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ON A COLLECTION OF FISH FROM THE HEADWATERS OF DAMODAR RIVER

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INTRODUCTION

Fish and fisheries of Damodar River have been studied in detail only by few workers in past, that too several decades ago (Job et. al., 1952; Hora, 1955). Since then tremendous changes have been taken place in the general condition of the river because of increased mining and industrial activities in the catchment area. This has necessiated a thorough investigation of current faunal composition.

While surveying the fish fauna with the above objectives, some observations were also made as general ecology of the river, two important localities viz. Tori (Origin of the River Damodar Dist. Ranchi) and McCluskigunj (Dist. Ranchi) were selected. Survey were conducted during pre and postmonsoon seasons of three years 1995 to 1997.

DESCRIPTION OF STUDY AREA

Tori : Tori is situated at the foot hills of Khamarpat hills from where River Damodar originates. The hills are covered with dense forest and upper reaches are extremely inaccessable. Barring few small human settlements, the area arround Tori is also covered with forests.

Mc Cluskigunj : The area falls under North Karanpura coal field region. This part is also covered with forests and sourrounded by a chain of low hills. There are several coal mines.

RESULTS

Following is the combined list of fishes collected from both Tori and Mc Cluskigunj.

SYSTEMATIC LIST OF FISHES FROM TORI AND MC CLUSKIGUNJ

Order : CYPRINIFORMES

Family : CYPRINIDAE

Sub Family : CYPRININAE

Genus : ***Cirrhinus*** Cuvier

Cirrhinus reba (Hamilton-Buchanan)

Genus : ***Labeo*** Cuvier

Labeo boggut (Sykes)

Genus : ***Osteobrama*** Heckel

Osteobrama cotio cotio (Hamilton-Buchanan)

Sub Family : RASBORINAE

Genus : ***Barilius*** (Hamilton-Buchanan)

Barilius bendilisis (Hamilton-Buchanan)

Genus : ***Danio*** (Hamilton-Buchanan)

Danio aequipinnatus (Mc Clelland)

D. rerio (Hamilton-Buchanan)

Genus : ***Esomus*** Swainson

Esomus danricus (Hamilton-Buchanan)

Genus : ***Rasbora*** Bleeker

Rasbora daniconius daniconius (Hamilton-Buchanan)

Sub Family : GARRINAE

Genus : ***Garra*** Hamilton-Buchanan

Garra annandalei Hora

G. gotyla gotyla (Gray)

G. mullya (Sykes)

Family : BALITORIDAE

Sub Family : NEMACHILINAE

Genus : ***Noemacheilus*** Bleeker

Noemacheilus botia (Hamilton-Buchanan)

N. denisoni dayi Hora

N. denisoni denisoni Day

Family : COBITIDAE

Sub Family : COBITINAE

Genus : ***Lepidocephalus*** Bleeker.

Lepidocephalus guntea (Hamilton-Buchanan)

Order : SILURIFORMES

Family : SISORIDAE

Genus : ***Glyptothorax*** Blyth.

Glyptothorax telchitta telchitta (Hamilton-Buchanan)

Order : PERCIFORMES

Family : MUGILIDAE

Genus : ***Rhinomugil*** Gill

Rhinomugil corsula (Hamilton-Buchanan)

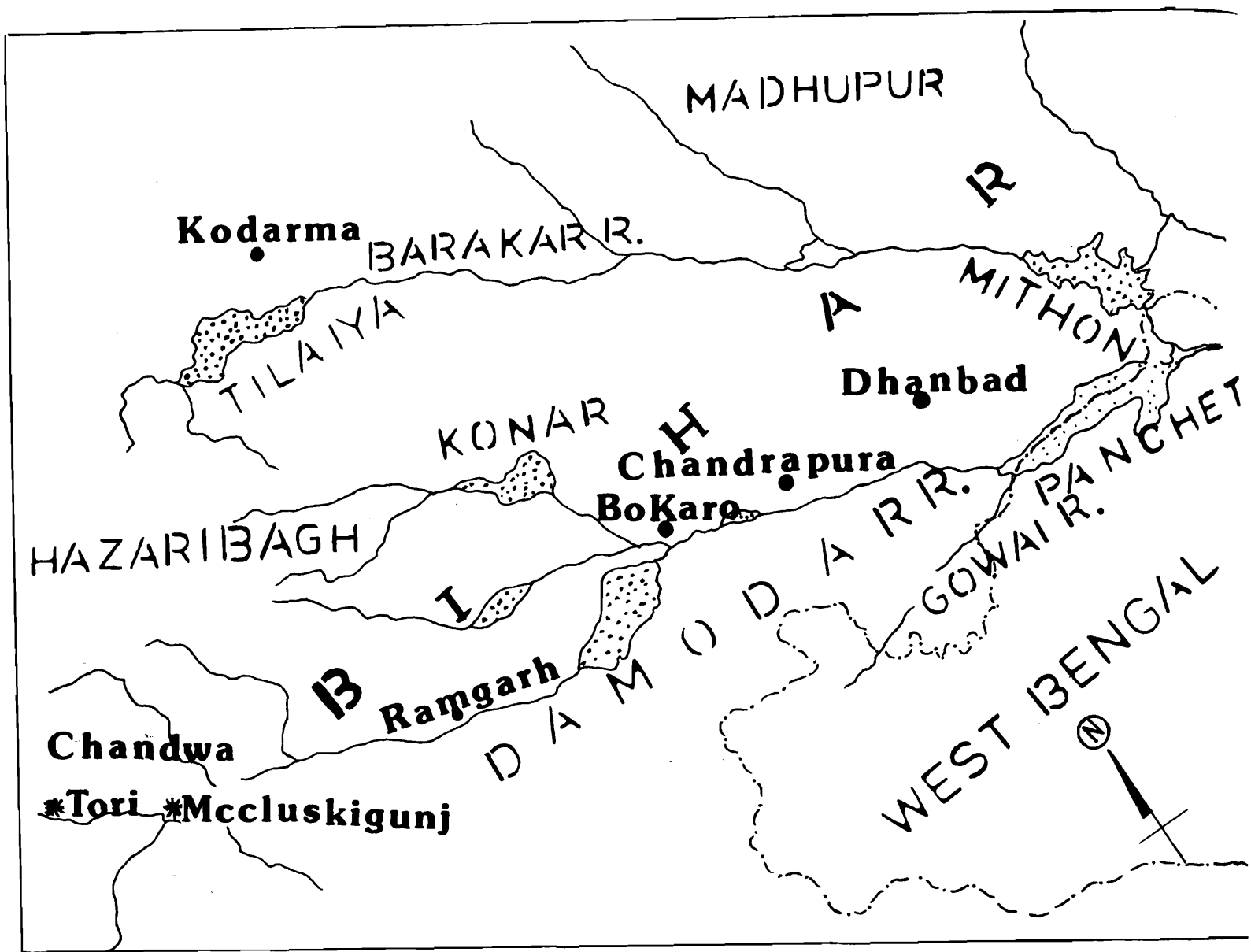
Family : GOBIIDAE

Genus : ***Glossogobius*** Gill

Glossogobius giuris giuris (Hamilton-Buchanan)

Table 1. Hydrobiological Parameters of Tori and Mc Cluskigunj.

	Tori		**Mc cluskigunj**	
	Pre monsoon	Post monsoon	Pre monsoon	Post monsoon
1. Temperature of Water	28°C	18°C	30°C	20°C
2. Temperature of Air	38°C	20°C	43°C	23°C
3. Dissolved Oxygen	4.5 mg/lit.	6.2 mg/lit.	2.3 mg/lit.	5.6 mg/lit.
4. Free Carbondioxide	0.2 mg/lit.	0.0 mg/lit.	4.0 mg/lit.	0.2 mg/lit.
5. pH Content	4.2	6.8	3.0	4.0



MAP SHOWING THE COLLECTING SITES FROM THE HEAD WATER OF DAMODAR RIVER

Map Showing the Collecting Sites from the Head Water of Damodar River.

NOTES ON ECOLOGY

At Tori river bed was almost dried up during postmonsoon seasons excepting a shallow slow flowing stream. During premonsoon, water was found only in small ditches on the river beds, with total disruption of flow. Because of the absence of large human settlements and mines in these area, the water is almost free from any pollution, the physicochemical condition of water was good (Table-1). At Mc Cluskigunj a peculiar phenomenon was noticed. Local people construct a mud bridge across the river for communication. The bridge is constructed by rocks and soil with a cement pipe inserted near the bottom, for just to allow the scanty water flow. During monsoon the whole mass is washed away and settles nearby river bed.

The river arround Mc Cluskigunj is considerably affected by human infiltration, particularly due to coal mining operations. During premonsoon, water temparature was very high with low dissolved oxygen (Table-1) and acidic pH (3.0) value. These factors are highly detrimental to fish fauna.

FISHERIES

Most of the above listed fishes are of no economic value except few like *Cirrhinus reba* and *Labeo boggut.* Some of the species of hill stream fish found are *Garra mullya*, *Garra gotyla gotyla*, some species of *Danio aequipinnatus* and *Danio rario*, are also found in good quantity. As the river in this area is almost devoid of commercial species, no organised fishing efforts are made and only few fishermen catch small fishes and sell in local market.

CONCLUSION

The fishes collected from Tori and Mc Cluskigunj consisted of 3 orders, 5 families 15 genera and 20 species among them, only few are of some economic value. It is quite clear that serious degradation of the river resulted either in the total elemination of some species or drastic reduction in their population unless serious measures are taken by the concerned authorities to keep the water free from pollution and built permanent concrete bridge across the river, the water will remain continuously polluted hampering drastically the fish fauna.

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