



Threat Assessment of Ichthyofauna in Vindhyan Region: A Case Study of Rewa District (M.p.)

KEYWORDS

Fish diversity in Rewa District, M.P.

Dr. S.N. Shukla

Prof. of Zoology, Govt. Model Science College, Rewa (M.P.)-486001

ABSTRACT *The richness of fish fauna is completely depends on healthy water resources present in the area. Urbanization, use pattern of water resources, low rain fall, eutrophication, etc. are the main cause to reduce water resources day by day. Due to diminishing water resources and lack of knowledge about biodiversity, it was noted that several species which were abundant in past are not recovered during investigations. The maximum 46 and minimum 29 species & fishes were found in Tons river and Gorama dam respectively. During the study period it has been recorded that Bagorius bagarius, Wallago attu, Catla catla, Tor tor and Nandus nandus showing decreasing trends in Tons river. Threatend fishes of Govindgarh lake and migratory fishes in Tons river and Beehar river were also discussed in the present paper.*

Introduction:

Due to irrational fishing practices, environmental aberrations like reduction in water volume, increased sedimentation, water abstraction and pollution etc. are the major factors responsible for declining the aquatic diversity. Several researchers like Kottalt (1996), Molur (1998), Kataria et al (1996), Sakhare (2006), Bhakta and Bandhyopadhyay (2008), Chaudhuri (2010), Thirumala et al (2011); etc studied the fish diversity.

All human activities is underpinned by biological resources. We exploit plants and animals for food and raw materials at different levels of sophistication in different societies. Fishes are directly related with human and used as food. During the investigation five perineal water resource i.e. Beehar river, Tons river, Govinddarh lake, Gorama Dam and Jarmohra tank of Rewa district were selected to study the threat assessment of ichthyofauna of this region. The maximum 46 and minimum 29 species of fishes were found in Tons river and Gorama dam respectively. Various types of fishing gears and other methods are used for fish hunting. During the fishing, only those fishes are collected which are beneficial. Rest of fishes was thrown away without knowing their ecological importance. In the present study an attempt was made to assess the name of fishes which are decreasing. The assessment is based on the informations gathered from local persons, fishermen and self observations.

Material and methods:

For the study of Ichthyofauna of Rewa District, five water bodies were selected on the basis of their geographical distribution, nature of water resource for regular sample collections. The fish samples were collected throughout the one year. These water resources are:

Tons river – Tons river is only the major river system of Rewa District. It originates from Tamasa Kund (23°59'N latitude and 80°22'E longitudes) near Jhukehi station of Satna district.

River Beehar and Bichhia – Rewa town is situated on the bank of river Bichhia and Beehar River Bichhia arise near the village of Khaira and after flowing for 30 kms joins the river Beehar which join the Tons river northerly.

Gorama Dam – Gorama dam is the largest dam of this area constructed at the confluence of two median sized rivers. The dam is located on the right hand side of NH-7 in Mauganj Tahsil of Rewa District at 24°43-13" longitude and 82°2-55" latitude. The area of dam is about 2067 acres and water storage capacity is about 392.66 cubic meter.

Govindgarh Lake – It is large, man made water body used for fish culture and irrigation, located 20 km away from Rewa city. The catchment of lake is hilly with stone rocks.

Jarmohara Dam – Jarmohara dam is situated near Semaria town of Sirmour Tahsil of Rewa District. It is constructed for irrigation purpose. Its maximum area is about 242 ha.

For the study of fish biodiversity, selected water bodies were visited at a regular intervals to collected the specimens. The collections work was done with the help of local persons and fisherman. The experimental fishing was also done whenever required. In spite of collection work several valuable informations recording the fishery was also recorded. The collected specimens were preserved in the 8% formalien for further study. The identification was done with the help of literature provided by Day, 1958; Shrivastava, 1968 and Jayaran, 1999.

Results and Discussion:

During the course of study, five sampling sites i.e. Beehar river, Tons river, Gorama dam, Govindgarh lake and Jormohra dam were selected. In spite of these water bodies other water resources were also visited occasionally. The collected specimens were identified and listed in table no. 1.

Table :1 Distribution and abundance of fishes

S. No.	Name of fishes	Local Name	Beehar Bichia	Tons	Govindgarh	Gorama Dam	Jarmohra
01.	Notopterus notopterus	फतोला	++	+++	+	-	++
02.	N. chitala	मोप	+	+	++	-	-
03.	Chela untrahi	चेलवा	+	-	+	-	+
04.	C. bacaila	चेलवा	-	+	-	+	-
05.	C. laubuca	चेलवा	+	+	-	-	+
06.	Salmostoma bacaila	बकेला	-	+	-	+	-
07.	Esomus danricus	डेडुआ	++	-	+	-	-
08.	Tor tor	महापेर या महापीर	+	+	+R	-	+
09.	Amblypharyngodon microlepsi	मोरवा	-	++	-	+	++
10.	Catla catla	कतला	+	++	+++	+++	+++
11.	Cirrhinus mrigala	मिगल	+	+	+++	+++	++
12.	C. reba	गोटरिया	+++	++	-	+	+
13.	Labeo rohita	रोहू	++	+++	+++	+++	+++
14.	L. boga	भगन	++	+	-	+	-

S. No.	Name of fishes	Local Name	Beehar Bichia	Tons	Go-vind garh	Go-rama Dam	Jar-mohra
15.	L. angra	रइया	+	--	-	+	+
16.	L. calbasu	करौछर	-	++	++	+++	++
17.	L. dero	अरंगी, रइया	-	+	+	-	+
18.	L. goniis	कर्सि	+	++	+	++	++
19.	L. pongusia	कारी	++	+++	-	++	-
20.	L. nukta	कारी	+	+	-	-	+
21.	L. boggat	पथरचटी	++	+++	-	+	+++
22.	L. potail	कारी	-	+	+	++	-
23.	L. bata	पथरचटी, बाटा	+	++	++	+	++
24.	Puntius sarana	परदी	+	-	+	-	+
25.	P. sophore	सिघदी	-	++	-	++	++
26.	P. ticto	बारबर	-	+	-	+	-
27.	P. titus	सिधरी	-	+	-	+	-
28.	P. chrysopterus	सिधरी	-	+	-	+	-
29.	P. chola	पोटी	++	++	-	-	++
30.	Rasbora daniconius	डेडुआ, डरइली	++	+	+	-	-
31.	Ompok bimaculatus	जल कपूर	+	++	-	-	++
32.	O. pabda	पावदा	+	+++	++	++	+++
33.	Wallago attu	पाड़िन	++	+	+	-	+
34.	Mystus bleekeri	टेगरा	+	++	-	-	-
35.	M. cavasius	टेगरा	+	++	-	-	-
36.	M. tengra	टेगरा	++	+++	-	-	++
37.	M. vittatus	टेगरा	+	-	+	-	-
38.	M. aor	टेगरा	-	+	-	-	-
39.	M. seenghala	टेगरा	-	++	-	+	+
40.	Bagarius bagarius	लाभर, गाँच	+R	+	-	-	-
41.	Silonia silondia	सिलंद	+R	++	-	-	-
42.	Eutropiichthys vacha	चरखी	-	++	-	-	-
43.	Heteropneustes fossilis	सिंधी	++	++	++	++	++
44.	Clarias batrachus	मागुर	++	+++	++	+	+++
45.	Xenentodon cancila	सुजना	+	+++	+	+	+++
46.	Channa gachua	सौर	+	++	+++	++	++
47.	C. punctatus	सौर	++	+	+	+	-
48.	Channa striatus	सौर	-	-	-	+	-
49.	C. marulius	सौर	-	+	+	+	-
50.	Chanda nema	माया	-	-	+	-	-
51.	C. ranga	खड़डी	-	-	+	-	-
52.	Nandus nandus	चकडी	+	+	+	-	+
53.	Mastacembelus armatus	बाम	++	++	+	-	+
54.	M. pancalus	बाम, निदोह	++	+++	++	+	++
			37	46	29	29	31

The abundance and species richness were evaluated with the help of following sources:

- Department of Fishery District Rewa (M.P.)
- Local Persons
- Fisher men
- Nearby fish market
- Experimental and direct observations.

On the basis of collected in formations the distribution and abundance are presented with the help of following abbreviations:

- +R = Rarely found
- + = Low abundance
- ++ = Medium abundance
- +++ = Rich in species
- = Not found.

Fishes are directly related with human health and used as food. Various types of fishing gears and other methods are used for fish hunting. In spite of these, peoples used unconventional methods like poisoning and electric shocks which kill the fishes.

During the investigation an attempt was made to assess the name of fishes which are decreasing in this region.

List of threatened fishes in Tons river

Name of fishes	Local Name
Bagarius bagarius	लाभर (Labhar)
Wallago attu	पाड़िन (Padin)
Catla catla	कतला (Catla)
Tor – tor	महाषेर (Mahasheer)
Nandus nandus	चपडी (Chapadi)

List of threatened species in this region

Name of fishes	Local Name
Bagarius bagarius	लाभर (Labhar)
Wallago attu	पाड़िन (Padin)
Tor tor	महाषेर (Mahasheer)
Nandus nandus	चपडी (Chapadi)
Chanda vango	माया (Maya)

Finally five species of fishes were found to be decreasing with the time. It is necessary to take appropriate step for their conservation for future generation. The construction of dam reservoir, ponds etc. are mainly for irrigation and also use for fish culture but no particular water resources has been developed till the today where the fishes lived freely without fear of fishing.

REFERENCE

- Bhakta JN, Bandyopadhyay PK (2008) India International Journal of Environmental Research 2(3): 255-260, Summer 2008 | Chaudhuri Sabuj Kumar (2010) Fresh water fish diversity information system as a basis for sustainable | Day, F. (1958). The fisheries of India, William Dawson and Sons Ltd. London, Vol. I and Vol. II | Jayaram, K.C. (1999). The freshwater fishes of the Indian region. Narendra Publishing House, Delhi, p.551. | Kataria HC, Iqbal SA, Chandilya (1996) Indian J. Environmental Protection 16 (11) | Kottelat M Whitten T (1996) Freshwater Biodiversity in Asia with special reference to fish. World Bank Technical Paper No. 343. Washington, 59 29 | Molur S, Walker S,(eds.) (1998) Conservation Assessment and Management Plan (CAMP) Workshop report on freshwater Fishes of India. Zoo Outreach Organisation. CBSG India. Coimbatore, 156 | Sakhare V.B. (2001) Journal of Aquatic Biology 16 (1&2) , 31-33. ishyery. Department of Library and Information Science, Jadavpur University, | Shrivastava, G.J. (1968). Fishes of Eastern Uttar Pradesh. Vishwavidyalaya Prakashan, Varanasi. | Thirumala,S.,B.R.Kiran and G.S.Kantaraj;(2011).Fish diversity in relation to physico-chemical characteristics of Bhadra reservoir of Karnataka,India. Adv.Appl. Sci.Res.2(5):34-47. |