Biodiversity Of Fish Fauna In Lakhapura Reservoir, Bhikangaon Tehsil, Khargone District, M.P.

Ravindra Rawal
Assistant Professor, Department of Zoology, Government P.G. College, Khargone, M.P.

Pradeep S. Deshmukh
Assistant Professor, Department of Zoology, Government College of Arts & Science, Aurangabad, M.S.

Abstract: Freshwater fish biodiversity of Lakhapura reservoir is poorly studied. There is no proper documentation on freshwater fish resources of Lakhapura reservoir of Bhikangaon Tehsil, Khargone District. This study aims to prepare database of fishes found in Bhikangaon town. Fishes are the unique creature of animal world. It is one of the good source of protein and is able to combat problem of malnutrition. Khargone district is basically a tribal district. This is the first study to catalogue species of fishes found in Lakhapura reservoir. Total 24 species from different sampling station were recorded.

Keywords: Fish diversity, Fish management, Fish conservation.

I. INTRODUCTION

The reservoir water is mostly used by local farmers during crop seasons. Although, the reservoir gets replenished from the local nala in monsoon season, the water level fluctuates remarkably from dry to wet seasons. The water level becomes very low during pre-monsoon and only covers its bottom which is mainly composed of soft substrates like mud, organic debris. In contract, the water level is relatively higher during post-monsoon and reaches up to its dike which is composed of non-soft substrates like boulders, cobbles and stones. Additionally, it is subjected to various human use e.g. fishing, grazing, irrigation and fodder collection, domestic use, harvesting of wetland products, recreation and supply of water for irrigation. The Indian National Biological Diversity Act, 2002 defines biological diversity as ‘the variability among living organisms from all sources and the ecological complexes of which they are part and includes diversity with species or between species and of eco system’

Fishes are the important vertebrate group of animal’s world contributing to the biodiversity of animals. Primarily fishes are used as a food source. Many vital vitamins and fatty acids are found in fishes so sometimes it is referred by doctors as a good food source.

The study of fish and their stability is important because fish population of a water body may vary significantly from year to year. The fish fauna is an important aspect of fishery potential of a reservoir. They play an important role, as they are not only useful for food and recreation, but also act as a tool for biological control by feeding upon the planktonic population and aquatic vegetation in the reservoir. They are useful indicators of environmental quality and ecological integrity. More work has been carried out on fish fauna in different freshwater reservoir during the last few years.

This study is also aimed to suggest remedial measures for the development of fisheries resources and also to recommend some conservative measures so that the fish gene pool of this region may be protected and preserved for their conservation.
II. MATERIAL AND METHODS

The fishes were collected from Lakhapura reservoir, Bhikangaon Tehsil, Khargone District and from local fisherman. Fisherman generally uses many types of nets like gill nets, cast net, drag net etc. Fishes were preserved in 10% formalin solution and identified with the help of standard keys and book. This study was conducted between June 2012 - May 2013. The fishes were identified with the help of Jhingran 1982, Day1989, Gopali, Shrivastava 1992 and Jayaram 1999 the checklist of identified fish species was prepared and presented in table-1.

III. RESULTS AND DISCUSSION

Table 1: List of Fish Fauna Recorded from the Lakhapura reservoir with local name

<table>
<thead>
<tr>
<th>SN</th>
<th>Order</th>
<th>Family</th>
<th>Genus</th>
<th>Species</th>
<th>Local name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cypriniformes</td>
<td>Cyprinidae</td>
<td>Catla</td>
<td>catla</td>
<td>Kalua</td>
</tr>
<tr>
<td>2</td>
<td>Mastacembeliformes</td>
<td>Mastacembelidae</td>
<td>Mastacembelus armatus</td>
<td>Bam</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Mastacembeliformes</td>
<td>Mastacembelidae</td>
<td>Mastacembelus panchalus</td>
<td>Malga</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Order wise Fish Species in Lakhapura reservoir

<table>
<thead>
<tr>
<th>SN</th>
<th>Order</th>
<th>Number of Fish Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cypriniformes</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Siluriformes</td>
<td>06</td>
</tr>
<tr>
<td>3</td>
<td>Perciformes</td>
<td>01</td>
</tr>
<tr>
<td>4</td>
<td>Beloniformes</td>
<td>01</td>
</tr>
<tr>
<td>5</td>
<td>Channiformes</td>
<td>04</td>
</tr>
<tr>
<td>6</td>
<td>Mastacembeliformes</td>
<td>02</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>06</td>
</tr>
</tbody>
</table>

Figure 1: Map showing Bhikangaon (Tehsil), Khargone (District), M.P.

Figure 2: Satellite map of Lakhapura reservoir, Bhikangaon (Tehsil), Khargone (District) M.P.

Figure 3: Order wise Fish Species

Mandal (2010) same observation was noticed and Shrivastava et al.,(2011) studied the fish fauna of Shajapur district. Solanki et al., (2011) worked at Sanjay Sagar
reservoir and observed 16 species of fishes which are belongs to a different orders of class teleostei of class pisces viz. Cypriniforms, Siluriforms, Metacembeliformes and Ophiocephaliforms. Keshe and Mudgal (2012) were surveyed fish fauna of the Moghat reservoir, Khandwa and 18 fish species were collected which are belongs to 4 families. *Catla catla* and *Labeo rohita* showed its dominance respectively. Fishes found in reservoir are edible and have been an important source of protein. Narasimha and Benarjee (2013) 30 species of fishes were recorded at Nagaram Tank Warangal which are belongs to 6 orders. The fish fauna of 30 species belongs to 13 families among which 13 species are Cypriniformes.

IV. CONCLUSION

Our Nation is one of the mega diversity countries with respect to freshwater fish species. In freshwater fish diversity India is 8\textsuperscript{th} in the world and 3\textsuperscript{rd} in Asia. There are plenty of cultivable species and any further introduction of exotic fish species is unnecessary. It is concluded that the reservoir have high fish diversity with good economic potential. We found 24 species of 6 different orders (Table 2). Cypriniformes contributes its major contribution. To conserve and maintain the fish diversity, we further need to assess water quality and anthropogenic activities to this tank, which should be controlled.

ACKNOWLEDGEMENT

We are thankful to local fisherman community of Bhikangaon town who provided us there traditional knowledge of fish identification and especially local names of fishes.

REFERENCES