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**ICTHYOFAUNAL DIVERSITY OF FISHES OF INDIRA LAKE, RAJGURUNAGAR,  
PUNE (MS), INDIA**

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**ABSTRACT**

Indira Lake found in Rajgurunagar city, near of Pune- Nasik National highway 50 (Peth Ghats) India. This area receives precipitation from southwest monsoon (June to October). It is one of the prime lakes in Khed Taluka (Pune) and it's unexplored. The present investigation deals with the Ichthyofaunal Fish Diversity of Indira Lake, Rajgurunagar, Pune (MS). The study was carried out during the year June 2010 to September 2011. Ichthyofaunal diversity of Indira Lake were found to be 12 species belonging to 03 Orders, 07 Families of 11 Genera were recorded. In the assemblage structure of Indira Lake is dominated by cyprinids 07 species, followed by 03 species of perches, 02 species of Siluriformes. *Oreochromis mossambica* (Peters.) exotic species recorded in Indira Lake, Rajgurunagar city, Pune.

**Keywords: Ichthyofauna, Fish Diversity, Indira Lake, Peth Ghats**

**INTRODUCTION**

As many as 32, 120 valid species of fish are known from the world, which are distributed, approximately under 62 orders, 515 families and 4495 genera. The Western Ghats (WG),

located along the southwest coastline of the Indian subcontinent, is a biodiversity 'hotspot' [1] and is extremely rich in its fish diversity as well as endemism [2-4]. One of

the interesting aspects of community ecology studies has been that of patterns in assemblage structure. Species richness at local scales, however, are more dependent on biological factors like competition [5] and predation [6] as well as physical factors like habitat diversity [7], temperature and pH [8]. Species assort themselves along environmental gradients like pH and temperature.

Rajgurunagar is located at the northern region of the Pune district in Maharashtra state of India. The Indira Lake located in the Rajgurunagar city side of Pune- Nasik National highway (Khed- Peth Ghats). The main objective of this work is to study the Ichthyofaunal diversity of fish species distribution in Indira Lake. The community ecology of freshwater fishes in Indira Lake, Rajgurunagar has been studied for the first time. Chaskaman dam is dominated by cyprinids 19 species, followed by 6 species of perches, 4 species of Siluriformes and 1 species of Synbranchiformes [9].

#### **MATERIALS AND METHODS**

The present study was conducted in the Indira Lake, Rajgurunagar and laboratory, Department of Zoology, Hutatma Rajguru Mahavidyalaya, Rajgurunagar. Fishes were sampled regularly (using a variety of fishing

nets of varying mesh sizes – gill nets, cast nets and dragnets and tires) over a period of one years (June 2010 to September 2011) on sampling sites. The fishes were preserved in 4 percent formaldehyde solution.

The present study site, the climate of the region is mainly tropical with a well defined rainy season between June to October and a relatively dry pre-monsoon summer between March to May. The pH and temperatures were measured by pen pH meter (Milwaukee) and thermometer respectively.

For identification of fishes have been Identified using standard literature [10, 11] and with the help of taxonomic expertise from the Western Regional Station of the Zoological Survey of India at Akurdi, Pune. The analysis of was evaluated by graphical representation.

#### **RESULTS**

The present inventory study of fishes collected a total 12 species belonging to 03 orders, 07 families and 11 genera (e.g., “As shown in **Figure 1**”). Cyprinids constitute the dominant group. The pH of water bodies under investigation, we found ranged in between 7.3 to 7.9 pH showed minor seasonal variations. It was recorded maximum during summer and is associated high photosynthetic activity in water. Present studies showed pH

range favorable for aquatic life, agriculture and domestic use. The water temperature varied between ranges of 25<sup>0</sup> to 31<sup>0</sup>C. It is an

urgent need to conserve the dam and natural resources by applying conservative measures.

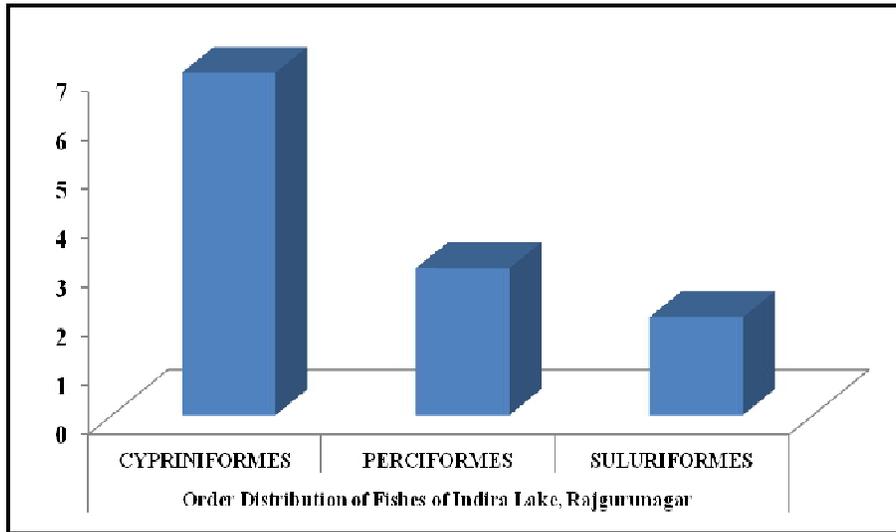


Figure 1: Order distribution of Fish species of Indira Lake, Rajgurunagar

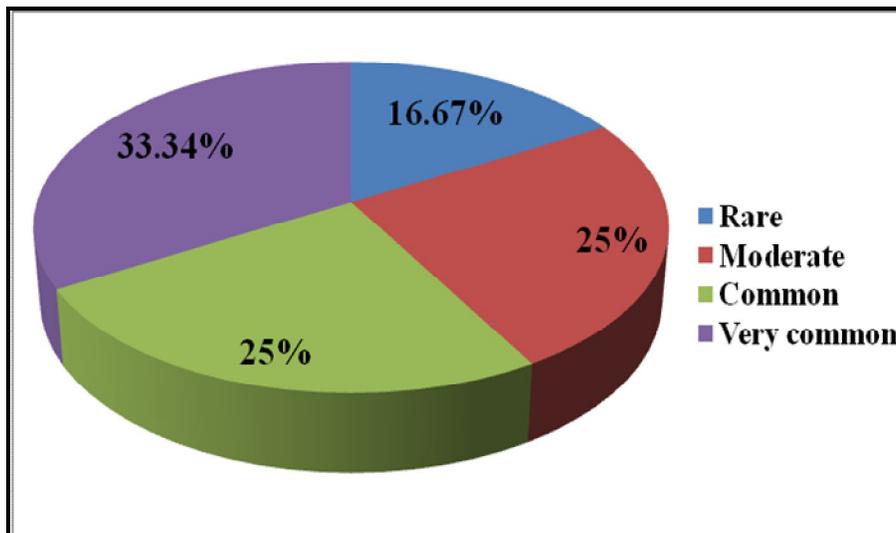


Figure 2: Pie Chart Showing Distribution Percentage of Threatened Status of Indira Lake

**Table 1: Threatened Species List of Sites in Indira Lake, Rajgurunagar**

Fish Species	Threatened Status	Fish Quantity/ Month
<i>Catla catla</i> (Ham-Buch.)	Very Common	38
<i>Labeo rohita</i> (Ham-Buch.)	Very Common	68
<i>Labeo boggut</i> (Sykes)	Common	59
<i>Garra mullya</i> (Sykes.)	Very Common	72
<i>Noemachilichthys ruppelli</i> (Sykes.)	Common	44
<i>Oreonectes (Oreonectes) evezardi</i> (Day.)	Common	42
<i>Rasbora daniconius</i> (Ham-Buch.)	Very Common	92
<i>Oreochromis mossambica</i> (Peters.)	Moderate	12
<i>Glossogobius giuris giuris</i> (Ham-Buch.)	Rare	07
<i>Channa punctatus</i> (Bloch.)	Rare	09
<i>Mystus bleekeri</i> (Day.)	Moderate	11
<i>Clarias batrachus</i> (Linn.)	Moderate	12

## DISCUSSION

The present ichthyofaunal study of Indira Lake, Rajgurunagar is dominated by cyprinids 07 species (Order: Cypriniformes), 03 species of perches (Order: Perciformes), followed by 02 species of catfishes (Order: Siluriformes). Order Cypriniformes forms predominant group with followed by 58.34 percent, Perciformes 25 percent, Siluriformes 16.67 percent in the Indira Lake. During the present sites of Indira Lake belonging to 12 species. Distribution of Threatened status in Indira Lake is followed by Rare, Moderate, Common and Very common (e.g., “As shown in **Figure 2**”).

*Glossogobius giuris* (Ham-Buch.) and *Channa punctatus* (Bloch) are rare. *Oreochromis mossambica* (Peters.), *Mystus bleekeri* (Day.) and *Clarias batrachus* (Linn.) are moderate in Indira Lake.

*Noemachilichthys ruppelli* (Sykes) and *Oreonectes evezardi* (Day) are endemic in Northern Western Ghats found in Indira Lake, Rajgurunagar. *Catla catla* (Ham-Buch), *Labeo rohita* (Ham-Buch), *Garra mullya* (Sykes.) and *Rasbora daniconius* (Ham-Buch.) are threatened very common. The Western Ghats, while being extremely rich in its fish biodiversity, has not so far been investigated with regards to species distributions and their interactions with environmental and physical parameters.

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