

Status of Ichthyofaunal Biodiversity of Birra Fish Culture Pond of District Vaishali, Bihar

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ABSTRACT

The present study was based on intensive survey of fish culture Birra pond closest to village Mirnagar situated in district Vaishali, Bihar during the study period 2019-20. The study indicated diversity in fish fauna in this pond.

Keywords: *Ichthyofaunal biodiversity, Birra fish culture pond, Intensive survey.*

INTRODUCTION

Fish farming is an important and fast growing sector in Bihar. The state has immense natural aquatic resources in the forms of ponds and tanks where quality fish seed are required for good fish production. Biodiversity indicates the potential of any aquatic system and also depicts its tropic status. Biodiversity has become prominent in recent years as a result of a worldwide high rate of extinction of some species of fishes and other animals too. Present survey work has significant importance because there is no record available regarding the fish fauna of this historical water body. The pond receives continuous domestic wastes water from the surrounding catchments area and surface run off during monsoon. There is important need for future strategies to protect this water body from further degradation as well as development, conservation and management aspects.

MATERIALS AND METHODS

Fish samples collection:

Fish samples were collected randomly from the different sites of Birra fish culture pond with the help of local fishermen (Fig. 1 & 2). Samples were collected August, 2019 to January, 2020 in the study area. After collection, all samples were preserved in ice and later transferred into the laboratory. In the laboratory, the specimens were preserved in 10% with maximum care to avoid disgorgement or defecation of fishes due to stress during immediate transfer to formalin. Identification of fishes was done on the basis of Morphometric characters, Descriptive characters and Fin formula. Morphometric characters includes Total length of the body standard, Length of the body, Length and depth of the head, Position and diameter of the eye, Length of snout, Maximum and minimum girth, Length of Pre dorsal fin, Pre pectoral fin, Pre anal fin and Pre caudal fin. Descriptive Characters includes Profile and Shape of the body, Skin texture and coloration, Position and shape of the mouth, lips and snout, Barbels and jaws, Scales and lateral line system Origin, shape, size and type of median, paired and caudal fins, Fin rays and fin formula, Tail and special marking. Fishes are classified and arranged based on the different workers.¹⁻³

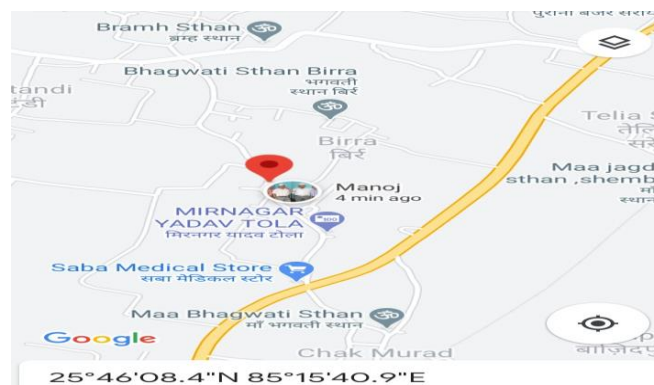


Fig.1. Google location of Birra Pond.

RESULTS AND DISCUSSION

The present study was carried out to determine the current status of freshwater fish biodiversity found in Birra pond of Vaishali district in Bihar. We have reported 20 freshwater fish species in Birra pond. During the survey of Birra pond, the diversity of fishes comprised of 15 genera and 15 species belonging to 10 different families viz., Clupeidae, Claridae, Heteropneustidae, Mastacembilidae, Anabantidae, Cyprinidae, Gobiidae, Siluridae, Cichlidae, Channidae. (Table 1).

Table 1
Fish species identified in Birra pond of district Vaishali, Bihar during study period August 2019-January, 2020

Family	Common Name	Scientific Name
Clupeidae	Bhunna	<i>Notopterus notopterus</i>
Claridae	Mangur	<i>Clarias batrachus</i>
Heteropneustidae	Singhi	<i>Heteropneustes fossilis</i>
Mastacembilidae	Gainchi	<i>Macrognathus aculeatus</i>
Anabantidae	Kabai	<i>Anabas testudineus</i>
Cyprinidae	Reba	<i>Cirrhinus reba</i>
Cyprinidae	Rohu	<i>Labeo rohita</i>
Cyprinidae	Catla	<i>Catla catla</i>
Cyprinidae	Naini	<i>Cirrhinus mrigala</i>
Anabantidae	Khesra	<i>Colisa fasciatus</i>
Cyprinidae	Chelwa	<i>Salmostoma bacaila</i>
Gobiidae	Bhulla	<i>Glossogobius giuris</i>
Cyprinidae	Pothia	<i>Puntius muzaffarpurensis</i>
Siluridae	Tengara	<i>Mystus vittatus</i>
Cichlidae	Tilapia	<i>Oreochmis niloticus</i>
Channidae	Garai	<i>Channa punctatus</i>
Channidae	Saura	<i>Channa straitus</i>
Siluridae	Boari	<i>Wallago attu</i>
Channidae	Bhaura	<i>Channa marulius</i>
Channidae	Changa	<i>Channa gachua</i>

The diversity and abundance were co-related with the aquatic surroundings. Similarly some more workers have reported 15-25. species from different districts of Bihar, Maharashtra and other states.⁴⁻⁷ A total of 27 species belonging to 13 families were identified in the urban and rural area studied ponds of district Darbhanga and Samastipur were recorded also.⁸⁻¹⁰ The present study recorded a greater number of fish species during the study period. These findings coincide with a study conducted by different scientists which concluded the ichthyofaunal diversity in Bihar¹¹.

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