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Short Communication

Status of Cat Fish Diversity of River Kelo and Mand in Raigarh District, CG, India

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Abstract

Fishes are one of the most significant aquatic fauna which is directly or indirectly related with human health and wealth. Hence biodiversity and its conservation are regarded as one of the major issue of enabling sustainable use of natural resources. It is necessary and need of the day to protect icthyofaunal diversity in their natural habitat. Raigarh district is blessed with two main rivers Kelo and Mand and are the left tributaries of the Mahanadi river. Our freshwater fish diversity is poorly studied and some areas are still untouched and there is no proper documentation on freshwater fish resources of Raigarh district. Due to irrational fishing practices, industrial discharge, sewage discharge, deforestation, mining activities and other anthropogenic activities over the year this captive fish diversity is on a decline. The study area includes river Mand from Tarapur to Chandrapur and river Kelo from Lakha (dam constructing site) to Padigaon area, about twenty five kilometer down stream is supported with few number of economically important species of cat fishes. Higher cat fish diversity is observed after mansoon season. River Mand and Kelo of Raigarh district is rich in fish fauna but the status of cat fishes is the most average. We presently recorded 17 species of cat fishes from 12 genera and 6 families during the period of July 2010 to March 2011 when rivers has sufficient water. Diversity index was lowest in March and highest in October in the year.

Keywords: Biodiversity, conservation, sustainable cat fish.

Introduction

Raigarh is the east border of the Chhattisgarh state. Kelo river originate from village Amapali at elevation of 710.36 M. (2330 Ft.) above mean sea level about 40 km. north of Gharghora tahsil in Raigarh district. The total length of Kelo river is 112.60 km., joins Mahanadi near village Mahadeopali, district Sambalpur (Orissa). It is a perennial river, flows western direction from its origin about 4 km. and deflected in south direction up to 35 km. and leave the hilly track and enters plains near Milupara village. It flows 78 km, in plain area. Industrial wastes, sewage, pollutants released in Kelo river at many places, changing its natural water quality.

Mand river originate from north part of Manpat plane of Sarguja district. It runs about seven km. away from Sardenga of Dharmjaigarh tehsil and enters Gharghoda, Raigarh tehsil and finally joins Mahanadi river near Chandrapur area of Janjgir – Champa district. It is a perennial river, flows north to south direction. The total length of Mand river in Raigarh district is 174 km. and its drainage area is 4033 sq. km.

The fish diversity is not only the wealth of the district but it also has serious implications fisheries. Thus there is an urgent need for proper investigation and documentation of this diversity. During mansoon and throughout the year the fisherman and the villagers collects the variety of fishes from Kelo and Mand river by applying various types of nets results remove the fingerlings of the fishes ultimately leading to irregular growth over fishing and consequent reduction in fish population.

Material and Methods

Our study area was conducted in the hilly zone, middle plain zone and lower zone. Sampling involved collection from various station either with the help of fishermen using indigenous fishing methods or were purchased from the fishermen on the spot and the related local fish markets.

The specimens were preserved in 10% formalin and brought to the laboratory for further studies. Fishes were identified by using standard taxonomic keys viz. Fishes of India[1], Inland Fishes of India (vol. 1 and 2) Talwar and Jhingran[2], the species status of the collected fish was identified.

Study area and sampling station sites: Sampling stations was selected for the present study and site selection for the sampling of fish specimens was done on the basis of their approachability ie., linking by roads, villages, depth of river, local fish collection centre, village markets, fishing activities etc.

Laripani, khamaria, Tamnar, Gerwani, Lakha, Urdana, Raigarh city, Atarmuda, Jhalmala, was the sampling stations of Kelo

river. Usrout, Tarapur, Dulopur, bhatpur, Baradaputi, Sahaspuri, Borsi, Sirouli, Bilaijhorh village and Chandali village area was the sampling stations of Mand river.

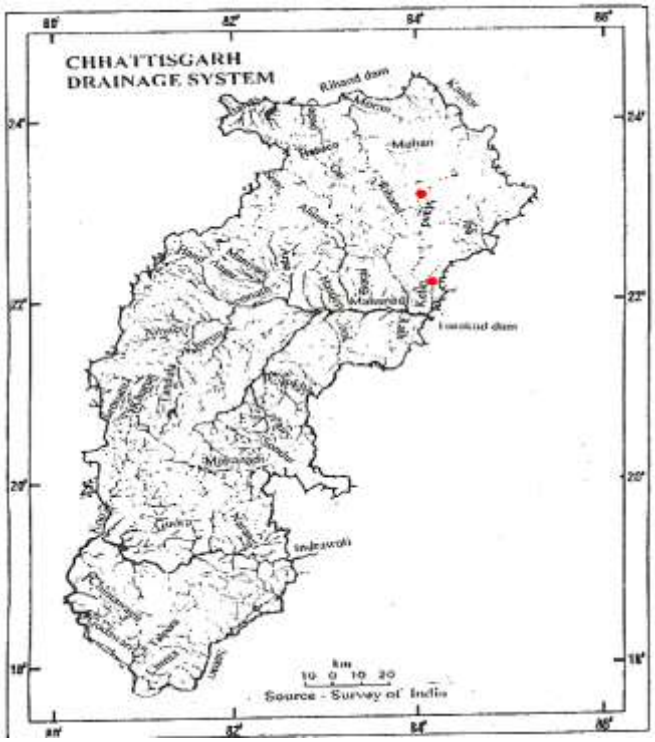

Figure - 1

Figure -2

Results and Discussion

Mand and Kelo rivers are tributary of Mahanadi river. Kurkut and Koiraj are the main tributaries of Mand river. Koedega and Rarod minor rivers are the main tributaries of Kelo river. Instead of these Binyari, Kunderbora, Panar nalla are right bank tributaries and Gahira, Guidrha, Karra nalla are left tributaries of Kelo river. The most common and wide spread species belonging to the cat fishes family are Siluridae, Bagridae, Sisoridae, Schilbidae, Saccobranchidae and Claridae.

We recorded the species of Ompok, Wallago, Rita, Mystus, Bagarius, Ailia, Clupisoma, Eutropiichthys, Pseudotropius, Silonia, Heteropneustus and Clarias. Wallago attu, Ompok bimaculatus, Rita rita, Mystus tengara, Mystus seenghala, Mystus cavasius, Mystus aor, Ailia coila, Suilonia silondia, Pseudotropius atherinoides Heteropneustus fossilis species are most common and the other are occasionally encountered.

The fish fauna of the Mand and Kelo river was studied from July 2010 to March 2011. We recorded 17 species from 12 genera and 6 families. The comparative cat fish diversity of the two rivers are shown in the table - 1.

Table – 1
Cat fish diversity recorded in river Mand and Kelo of Raigarh district from July 2010 to March 2011

S. No.	Family and Fish species	River Mand	River Kelo
1.	Family – Siluridae		
	1.*Ompok bimaculatus* (Bloch)	+	+
	2. *Ompok pabda* (Ham.- Buch.)	+	-
	3. *Wallago attu* (Bloch and Schn.)	+	+
2.	Family – Bagridae		
	4. *Rita rita* (Ham.)	+	+
	5. *Mystus aor* (Ham.-Buch.)	+	-
	6. *Mystus cavasius* (Ham.-Buch.)	+	+
	7. *Mystus Seenghala* (Sykes)	+	+
	8. *Mystus tengara* (Ham.-Buch.)	+	+
3.	Family – Sisoridae		
	9. *Bagarius bagarius* (Ham.-Buch.)	+	+
4.	Family – Schilbidae		
	10. *Ailia coila* (Ham.-Buch.)	+	+
	11. *Clupisoma garua* (Ham.-Buch.)	+	-
	12. *Eutropiichthys vacha* (Ham.-Buch.)	+	-
		+	+
	13. *Pseudotropius atherinoides* (Bloch)	+	+
	14. *Silonia silondia* (Ham.-Buch.)		
5.	Family – Saccobranchidae		
	15. *Heteropneustus fossilis* (Bloch)	+	+
6.	Family – Claridae		
	16. *Clarias batrachus* (Linn.)	+	+
	17. *Clarias gariepinus* (Burchell)	-	+*
	Total	**16**	**13**

(+) = Reported, (-) = not reported, (*) = very rare

Conclusion

The large scale industrialization and the consequent effluent discharge is going to make the river almost lifeless or dead. In addition to this now a days the river Kelo has become a sewage canal carrying a myriad of hazardous and toxic city-born pollutants resulting massive destruction of this riverine fauna and flora. Netting operations and other anthropogenic activities has become routine, so that the river ecosystem never get adequate time to recover its natural community structure.

Acknowledgement

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