

STUDY OF FISH FAUNA IN RIVER KEN AT DISTRICT BANDA (U.P.)**Kunwar Digvijaya Singh Negi* and S. K. Chaturvedi**

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*Email:-kdsnegi02@gmail.comEmail:-suryakantmgcgv@gmail.com**ABSTRACT**

The fisheries of lotic water (River and Canals) play an important role in the field of fish diversity. It covers the 7.20 lakh/ha. area of water body only in Uttar Pradesh. In fisheries sector, India's place is third in the world in total fish production (it included all marine and fresh water resources). Development of urban and rural area is important but it also becomes the reason of contraction of agriculture and other natural resources that pick up the significance of fisheries and its study. The study of fish fauna and its habitat in river Ken at Banda is presented in this paper. The analysis of fishes has been done between 05-07-2014 to 05-07-2015. One year data has been listed and categorized. There are thirty three species of fishes, recorded from the considered area which belongs to twenty four genera, sixteen families and seven orders. In which order *Cypriniformis* is dominant. Other than this, six orders namely, *Clupeiformes*, *Beloniformes*, *Ophiocephaliformes*, *Symbranchiformes*, *Perciformes*, *Mastacembeliformes* were also found in the due site. This data is recorded with the help of Day fauna volume I & II. Catching fish is the source of living for several families for their daily needs. That is why it is important to understand the distribution of the fishes in the stretch of the river Ken.

KEYWORDS: diversity, habitat, fish fauna, river Ken.**INTRODUCTION**

The riverine fisheries have a great significance as it fulfills a rich protein diet for the human society. Thus it is a good substitute of food; In this regard the study of fish fauna is quite essential. Having in view the river Ken in Banda district has been chosen. It is a hilly river runs in M.P. and U.P. Surrounded by Vindhya ranges. Its origin from the Ahirgawan village on the north-west slopes of the Kaimur hills of Vindhya ranges in the Jabalpur district of M.P. The river Ken basin lies between the latitudes of 23^o12' North and 25^o54' North and the longitudes of 78^o30 East and 80^o36 East. A large part of it flows in Banda nearly 52 km. As regards the suitability of the fish fauna it suits very much because no factories ad joining to this river besides no heavy drainage accept minor ones. Further the sand is coarse which is suitable as bed for the fishes. The river is more oxygenated due to scattered villages situated nearby river basin. Some hill stream fishes are also found during the rainy season.

The fishing in this river is an important source of livelihood for the fisher men. The more attention has also been paid in this field due to "Blue Revolution" sponsored by government of India. Due to different feeding habit and habitat fishes have great diversity in the river. Since ecology determines the habitability and great quantity of flora and fauna in different sections, Hora (1942) was first to realize that the pollution in streams is likely to affect fishes. Verma and Dalelu (1975) have studied fish fauna of stressed river and have tried to designate fish species tolerant to pollution. Having in view the entire ecology of the river the stretch of it is from Gancha village to Chilla Ghat has been selected for four stations viz Gancha village at Banda first station, second station is Bhuragerh downstream, third station is Pailani town and the last one is the Chilla Ghat at Chilla town at the confluence of river Ken with river Yamuna.

Aim of the study is to enhance fisheries to fulfill the mission of "Blue Revolution". The macro fauna of river Ken at Banda is characteristics in having a large number of fishes. The quality of water is oxygenated, which is appropriate to river fisheries. It is suggested to take care of present ecological condition of river and prevent sources of pollution that can harm this rich biodiversity, and its need to monitoring those types of factors who create pollution and prevent them.

MATERIALS AND METHODS

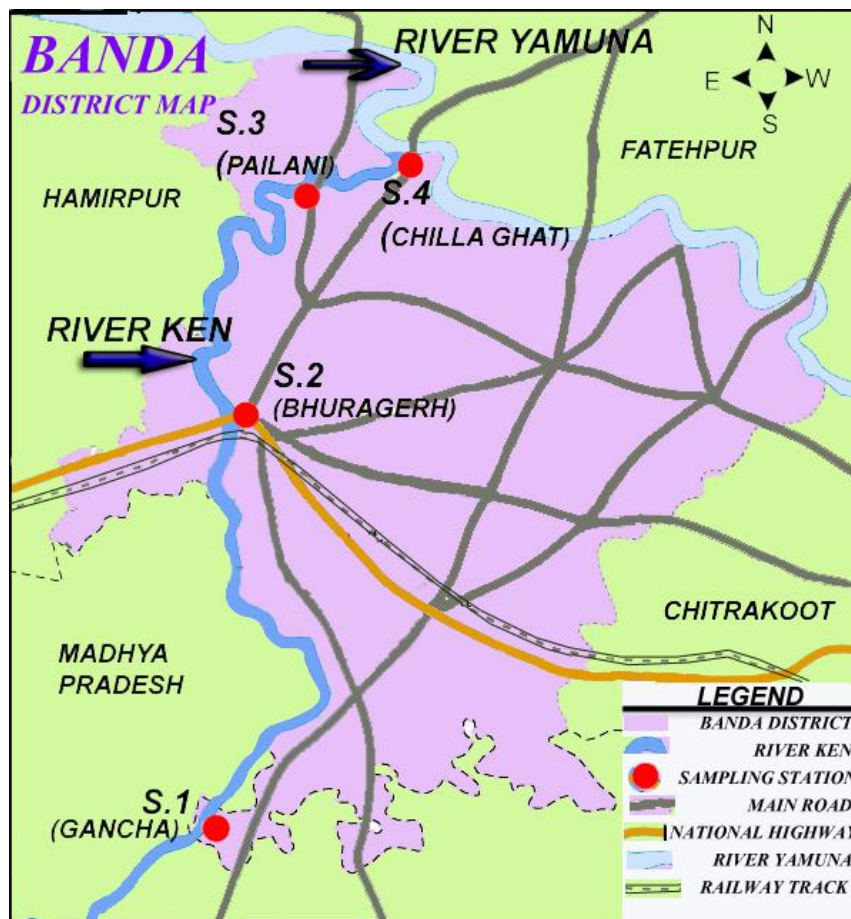
Most of the fish samples were collected during morning hours from the different stations of river Ken at Banda district. The method of catching was Drag net and also with vertical nets (100'x5') with a mesh (3'x5') in diameter, and fishing rod by using boats with the assistance of local fishermen. Fishes were identified with the help of "Fishes of India" by Francis Day volume I & II and also with Gopalji Srivastava. The collection was made at intervals extending over a

period of one year of three seasons. The specimens were fixed in 8% formalin. For preservation, small specimens were directly put in formalin and 10% formalin injected into the muscles and the abdomen.

Four stations were selected for the study namely (MAP- 1):

- (1) Ganchhauptstream
- (2) Bhuragerhdownstream
- (3) Pailani town and
- (4) Chilla town

Station 1 and 3 are shallow and the station 2 is deep and full of rocks. Station 4 is the deep enough to found range of fish.



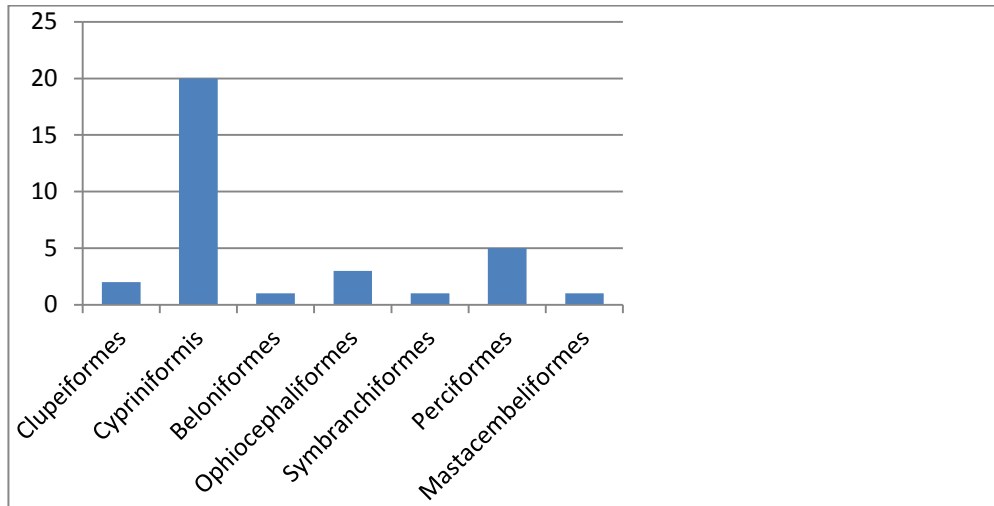
Map.1: River Ken at Banda District U.P. Showing all selected Stations

OBSERVATION

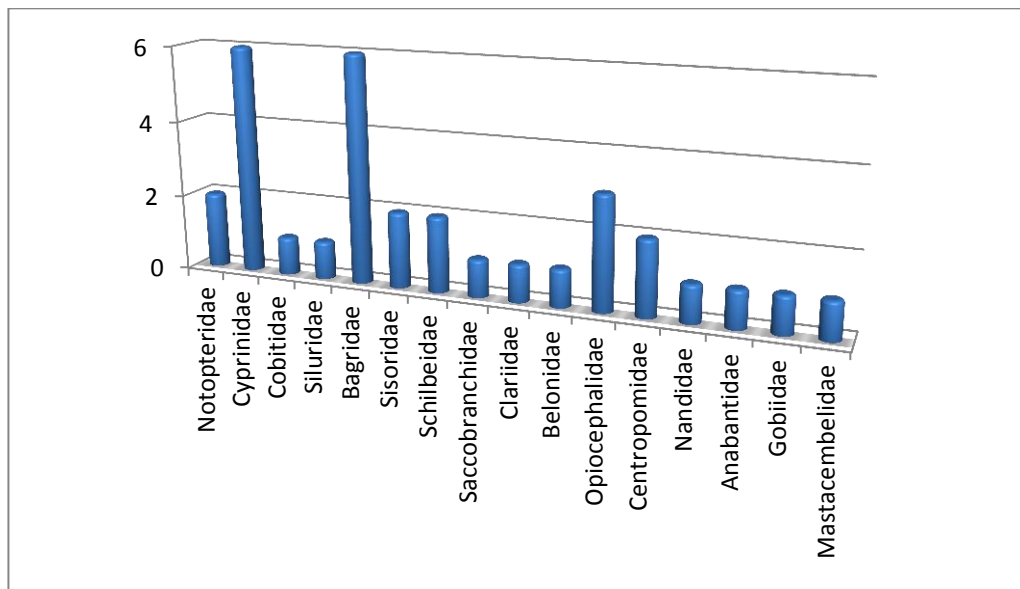
In the study few number of hill stream fishes were also found in this region viz Tor tor (Ham), Hara hara (Ham), are of seasonal occurrence only. Possibly they are swept along with flood waters in rainy season besides Several economically important fishes were also found like, Notopterus chitala, Notopterus notopterus, Catla catla, Labeo calbasu, Labeo rohita, Wallago attu, Mystus cavasius (ham), Mystus vittatus, Mystus aor, Mystus seenghala Amphipnous cuchia, Cirrhinus mrigala. These fishes are high source of protein and fish fat full of vitamins. Local fisher men get good income from it for their daily needs. The fish fauna have been arranged on the basis of their classification sequence (Table-1 and Graph 1 & 2).

Table-1: Showing the categorize fishes of different station found in the Banda district.

Sr. No.	Order	Family	Genus	Scientific Name of the fish	Local name of the fish
1	Clupeiformes	Notopteridae	<i>Notopterus lacepede</i>	<i>Notopterus chitala</i>	Moya
2	Clupeiformes	Notopteridae	<i>Notopterus lacepede</i>	<i>Notopterus notopterus</i>	Patra
3	Cypriniformis	Cyprinidae	<i>Catla cuv. Val.</i>	<i>Catla catla</i>	Bhakur
4	Cypriniformis	Cyprinidae	<i>Cirrhinus oken</i>	<i>Cirrhinus mrigala</i>	Nain or Bajia
5	Cypriniformis	Cyprinidae	<i>Labeo Cuvier</i>	<i>Labeo calbasu</i>	Karaunchar
6	Cypriniformis	Cyprinidae		<i>Labeo rohita</i>	Rohu
7	Cypriniformis	Cyprinidae	<i>Puntius Hamilton</i>	<i>Puntius chola</i>	Sidhri
8	Cypriniformis	Cyprinidae	<i>Tor Gray</i>	<i>Tor tor (hill stream)</i>	Mahasher
9	Cypriniformis	Cobitidae	<i>Botia Gray</i>	<i>Botia dario</i>	Baghaua
10	Cypriniformis	Siluridae	<i>Wallago Bleeker</i>	<i>Wallago attu</i>	Padhain & Barari
11	Cypriniformis	Bagridae	<i>Mystus Gronow</i>	<i>Mystus bleekeri (Day)</i>	Tengara
12	Cypriniformis	Bagridae	<i>Mystus Gronow</i>	<i>Mystus cavasius (ham)</i>	Sutahawa
13	Cypriniformis	Bagridae	<i>Mystus Gronow</i>	<i>Mystus vittatus</i>	Tengara
14	Cypriniformis	Bagridae	<i>Mystus Gronow</i>	<i>Mystus aor</i>	Dariai Tengar
15	Cypriniformis	Bagridae	<i>Mystus Gronow</i>	<i>Mystus seenghala</i>	Dariai Tengar
16	Cypriniformis	Bagridae	<i>Rita Bleeker</i>	<i>Rita rita</i>	Hunna & Rita
17	Cypriniformis	Sisoridae	<i>Bagarius Bleeker</i>	<i>Bagarius bagarius</i>	Goonch, in Banda Lamher
18	Cypriniformis	Sisoridae	<i>Hara Blyth</i>	<i>Hara hara (hill stream)</i>	Panahi In Banda gogra
19	Cypriniformis	Schilbeidae	<i>Clupisoma Swainson</i>	<i>Clupisoma garua</i>	Baikari, Karahi In Banda bachua
20	Cypriniformis	Schilbeidae	<i>Pangasius Cuv. & Val.</i>	<i>Pangasius pangasius upiensis</i>	payas
21	Cypriniformis	Saccobranchidae	<i>Heteropneustes Muller</i>	<i>Heteropneustes fossilis</i>	Singhi
22	Cypriniformis	Clariidae	<i>Clarias Gronow</i>	<i>Clarias batrachus</i>	Mangur
23	Beloniformes	Belonidae	<i>Xenentodon Regan</i>	<i>Xenentodon cancila</i>	Kauwa
24	Ophiocephaliformes	Opiocephalidae	<i>Channa Gronow</i>	<i>Channa gachua</i>	chanaga
25	Ophiocephaliformes	Opiocephalidae	<i>Channa Gronow</i>	<i>Channa marulius</i>	Saur
26	Ophiocephaliformes	Opiocephalidae	<i>Channa Gronow</i>	<i>Channa punctatus</i>	Girai
27	Symbranchiformes	-	<i>Amphipnous Muller</i>	<i>Amphipnous cuchia</i>	AnhayaBaam
28	Perciformes	Centropomidae	<i>Chanda Hamilton</i>	<i>Chandanama</i>	Chanari
29	Perciformes	Centropomidae	-	<i>Chanda ranga</i>	Chanari
30	Perciformes	Nandidae	<i>Nandus Cuv. & Val.</i>	<i>Nandus nandus</i>	Dhebari in Banda jalabi
31	Perciformes	Anabantidae	<i>Anabas Cuv. & Cloquet</i>	<i>Anabas testudineus</i>	Kawai, Sumha
32	Perciformes	Gobiidae	<i>Glossogobius Gill</i>	<i>Glossogobius giuris (Ham)</i>	Bulla
33	Mastacembeliformes	Mastacembelidae	<i>Mastacembelus Gronovius</i>	<i>Mastacembelusarmatus</i>	Baam in Banda Kalend



Graph -1: Showing number of fishes order found in river Ken



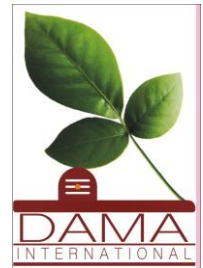
Graph -2: Showing number of fish families found in river Ken

RESULTS AND DISCUSSION

In the reported period above varieties of fish and fauna has been found. There are 33 species of fishes, recorded from the considered area which belongs to 24 genera, 16 families and 7 order. In which order *Cypriniformis* is dominant. Other than this, six orders namely, *Clupeiformes*, *Beloniformes*, *Ophiocephaliformes*, *Symbranchiformes*, *Perciformes*, *Mastacembeliformes* were also found in the due site.

Zoological survey of India (1991) has published that about 400 species of fishes were found in Indian water. Gunther (1880) found 26 families in India; Day (1885) reported 87 genera in Indian fresh water.

Three of the cyprinids species such as *Devario aequipinnatus*, *Esomus danricus* and *Garra mullya* were widely distributed in most of the study sites and they also have widespread distribution in India (Talwar and Jhingran 1991; Jayaram, 1999) and they are a common and abundant species in Indian waters. Sand is coarse in this it is porous and suitable for fishes the water has a fair amount of dissolved Oxygen, sufficient amount of organic compound as well as planktons besides temperature variation, light, pH, and water flow their optimum value are required for fish fauna.



Fishes are most economically important group of vertebrate. Fish diet provides rich protein fat and vitamin A, D, and E. Phosphorous and other element are also present in it and they are easily digestible and gives more energy. Besides industrial by products like fish manure (high contained nitrogen and phosphate) for field, artificial food for poultry, pig and cattle, for skin cosmetics polishing and smoothing material fish oil and fish glue, artificial pearl industry and many other products.

The distribution of the fishes are maximum in Chilla ghat in Chilla town, and medium number species catch in Bhuragerh, and few found on station Ganchha and Pailani. On the study area fishes were found herbivorous, carnivorous and omnivorous. The feeding habit of the fishes is sub-surface, middle feeders, and bottom feeders.

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REFERENCES

- Day F. (1889).** The fauna of British India including Ceylon and Burma. Fishes vol. I & II pp. xx.
- Gunther A. (1880).** An introduction to the study of fishes Edinburgh: Adams and Charles. Black. 720.
- Hora S.L. (1942).** On a collection of fish from the head waters of the Mahanadi river Rajpur district. *C.P. Rec. India Mus.* 42: 365-374.
- Jyotsna N. (2015).** A Contribution to the Seasonal Distribution and Biodiversity of Fresh Water Phytoplankton of Karagam Lake, Srikakulam, Andhra Pradesh, India. *Int. J. Environ.* 4(1).
- Kantaraj G. S. et al. (2011).** Fish diversity in relation to physico-chemical characteristics of Bhadra reservoir of Karnataka, India. *Advances Applied Sci. Res.* 2 (5):34-47.
- Shukla Arjun (2016).** Plankton Diversity, Seasonal Variation and Population Dynamics in River Narmada at Jabalpur Region (M.P.). *Int. J. Curr. Agri. Sci.* 6(4):11-16.
- Srivastava Gopalji (1968).** Fishes of eastern Uttar Pradesh., University of Gorakhpur, 11-144
- Talwar P.K. and A.G. Jhingran (1991).** Inland Fishes of India and Adjacent Countries. Oxford IBH Publication, New Delhi, Vol. 1 & 2, 1158.
- Verma S.R. and Dalelu (1975).** Studies on the pollution of Kalinadi by Industrial wastes near Mansurpur. Part. I. Hydrometric and physico- chemical Characteristics.