

## A STUDY OF ICHTHYOFAUNA OF PAGARA DAM OF MORENA DISTRICT, MADHYA PRADESH

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### ABSTRACT

Pagara dam is situated on Asan river at about 13 Km from Jaura town of Morena District of Madhya Pradesh. The dam was constructed for irrigation of the nearby villages. But, at present, the water of the dam is also used for drinking purpose. The water of the dam is also used for fish culture by fishery department and local fishermen. Fish diversity of water bodies depends on various factors such as geographical position, varied aquatic ecological conditions and health of aquatic bodies. The present work was undertaken to study ichthyofauna of Pagara reservoir. Total twenty (20) fish species were recorded during the study. The identified fishes belonged to major carp, minor carp, cat fish and local fishes. All fish were fresh water fish. The order Cypriniformes was the most dominant one.

**KEYWORDS :** Pagara Dam, Pisciculture, Asan River, Ichthyofauna

Water is the most productive resource for fish culture. Fish are the largest group of vertebrates. They are an important proteinous and palatable food for human beings and other animals. Fishes also provide fish meal, fish manure, medicines and several other products of commercially important value. For survival of fish, proper amount of dissolved oxygen, food, good breeding sites and specific characteristics such as pH and water temperature are very necessary. Many species of fishes are found in different reservoirs. Many workers have worked on the fish fauna of different reservoirs of Madhya Pradesh and various others parts of India (Jain et.al 2002, Mohite 2006, Nambirajan and Ravikumar 2011 and Mahor et.al 2014).

#### Study Area

Pagara Dam is situated at about 13 Km from Jaura town of Morena District of Madhya Pradesh. The dam is located on Aasan river (Figure 1). It is a masonry dam which was constructed in 1931. The dam is located at latitude 26°09'27.9"N and longitude 77°48'22.3"E. The FTL (Full tank Level) of the dam is 199.34m. The dam was constructed mainly for irrigation purpose. The water is used for irrigation of 870 acre land of the nearby villages. Pagara is the nearest village, after the name of which the dam is known as Pagara dam. Besides irrigation, the water is also used for drinking purpose and fish culture by local fishermen.

#### MATERIALS AND METHODS

Fish samples were collected by using fish nets - cast nets and gill nets with the help of fishermen from two

different sites (Fig 2). Collected ichthyofauna was instantly fixed in 9 to 10% percent formaldehyde. After 4-5 hours of fixation, sample were washed with water and then transferred in 70% alcohol. Fishes were identified with the help of Jayaram 1981, Talwar and Jhingran 1991, Shrivastava, 1999 and Shrivastava, 2007.

#### RESULTS

Fish species recorded and identified during the present study are given in table no.1. Following were the main fishes collected during the study:

*Labeo rohita*, *Catla catla*, *Cirrihinuss mrigala*, *Labeo calbasu*, *Wallago attu*, *Notopterus notopeterus*, *Notopterus chitala*, *Cyprinus carpio*, *Mastacembelus armatus* and *Clarias batrachus*, *Sperata aor*, *Sperata seenghala*, *Heteropneustidae fossilis (Bloch)*, *Puntius puntio*, *Xenetodon cancila*, *Labio gonius*, *Labio bata*, *Channa marulius*, *Mystus bleekeri*, *Parambassis (c) ranga* (Figure 3 to 22).

Collected fish belong to 10 familis and 5 order. Out of the total recorded fish Cyprinidae was the most dominant family.

#### DISCUSSION

Several workers have studied the fish fauna of different water bodies. 1,360 fishes of India were listed from both marine and freshwater by Jhingran (1982). Someone reported 80 fish species from Kathua district, Jammu. Hiware (2006) found 66 fish species from Marathwada region of Maharashtra. Saksena (2007) observed fish

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**Figure 1 : Satellite View of Pagara Reservoir (Courtesy Google Map)**



**Figure 2 : Sites for Fish Collection**

diversity of Northern Madhya Pradesh and recorded 73 species of fishes belonging to 52 genera, 24 families and 11 orders. Someone studied the Ekrukha Lake near Solapur and recorded 18 species of fish. Garg et al.(2007 and 2010) identified 42 species belonging to 6 orders, 15 families and 28 genera from Ramsagar reservoir, Datia District (M.P). Paller et al. (2011) observed sixteen (16) species of fish from thirteen genera, belonging to ten families from the three major watersheds of the Makiling Forest Reserve

Logona, Philippines. Sharma et al. (2011) identified (15) species of fish during their study period from Picchola lake Udaipur, Rajasthan. Jagtap (2013) found (61) fish species belonging into 13 families in Himachal Pradesh. Uchchariya et al. (2012) observed 40 species of fishes, belonging to 23 genera, 12 families and 6 orders from Tighra reservoir. Vishwakarma and Vyas (2014) found 27 fish species from there. Guzman et al.(2014) identified thirty eight (38) species, belonging to twenty families.

Table 1 : List of Fishes Collected Them Pagara Dam

S.No	Present Scientific Name	Local Name	Family	Fin Formula
1	<i>Labeo rohita</i>	Rohu	Cyprinidae	D. 15-16(3/12-13);P1.16-17;P2.9;A.7(2/5).
2	<i>Catla catla</i>	Catla(Bhakur)	Cyprinidae	D.17-18(2/15-16);P1.18-20;P2.9;A.8(3/5).
3	<i>Cirrhinus mrigala</i>	Nain	Cyprinidae	D. 16; P1. 17; P2.9; A.8.
4	<i>Labeo calbasu</i>	Calbasu(karaunchar)	Cyprinidae	D.17-18(3/14-15);P1.16-18; P2.9(1/8);A.7(2/5).
5	<i>Wallago attu</i>	Padhani(barari)	Siluridae	D.5;P1.1/13-14;P2.10;A.85-89.
6	<i>Notopterus notopterus</i>	Patola	Notopteridae	D.7-8;P1.15-17;P2.5-6;A.99-104.
7	<i>Notoprerus chitala</i>	Moya	Notopteridae	D.9;P1. 15-16; P2. 6; A.115-120.
8	<i>Cyprinus carpio</i>	Comman carp	Cyprinidae	D.3-4/18-20;P1.1/15; P2.1/8;A.3-5.
9	<i>Mastacembelus armatus</i>	Baam	Mastacembelidae	D.XXXII-XL 64-92; P1.17-19;A.III 31-46.
10	<i>Clarias batrachus</i>	Mangur	Clariidae	D.64-70;P1.1/9-10;P2.6; A.45-52.
11	<i>Heteropneustidae fossils (Bloch)</i>	Singhi	Heteropnerstidae	D6-7; P.7; V.6; A.6 -79; C.19.
12	<i>Puntius sarana sarana</i>	Puthia	Cyprinidae	D.III-IV 8; A.III 5;PI 14-16; VI 8.
13	<i>Xenentodon cancila</i>	Suja	Belonidae	D.15-16;P1.10-11;P2.6;A.17-18.
14	<i>Labio gonius</i>	Kuria	Cyprinidae	D.15-19;A.8(3/5);P.17-18;V.9;C.19.
15	<i>Labio bata</i>	Bata	Cyprinidae	D.11(2/9);P1.16-17;P2.9(1/8);A.7(2/5).
16	<i>Channa marulius</i>	Saal	Channidae	D.45-55;A.28-36;P.16-18;V.6.
17	<i>Mystus bleekeri</i>	Kirua	Bagridae	D.I 7-8;A.III6-7;PI 9-10;VI 5.
18	<i>Parambassis c. ranga</i>	Chanda	Ambassidae	D.VII+I 11-14;P1.I 11-12;P2.15;A.III 13-15
19	<i>Sperata aor</i>	Tengra	Bagridae	D.I/7;P1 I/9-10; P2.I/5;A.12-13
20	<i>Sperata seenghala</i>	Singhra	Bagridae	D.I/7;P1 I/9;P2. I/5; A.11-12

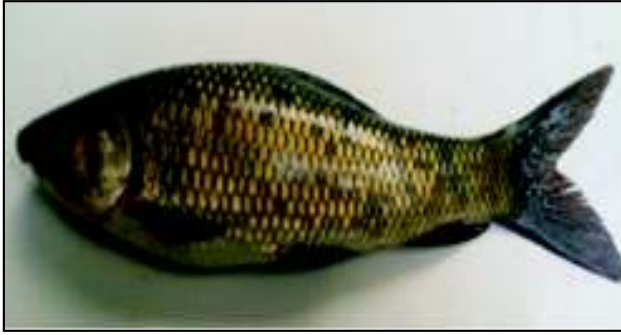


Figure 3 : *Lebeo rohita*



Figure 4 : *Catla catla*



Figure 5 : *Cirrhinus mrigala*



Figure 6 : *Labeo calbasu*



Figure 7 : *Wallago attu*



Figure 8 : *Notopterus notopterus*

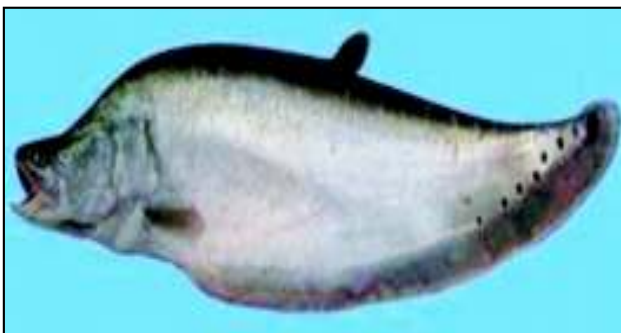


Figure 9 : *Notoprerus chitala*



Figure 10 : *Cyprinus carpio*



Figure 11 : *Mastacembelus armatus*



Figure 12 : *Clarias batrachus*



Figure 13 : *Heteropneustes fossilis*



Figure 14 : *Puntius sarana sarana*



Figure 15 : *Xenentodon cancila*



Figure 16 : *Labeo gonius*



Figure 17 : *Channa (O) marulius*



Figure 18 : *Labeo bata*





Figure 19 : *Mystus bleekeri*



Figure 20 : *Parambassis (C.) ranga*



Figure 21 : *Sperata aor*



Figure 22 : *Sperata seenghala*

Mahor et al.(2014) studied fish resources of Tighra reservoir, Gwalior (M.P.).In the present study, total 20 fish species were identified, out of which 8 belong to cyprinidae, 3 Bageridae, 2 Notopteridae and one each to in Siluridae,Mastacembelidae,Clariidae,Heteropnerstidae,Beloniidae,Ambassidae and Channidae. Thus, cyprinidae is the most dominant family with 8 fish species. There may be possibility of some more fish species in the Pagara reservoir.

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