

Diversity of Lentic Freshwater Catfish at Chhatarpur City Madhya Pradesh, India

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ABSTRACT

From the last decade the pond has been suffering from the resource of water due to decline rain fall, variable climate, and geologic conditions. Thus, so many of areas of the India suffer from severe water shortage like Chhatarpur.

Ichthyodiversity increases the economic success of the fisheries pond and implies that the area has become more efficient. A fish are not only useful as source of food, medicine, and economic value but also plays a crucial role in the second tropic level of the aquatic ecosystem.

Therefore, in the present investigation preliminary observations of the Catfishes were carried out in the different water body of Chhatarpur city.

Following species were found initially viz Wallago attu, Ompak bimaculatus (Bloch) Clupisoma garua, Mystus seenghala, Mystus aor, Mystis vittatus (Bloch), Heteropneustes fossilis (Bloch), and Clarias batrachus (Linneus), an unequal distributions were observed.

Keywords: *Ichthyodiversity, Freshwater, Catfish, Species, Climate change.*

1. INTRODUCTION

Chhatarpur is situated with Longitudes and Latitudes of 24°06 and 25°20 on North 78°59 to 80°26 on East respectively with approximate 182 meter above mean sea level experiencing a annual rain fall of 1000-1200 m.m..Average temperature in cold 6-9° C,summer 46-48° C,and rain 28-37° C.

Several scientists have been reported in concern of diversity. Comparative study on diversity and seasonal abundance of benthic¹ microorganism¹³ benthic invertebrate², bottom fauna^{6,9} seasonal vouanav in maorozw bestnhetic organs⁸, succession¹² diversity of zooplankton and benthos⁷. As no data appeared in literature concern catfish diversity of Chhatarpur district Madhya Pradesh.

Catfish play an important role on decay and feed on dead organic matter and animals because of its carnivorous habit. Diagnostically catfish are naked body often with an adipose dorsal fin and spines at the front end of the dorsal and pectoral fins. They are referred catfishes owing to the characteristic presence of barbell around the mouth just like the whiskers of cat.

Ponds Santari Talaiya, Kishor Sagar, Rani Talaiya, Pratap Sagar, Gwal Mangara Pond, Sankat Mochan Pond and Khonp Tal are the important water bodies of Chhatarpur city (M.P.), out of these Santari Talaiya die off⁵ Kishor Sagar and Rani Talaiya, are still suffering from its biological importance. Gwal Mangara, Pratap Sagar,Sankat Mochan Pond and Khonp Tal have its biological importance with its rich water. Therefore, in the present investigation preliminary observations of the catfishes were carried out in these ponds.

2. MATERIALS AND METHODS

Fishes were caught from selected water bodies of vicinity Chhatarpur Madhya Pradesh. Fishes were caught by cast net and using baited hook and lines during a period of one year from September 2010 to August 2011. Formalin (37%) is used as preservative. A solution of formalin is prepared by diluting 10 ml of commercial formalin with 90 ml of water and it neutralize with 5 grams of borax per liter.

To established the identify morphometric characters and meristic characters. conventionally the measurements are taken and represented in the form of fin formula.Hence,the fishes identified as reported by^{3,10}

Formulate the abbreviations used as are under B Branchiostegal rays, D Dorsal fin, P Pectoral fin, V Ventral fin (Pelvic fin), A Anal fin, C Caudal fin, (/) separates the two kinds of fin rays, (!) separates the two kinds of fins, Roman numerics the number of spiny or unbranched rays. Dissecting microscope used for various counts.

3. RESULT AND DISCUSSION

Catfish diversity pattern of freshwater Indian catfishes from different water bodies Viz. Ponds Santari Talaiya, Kishor Sagar, Rani Talaiya, Pratap Sagar, Gwal Mangara Pond, Sankat Mochan Pond and Khonp Tal were observed in the present study. Total eight species were identified out of these eight species under five family Siluridae, Schilbeidae, Bagridae, Saccobranchidae and Clariidae, in different ponds.

In Santari Talaiya no catfish were observed during this study it is filled with garbage and no biomass. Santari Talaiya die off⁵. Kishor Sagar and Rani Talaiya, are still suffering from its biological importance. Heteropneustes fossilis and Clarias batrachus found in these ponds. Gwal Mangara, Pratap Sagar, Sankat Mochan Pond and Khonp Tal have its biological importance with its rich water. Adverse effect of environment, climatic changes, increasing water temperature¹¹, declining water level⁵, tremendous use of pesticide and xenobiotic compound⁴. Routines dumping of city garbage and garlanding over the pond sites affected the fisheries pond product hence decreasing the number of aquatic organism specially fish species in the pond. In these ponds anthropogenic activities should be controlled.

Following species were observed and identified in the present study.

Family	Siluridae
Genus	Wallago
Species	attu (Bloch)



Fin formula	Bxviii D5(1/4) P15(1/-14) V10 (I/9) A86-89 (iv/82-85) C-17
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Family	Siluridae
Genus	Ompok
Species	bimaculatus (Bloch)



Fin formula	Bxii-xv. D4(I/3) P14-15(I/13-14) V8(I/7) A68-71(II/66-69) C17
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Family	Schilbeidae
Genus	Clupisoma
Species	garua (Hamilton)



Fin formula	Bvi D8(I/7) I0 P12(I/-11) V6(I/5) A32 (III/29) C17
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Family	Bagridae
Genus	Mystis
Species	seenghala (Sykes)



Fin formula	Bxii D8 (I/7)/0 P10 (I/9) V6 (I/5) A11 (III/8) C19-21
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Family	Bagridae
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Genus Mystus
Species aor

Fin formula Bvii. D6(I /5) P8(I /7) V6(I/5) A62-65 C-19



Family Clariidae
Genus Clarias
Species batrachus (Linnaeus)

Fin formula Bxii. D8(I/7)/0 P11(I/10) V6(I/5) A12-13(iv/8-9) C17

Family Bagridae
Genus Mystus
Species vittatus (Linnaeus)



Fin formula Bix. D70-76 P9(I/8) V6(I/5) A47-55 C17.



Fin formula Bx.. D8(1/7) I 0 P9(I /8) V6(I/5) A9-12(II-III/7/9) C-17

Family Saccobranchidae
Genus Heteropneustes
Species fossilis (Bloch)



4. CONCLUSION AND SUGGESTION

Water is one of the most vital factors for existence of living organism on this Planet. Unfortunately, because of variable climate and geologic conditions. Thus, so many of areas of the India suffer from severe water shortage like Chhatarpur. Ichthyodiversity increases the economic success of the fisheries pond and implies that the area has become more efficient. A fish are not only useful as source of food, medicine, and economic value but also plays a crucial role in the second tropic level of the aquatic ecosystem. Fish are the best source of protein and also chief source of income for fisherman. Therefore, need to conserve Ichthyodiversity.

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