand side of N.H.7 in Hanumana tahsil of Rewa district at 24 ^{0}43' 13" N and 80^{0}2'53"S. Rewa has 7495 sq. Km of territory and occupies about 2.5% of total geographical area of the state. It stretches about 150 Km from north to south and 83 Km. from east to west.

The fishes were collected from the reservoir every month by repeated netting for the period of one year from Jan 2017- Dec 2017 and are preserved in 4% formalin. Fishes were identified with the help of Day (1889), Qureshi and Qureshi (1983), Talwar and Jhingram (1991), Jayram (1999).

RESULT AND DISCUSSION:-

A total of 22 fish species belonging to six order were collected from the Gorama dam high economic value. These are Labeo rohita, Catla catla, Cirrhinus mrigala, Walago attu, and Channa marulius, and others have moderate economic value. During this study we also found exotic species namely Cyprinus carpio (common carp), Ctenopharyngodon idella (grass carp).

Table no.1 species richness, order Cypriniformes was dominant (12 species) followed preciformis (4 species), Siluriformes (3 species), Clupeiformes (1 species), Perciformis (1 species) and Mastcabeliformes (1).

During the present investigation the order of dominance was as follows:

Cypriniformes>preciformis>Siluriformes>Clupeiformes >Perciformis>Mastcabeliformes

The study findings showed that fish diversity of the study area is reducing with the increase of water quality. The reduced fish diversity eventually decreases the fish production of native species and creates extinction of several species. These consequences eventually create instability in the socio-economic sector of the study area in terms of increased poverty of local fishermen. In the polluted stretch of the Gorama dam tolerant species such as is thriving well and commercially important and sensitive native species such as *Wallago attu*, *Labeo calbasu*, *Puntius* sp. etc, are considered to be threatened by increasing water pollution.

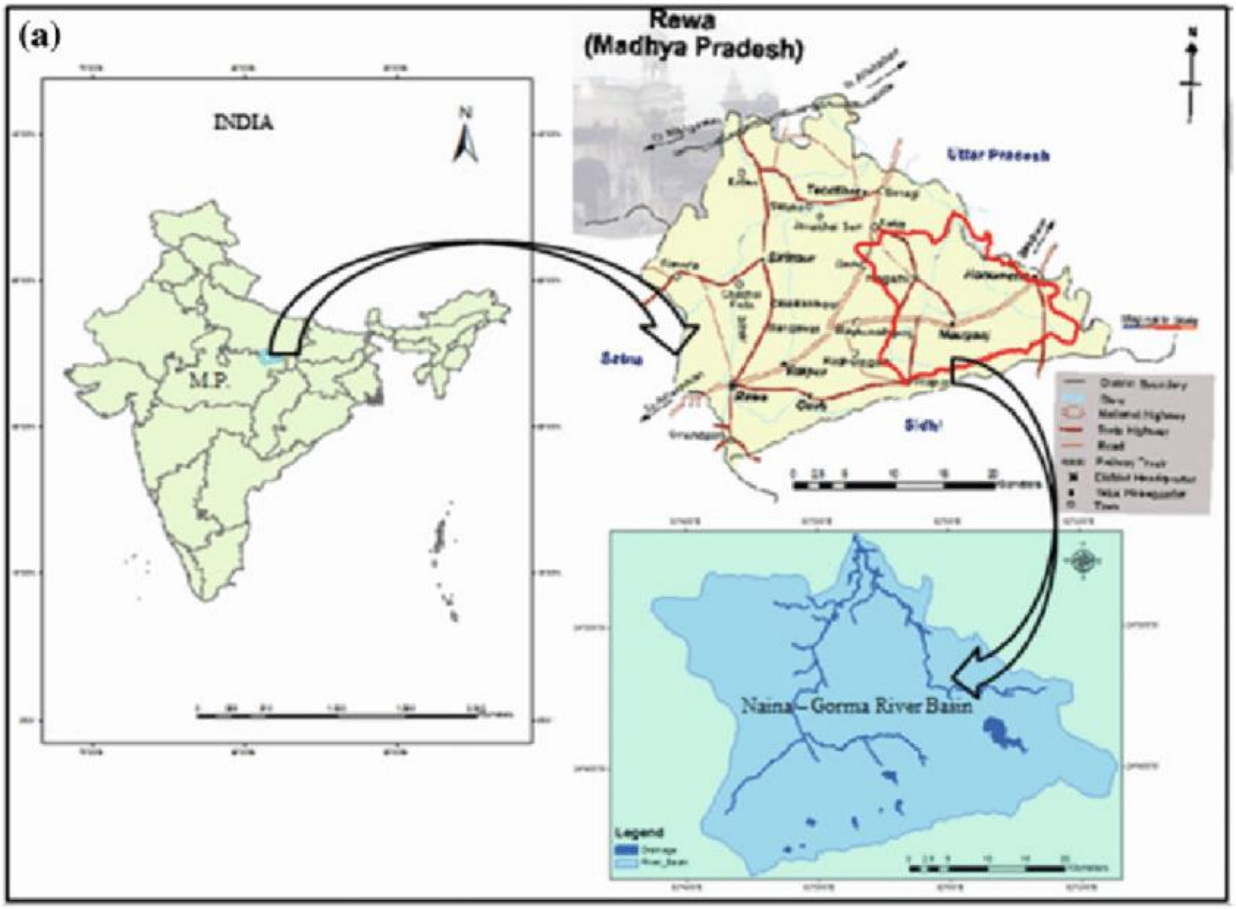

FIG.1. MAP OF GORAMA DAM STUDY SITE

Table No.1. Ichthyofaunal Diversity of Gorama Dam Hanumana Rewa (M.P.)

S.No	Taxonomic position				
	Order	Family	Genus	Species	Local Name
1.	Cyperiniformes	Cyprinidae	*Labeo*	*rohita*	*Rohu*
2.			*Labeo*	*Calbasu*	Karauchar
3.			*Cirrhinus*	*mrigal*	Mrigal
4.			*Cyprinus*	*carpio*	Common carp
5.			*Catla*	*catla*	Catla
6.			*Puntius*	*sarana*	Pothiya
7.			*Oxygaster*	*bacaila*	Chela
8.			*Puntius*	*sarana*	Punti
9.			*Ctenopharyngdon*	*idela*	Grass carp
10.			*Oxygaster*	*bacaila*	Chela
11.		Sisoridae	*Bagrius*	*bagarius*	Baikar
12.		Bagridae	*Rita*	*rita*	Raiya
13.	Siluriformes	Siluridae	*Wallago*	*attu*	Padin or Bual
14.		Bagridae	*Mystus*	*seennghala*	Tengara
15.		Clariidae	*Clarias*	*batrachus*	Magur
16.	Preciformis	Chanidae	*Channa*	*marulius*	Punti
17.			*Channa*	*punctatus*	Punti
18.		Heteropneustidae	*Heteropneustus*	*fossillis*	Shinghi
19.		Anabantidae	*Anabas*	*testudineus*	Kaoi
20.	Clupeiformes	Notopteridae	*Notopterus*	*Notopterus*	Patra
21.	Perciformes	Nandidae	*Nandus*	*nandus*	Bata
22.	Mastcabeliformes	Mastacembelidae	*Mastacembalus*	*armatus*	Balm

Due to more fecundity of major carps and suitable environmental conditions, relatively higher population density of cypriniformes was evident in the dam similar observations were earlier made by Talwar and Jhinran (1991), Das and Chand (2003), Pathak and Mudgal (2005) Sharma (2003). In a study on similar lines, Valsangar (1993) recorded 17 indigenous and 5 introduced fish species from Shivaji Sagar reservoir a

cross koyana river in Maharashtra. Sakhare and Joshi (2002) observed 28 fish species including a species of craps, 5 of cat fishes, 2 of Feather bace, 5 of Live Fishes in Hirakud reservoir. Hiware and Pawar (2006) recorded 43 fish species from Nath sagar dam paithan in Aurangabad district Krishna and Piska (2006) reported 31 Icthyofauna insecret lake, Durgamcheru,Rangareddy District. Jayabhaye. Khedkar (2008) recorded 25 fish species belonging to 14 genera, 8 families and 6 orders from Sawana dam.

CONCLUSION:-

Fish Biodiversity has become important aspect to understand different ecosystem and influence on them

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